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MASTER THESIS

Target Accounting Quality in Mergers and Acquisitions

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Abstract

This study aims to provide evidence on whether higher accounting quality of target firms leads to more profitable acquisition for a sample of Western European firms between 1997 and 2012. Both short-term and long-term measurements are used to test the effect of target accounting quality. In addition, this study also examines non-return tests. More specifically, this study investigates whether target accounting quality has an impact on the speed of the M&A process. Furthermore, this study examines whether target accounting quality has an impact on the likelihood that a proposed acquisition is ultimately completed. The results indicate that the short-term returns to acquirers are significantly higher when the target has higher accounting quality. When controlling for uncertainty, the effect remains significantly positive. In the long term, the effect of target accounting on profitability is significantly positive as well. The results also show that targets with high accounting quality are associated with a shorter deal process. Moreover, this study finds that high accounting quality increases the likelihood of deal completion. Using a subsample in which renegotiation is most likely to occur by excluding deals involving tender offers, the results indicate that target accounting quality does not affect the likelihood of renegotiation.

JEL Classification: G11, G14, G34, M41

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1. Introduction

The purpose of this study is to examine the relation between target accounting quality and the profitability of acquisitions for acquirers. More specifically, the study investigates whether a higher accounting quality¹ of target firms leads to more profitable acquisitions for a sample of Western European firms. If accounting information can reduce uncertainty in the value of the target by facilitating a better valuation process, the prediction is that the management of the acquiring firm can bid more effectively to acquire a target that provides high-quality accounting information. Since due diligence is a critical process to conduct a successful merger & acquisitions (M&A) transaction, this study also examines the relation between target accounting quality and the due diligence process. The prediction is that a high-quality accounting information reduces the amount of time required for due diligence, thereby reducing the length of the M&A process overall. Also, this study predicts whether a high-quality accounting information increases the likelihood of deal completion. Overall, this study answers the following research question:

Do acquiring firms conduct better M&A transactions if target firms provide better accounting information?

Providing an answer to this research question is important because poor accounting quality can increase the likelihood of misvaluation and can hinder the efficient allocation of the economy's capital resources. The results of the thesis should be of relevance to acquiring firms who need to know whether better accounting information improves the M&A transactions. Since acquisition decisions are relatively the most critical investment decisions made by firms, bidders face difficult choices relating to the type of bid, the offer premium, and the method of payment. Those choices are likely to be dependent upon the quality of information available to bidders (Raman et al., 2013). Moreover, practitioners may be interested in the role that accounting quality plays in the due diligence phase of a deal, because reviewing the financial statements is considered as one of the most important aspects of due diligence. This study provides a comprehensive understanding of how target firms' accounting quality relates to the valuation of the target firm and it directly examines the profitability of the acquisition to the acquirer. Valuing the target firm is an important part of an acquisition, especially due to the economic magnitude of many deals and the information asymmetry often involved. In addition, by further linking target accounting quality to the due diligence process, this study

¹ Accounting quality can be applied to various contexts. However, in this study, accounting quality is defined as decision usefulness in the context of equity valuation

complements several recent papers that solely examine target firm accounting information and M&A returns (e.g. McNichols & Stubben, 2015; Martin & Shalev, 2009).

In this study, accounting quality is measured by using the Dechow & Dichev's (2002) model. To measure acquirer's profitability, three-days cumulative abnormal return is used for short term and one- and three-year buy-and-hold abnormal return is used for long term. Target value uncertainty is measured by using volatility of the target firm's monthly stock return. As a robustness check, an alternative measure of uncertainty is utilized, which is the volatility of annual cash flows from operations divided by total assets.

The relevant data that are necessary to conduct the study are available through databases such as Compustat Global, Datastream, and ThomsonOne (T1). The sample should meet the following criteria: deal value should be larger than \$1 million and both acquiring and target firm are publicly listed firms. In addition, the acquiring firm should own (or seeks to own) 100% of the target's shares after the transaction. Lastly, deals are only included if there are available accounting data to calculate accounting quality, and acquirer and target stock returns. The final sample consists of 1684 announced deals between 1997 and 2012.

The empirical results show that the short-term returns to the acquirer's shareholders for acquisition of targets with uncertain values are lower, consistent with expectations. In the short term, returns to acquirers are significantly higher when the target has higher accounting quality. When controlling for uncertainty, the effect remains significantly positive. Thus, the results are consistent with previous research (McNichols & Stubben, 2015; Lim et al., 2015). The results for one- and three-year abnormal returns are similar, which are in contrast to the results of Black et al. (2007). Overall, the findings support the hypothesis that a higher target accounting quality leads to a higher acquirer's profitability in the short and long term in Western European countries. Moreover, similar to the results of Marquardt & Zur (2012), this study finds that targets with high accounting quality are associated with a shorter deal process. Similar results are reported when examining only the length of the preannouncement phase. Lastly, the results show that a higher accounting quality has a higher likelihood of deal completion. It might be possible that the deal is renegotiated instead of terminated altogether. Therefore, the equation for the likelihood of deal completion is reestimated using a logistic regression. The results show that the target accounting quality does not affect the decision to renegotiate.

This study contributes to the current research by incorporating the effect of target accounting quality on both the acquirers' profitability and the speed of M&A process. To be more specific, this study examines both return and non-return tests. To my knowledge, there is limited literature linking the target accounting quality with M&A transactions. Furthermore, as most of the literature examines the relation between target reporting quality and investment efficiency (Bushman and Smith, 2001;

Verrecchia, 2001), it is interesting to test the effect on other dependent variables. Also, this is the first study that uses both short-term and long-term measurements to test the effect of target accounting quality on profitability of acquirers. Finally, this study on Western European M&A market contributes to the extant literature on M&A that has so far focused primarily on the M&A markets of the U.S. (Martin & Shalev, 2009; McNichols & Stubben, 2015; Raman et al., 2013). Compared to the U.S., European firms are characterized by weaker investor protection rules and less-developed capital markets, and by more concentrated ownership structures (Faccio & Lang, 2002). Also, there are major differences in the risk allocation between the U.S. and Europe, reflecting cultural and regulatory variations in the markets (PR Newswire, 2013). Therefore, it would be interesting to see if the effect of target accounting quality is different in Europe compared to U.S. The countries in which the institutional framework is more developed offer more information which means that more data is available. Consequently, only Western European countries are included in the sample.

The remainder of this paper is as follows. Section 2 provides the literature on the acquisition model, target value uncertainty, target accounting quality, corporate performance following M&A, and due diligence is reviewed. Section 3 describes the data and explains the methodology used. Section 4 presents and discusses empirical results. Finally, Section 5 concludes this study.

2. Literature Review

This chapter summarizes earlier theoretical and empirical papers that investigate the target accounting quality and M&A. Firstly, this paper will provide an overview of the theories that explain why overpayment occurs in acquisitions. Moreover, target value uncertainty and target accounting quality literature will be reviewed. Thirdly, this paper will analyze the corporate performance literature related to M&A. Fourthly, literature on due diligence process will be described. Finally, the last section of this chapter presents the hypotheses.

2.1 The Acquisition Model

This study examines the role of accounting information in business valuation. Acquisitions are studied because valuation of the target firm is an important part of an acquisition, considering the economic magnitude of many deals and the information asymmetry often involved (Palepu & Healy, 2008)

If a firm realizes it is a potential target in a probable acquisition, it may be incentivized to manipulate its reported financial information. However, the focus of this study is the more persistent accounting quality that characterizes the target firm. Even though accounting information could be influenced by discretionary choices in anticipation of an acquisition, Erickson and Wang (1999) are not able to find significant evidence of discretionary reporting behavior by target firms. They argue that targets have insufficient time to manipulate earnings before the acquisition. In order to make this strategy work, the target firm would need enough time to anticipate the acquisition, and the acquirer would have to be fooled by the earnings management, while at the same time presumably understanding the target firm's reporting incentives (McNichols & Stubben, 2015).²

The acquiring firm identifies a target with a given intrinsic value and level of accounting quality. In case of a completed deal, the acquiring firm will attain the intrinsic value of the target's net assets plus any synergies in exchange for the deal price. The change in the acquiring firm's market value can therefore be expressed as follows:

$$\Delta MVE = IV + Synergies - Price$$

where ΔMVE is the change in the acquiring firm's market value of equity around the acquisition period. IV represents the intrinsic value of the target firm and $Synergies$ is the expected synergies from the

² This study employs measures of accounting quality that should be fairly immune to any earnings management that occurs just before the acquisition announcement.

acquisition. Price is equal to the acquisition price. Since the target firm's intrinsic value and synergies are fixed for a given acquiring and target firm, the variation in the return to the acquiring firm is determined by the price paid for the acquisition. On the other hand, the acquisition price is dependent on the bargaining position of the acquirer, affected by the acquirer's ability to precisely value the target (McNichols & Stubben, 2015).

When considering the acquisition process as a two-agent bargaining game under imperfect information, the acquiring firm will decide under such a transaction that the optimal bargaining strategy is to make a first-and-final offer (Samuelson, 1984). If the target and acquiring firms merge, the combination will produce a given amount of synergies. While the acquiring firm pays the acquisition price, it will receive $IV + Synergies$ in return. The acquiring firm is likely to pay up to the combined value of the target and synergies, whereas the target firm is more inclined to accept bids greater than its own value. The partition of synergistic gains between the two parties is dependent on the negotiation of the deal price. Suppose that only the target knows its own intrinsic value with certainty, but the target firm is not sure of the expected synergies. The target firm has to make the following trade-off when setting a reservation price: demanding a high reservation price will result in extracting more merger rents but can also result in not being able to sell the firm if the synergies are too low. On the other hand, if the acquiring firm bids below the target's reservation price, no acquisition will occur. Bids are only accepted if they are above the target's reservation price. In case the acquiring firm knows the intrinsic value and reservation price with certainty, it will bid just at an acceptable level to match the reservation price. However, if there is a high target uncertainty and there are multiple bidders, variation in bids will be greater and the accepted (winning) bids will be higher. Therefore, the acquiring firm will pay a higher price for a target firm under uncertainty. It may be possible that acquirers overpay for acquisitions. That is when the deal price exceeds intrinsic value plus synergies. Even though potential acquirers might discount bids as an optimal response to target firm uncertainty, prior literature suggests that this is not always the case (Andrade et al. 2001; Moeller et al. 2005). Prior literature has shown several theories that explain why acquirers overpay. Two most important theories are agency theory and the winner's curse (Morck et al. 1990). The prediction is the same for both theories, i.e. higher uncertainty in the value of the target results in overpayment.

2.1.1 Agency Theory

Managers may have incentives that motivate them to make suboptimal decisions that do not maximize shareholder wealth (Jensen & Meckling, 1976). According to Jensen & Meckling (1976), it is generally impossible for the principal or the agent to ensure that the agent will make optimal decisions from the viewpoint of the principal without incurring costs. In most agency relationships,

the principal and the agent will incur positive monitoring and bonding costs, and also there will be some divergence between the agent's decisions and those decisions which would maximize the wealth of the principal. Specifically, managers may be incentivized to grow their firm beyond the optimal size (Jensen, 1986). Growth increases managers' power by expanding the resources under their control. Jensen (1986) also argues that incentives for growth is associated with increases in managers' compensation as changes in compensation have a positive association with the growth in sales. Furthermore, the incentives also stem from the link between managers' desire for greater prestige and visibility. It is also possible that managers have incentives to diversify the risk on human capital for their personal benefits from the investment (Black, 1989). In addition, managers acquire firms in industries with favorable prospects to protect their jobs if their firm is in declining industry. Thus, overpayment occurs when managers perceive high private benefits even though the acquisition is not expected to increase the welfare of shareholders. In fact, the results of the study of Morck et al. (1990) show that managerial objectives tend to drive acquisitions that reduce bidding firms' values.

Jensen & Merckling (1976) argue that it is possible for the principal to limit divergences from his interest by establishing appropriate incentives for the agent and by incurring monitoring costs to limit the peculiar activities of the agent. Usually the board of directors is used as a primary monitoring mechanism. The board of directors approves significant management activities which also include acquisition decisions. However, a board is only able to monitor the management effectively if sufficient information is available to it. In case when the accounting information is able to reduce uncertainty in the value of the target, it will be harder for managers of the acquirer to rationalize a high potential bid to the board of directors by undervaluing risks or exaggerating potential gains.

Watts & Zimmerman (1986) and Bushman & Smith (2001) emphasize the importance of financial accounting information to both shareholders and board of directors in monitoring the management. Prior studies (e.g. Hope & Thomas, 2008; Kanodia & Lee, 1998) examine the role of a firm's ex post accounting information in facilitating the monitoring of prior managerial actions. However, this study examines the ex-ante use of target firm's accounting information by the acquirer's board of directors to value potential acquisition bids.

2.1.2 The Winner's Curse

The winner's curse hypothesis suggests that in the event of competition for a takeover candidate, the successful bidder will tend to be the one that pays too much for an asset with an uncertain value (Varaiya & Ferris, 1987). The bidder who most overestimates the target's value will typically win the auction (Bazerman & Samuelson, 1983). When extending the winner's curse theory to bilateral negotiations, Bazerman & Samuelson (1985) argue that the winning bidders are likely to lose money

on the purchase. Boone and Mulherin (2008) also predict that the predictions are the same for both negotiations and auctions: overpayment results in less profitable acquisitions for its shareholders.

As mentioned earlier, the optimal response of acquirers to greater uncertainty is to discount bids. This should be done in order to counteract the greater likelihood of overbidding. The winner's curse does not take place if all bidders are rational. However, it is hard to act rationally in auctions (Thaler, 1988). In addition to the calculation of the expected value of the asset conditional on information available at the time of bidding, the bidder must also calculate the expected value conditional on winning the auction. They need to take into consideration that winning the auction most likely means that they overestimated the value of the target relative to other bidders. French and McCormick (1984) suggest in their auction theory that assets with more uncertainty about their true value are more likely to be sold via auctions than through other sales method because uncertainty most likely increases the expected value of the winning bid. Furthermore, Black (1989) argues that there are always bidders that do not take into account the winner's curse and thus they will be more likely to win the bid. It is important to take the winner's curse into consideration in the context of acquisitions due to its uncertainty and information asymmetry.

Prior studies investigate whether potential acquirers bid appropriately and the results show that the winner's curse is evident in the takeover market. For example, Roll (1986) explains in his hubris hypothesis that overconfident managers suffer from the winner's curse and tend to overbid when acquiring target firms.

The test of the winner's curse in this study relates acquirer returns to uncertainty in the value of the target firm. If the uncertainty in the target's value increases, the variance of bids also increases, which leads to higher winning bids. Bazerman & Samuelson (1983) argue that failure to discount bids in response to more uncertainty will increase the probability and magnitude of the winner's curse.

2.2 Target Value Uncertainty

Prior literature on uncertainty and information asymmetry mainly focuses on uncertainty relating to the acquirer. Eckbo & Thorburn (2000) relate target-firm information asymmetry to acquirer returns in their research. They found that bidders are likely to make stock offers in cases of uncertainty since stock offers have a "contingency pricing effect". This effect means that the target is forced to share part of the risk if the bidder overpays when evaluating a stock offer. Thus, bidders should make stock offers when there is high uncertainty on the target's value, and cash offers when there is high uncertainty on their own firm's value. Previous research supports these hypotheses. For example, Travlos (1987) and Martin (1996) find that bidders making cash offers enjoy greater abnormal returns at the bid announcement than do those making stock offers. Officer et al. (2009) confirms by showing

that acquirer returns are significantly higher in stock-swap acquisitions of difficult-to-value targets, as measured by R&D intensity and idiosyncratic return volatility. The results suggest the use of stock as payment resolves information asymmetry about the target. Further to that, they found that the effects of target-valuation uncertainty on both the payment method and the market reaction to acquisitions are more likely to be evident in samples of private acquisitions, as these effects can be disguised in samples of acquisitions of publicly held targets.

In their study, Moeller et al. (2007) link acquirer returns to diversity of opinion and information asymmetry. They found that acquirer abnormal returns are negatively related to information asymmetry for equity offers but not for cash offers. One explanation for this is that the announcement signals to the market that bidder management believes the firm's common stock is overvalued. However, no relation is found between abnormal returns and the proxies for information asymmetry for acquisitions of private firms paid for with equity.

On the other hand, Dionne et al. (2015) find that blockholders pay a much lower premium than other buyers. This is consistent with the belief that less information asymmetry produces higher returns. Dionne et al. (2015) suggest that uncertainty about the target affects acquisition profitability. Following previous research, this study documents an effect of uncertainty in general, and tests – controlling for uncertainty – whether accounting quality has an incremental effect. In other words, by examining accounting quality, this study seeks to test whether a target firm's financial reporting has a meaningful and measurable effect on the results of an acquisition.

2.3 Target Accounting Quality

Before acquiring a firm, bidders face important choices related to the type of bid, the offer premium, and the payment method (Raman et al., 2013). These choices most likely depend upon the quality of information available to bidders, as depicted by the prevalence of anecdotal evidence where takeover bids are conditional on additional disclosures by the target firm. For example, BASF launched a hostile takeover bid for Engelhard Corp on January 4, 2006. The bid represented a 23% premium over Engelhard's closing stock price, but the CEO of BASF was prepared to raise its bid 'by as much as \$1 per share' if Engelhard was ready to open its book (Jenkins et al., 2006).³ Financial reports are not by any means the only source of information used in takeover decisions, but they are likely to be an important source (Raman et al., 2013). Bushman and Smith (2001) argue that an important channel through which financial accounting information can improve economic performance is by contributing input to a variety of corporate control mechanisms. Financial information available about the target is

³ For other example, see the bid by Murchison Metals Limited for Midwest Corporation Limited in 2007.

often used to estimate synergies and other benefits (Koller et al., 2005). The role that financial statements plays during the takeover decision is even more important in deals where the target firm is either unwilling or unable to provide reliable inside information. In the study of Raman et al. (2013), they examine how targets' earnings quality affects acquirers' decisions along three key dimensions: takeover method, offer premium and payment method. They find that bidders prefer negotiated takeovers in deals involving targets with poor earnings quality. Furthermore, they find that earnings quality and takeover premiums are negatively related in negotiated takeovers. Similar to Eckbo & Thorburn (2000), they also find that bidders share information risk with target shareholders by paying with more equity for targets with poor earnings quality. These findings are driven predominantly by the asymmetric information component of earnings quality. However, Raman et al. (2013) do not directly examine the profitability of the acquisition to the acquirer, which is the main focus of this study. In addition, the advantage of examining acquirer returns rather than acquisition premiums is that it includes expected synergies and excludes valuation discounts (McNichols & Stubben, 2015).⁴ Marquardt & Zur (2014) also examine the role of target firms' accounting quality in the merger and acquisition process. They argue that if target firm accounting quality is poor, the target firm benefits to a greater extent from additional bids because the expected winning bid will be higher when there is greater variation in target firm values across potential bidders. Thus, the authors predict that target firms are more likely to be sold via auction when there is a low accounting quality. They find that target firm accounting quality is positively associated with 1) the likelihood that the deal will be structured as a negotiation rather than as an auction, 2) the speed with which the deal reaches final resolution and 3) the likelihood that the proposed deal is ultimately completed. Similar to Raman et al. (2012), they do not address the profitability of acquisitions to acquirers. Black et al. (2007) focus on the relationship between the quality of the foreign target's accounting disclosures and the acquisition's long-term success. Their results show that US acquirers in cross-border mergers experience significantly more negative long-term abnormal returns post-merger. In contrast, this study focuses on mergers in Western Europe and focuses on both short- and long-term profitability. Table 1 provides an overview of relevant papers that analyze target accounting quality.

⁴ The acquisition premium is the acquisition price relative to the target's market value. The target's market value directly reflects any valuation discount due to poor accounting quality, confounding the acquisition premium measure. Instead, the acquirer's return reflects the net value of the acquisition to the acquirer (McNichols & Stubben, 2015).

Table 1

Key Empirical Studies

Overview of studies that analyze target accounting quality (AQ)				
No.	Study	Data description	Measurement of AQ	Dependent Variable
1	Black et al. (2007)	493 acquisitions involving domestic (US) acquiring firms and foreign targets in 17 countries worldwide between 1985 and 1995. Database: SDC Worldwide Mergers, Acquisitions and Alliances	CYAAP is equal to one if national accounting standards are set by private-sector bodies, alone or in conjunction with governmental bodies. NOT_WORSE is equal to one if it is a nation where GAAP generates more or equally timely and value relevant information than US GAAP	Long-term profitability
2	Bharath et al. (2008)	3082 firms in United States between 1988 and 2001. Database: Dealscan	Modified Jones model (1995) to separate total accruals into normal and abnormal accruals	Financial contracting
3	Martin & Shalev (2009)	2560 acquisitions in United States between 1980 and 2012. Database: SDC Merger and Acquisition	Stock return nonsynchronicity	Investment efficiency
4	Biddle et al. (2009)	34,791 firm-year observations in United States between 1993 and 2005. Database: Thomson Financial	Dechow and Dichev (DD) (2002) model, modification by Wysocki (2008), financial disclosure transparency, and average of these three measures	Investment efficiency
5	Raman et al. (2013)	4716 takeover bids in United States between 1977 and 2005. Database: SDC Merger and Acquisition	Dechow and Dichev (DD) (2002) models of accruals quality and McNichols (2002) to modify the DD model	Takeover decisions
6	Skaife & Wangerin (2013)	1638 acquisitions in United States between 2002 and 2008. Database: SDC Merger and Acquisition	Low Quality Financial Reporting (LQFR) is calculated as the average of the decile ranks of the five financial reporting quality variables	Deal completion
7	Marquardt & Zur (2014)	977 acquisitions in United States between 1990 and 2009. Database: SDC Merger and Acquisition	Dechow and Dichev (DD) (2002) models of accruals quality and McNichols (2002) to modify the DD model	Likelihood of negotiation, deal completion, speed of M&A process
8	Lim et al. (2015)	280 acquisitions in South Korea between 2002 and 2011. Database: S&P Capital IQ	The accruals quality measure developed by McNichols (2002) as a proxy for financial reporting quality	Short-term profitability
9	McNichols & Stubben (2015)	2427 acquisitions in United States between 1990 and 2010. Database: SDC Merger and Acquisition	Dechow and Dichev (DD) (2002) models of accruals quality and McNichols (2002) to modify the DD model	Short-term profitability

2.4 Corporate Performance Following M&A

If managers make optimal decisions to maximize shareholder wealth (as opposed to the agency theory) and if M&A can be thus seen as a rational choice of the management to benefit its shareholders, one would expect corporate performance to improve following M&A in case of synergies. Prior research has addressed the question whether M&A creates value for firms and shareholders. Findings from the early studies mostly suggest that targets earn a significant positive abnormal return from acquisition around the announcement day, whereas acquiring shareholders earn negative abnormal returns and earn little or no significant abnormal returns in case of tender offers (Dodd & Ruback, 1977; Jensen & Ruback, 1983; Malatesta, 1983). However, the combination of both target and acquirer becomes more valuable and thus signalling value creation.

With respect to the time frame taken into consideration by researchers, some researchers evaluate the post-M&A performance (e.g. after two or three years). Others adopt a longer time frame such as ten years post-M&A performance. Some studies adopt both *ex ante* and *ex post* measures of M&A performance. These approaches have both advantages and disadvantages. For example, the integration process may last for several years in large acquisitions. Thus, it would be optimal for the researcher to adopt a long time period to assess the success of these M&As (Cooper & Finkelstein, 2014). On the other hand, adopting a long-term period entails the danger of noises in data. The data may be biased by other acquisitions that the firm has conducted during this period. This issue can be overcome by using more short time lags. These trade-offs suggest that researchers should evaluate the accounting performance of M&As with both short and long term periods within a study in order to yield more robust results.

Most studies on M&A use either event methodology or accounting-based methodology. For instance, Black et al. (2007) employ event study and hypothesize that acquiring firms will experience negative long-term abnormal returns post-merger if there is a low target accounting quality. Loughran & Vijh (1997) examine short-window abnormal returns and find that acquiring shareholders earn little or no abnormal returns from tender offers and negative abnormal returns from mergers. However, both short-window and long-window studies of the post-merger market performance of acquiring firms in domestic deals provide mixed evidence. The relationship is stronger with respect to cross-border mergers, given the additional factors that make accurate valuation of international targets difficult. Besides short-term and long-term event studies examining the stock market reaction to takeovers, accounting studies evaluate the combined operating gains of takeovers. Various studies use accounting-based measures such as ratios, growth measures, and operating cash flows. For instance, Papadakis & Thanos (2010) find that half of the studied firms experienced negative ROA two years after the M&A. Researchers using growth measures of accounting performance typically indicate that

M&As lead to negative outcomes for both acquiring and target firms (Dickerson, Gibson & Tsakalotos, 1997). Studies that employ operating cash flows indicate that acquisitions have positive effects for acquiring firms (Healy et al., 1997; Linn & Switzer, 2001).

Generally, M&A studies focus solely on the long-term performance following M&A without taking the target value uncertainty and target accounting quality into consideration. Thus, it would be interesting to see if those two factors have an impact on the profitability in the long term following M&A.

2.5 Due Diligence

Due diligence process may last from a few weeks to a year or more (Reed et al., 2007). However, Lajoux & Elson (2000) find that a fast due diligence process ensures minimal disruption to ongoing business activities and minimization of out-of-pocket costs to both target and acquirer and is thus economically valuable to both parties. Assuming that a longer due diligence process increases the length of time it takes to reach resolution on the transaction, if target accounting quality is useful in the due diligence process, then it is expected to be negatively associated with the length of time required for the M&A process. Marquardt & Zur (2014) find that accounting quality is an economically significant determinant of the speed of the M&A process. They were the first ones that find an association between target accounting quality and the speed of the M&A process.

Other authors examine the relationship between accounting quality and the likelihood of deal completion. For example, Skaife & Wangerin (2013) find that deals involving target firms with low accounting quality are more likely to be terminated, with the marginal effect of low accounting quality increasing the likelihood of termination more than 9 percent. However, if the acquirer gains access to private information via transactional due diligence and realizes that there is greater risk to the takeover of a target with low accounting quality, then the acquirer might renegotiate the offer in order to lower the purchase price rather than terminating the deal. Similar to Skaife & Wangerin (2013), Amel-Zadeh & Zhang (2015) and Martin & Shalev (2009) find that the likelihood of a withdrawn deal after an acquisition announcement decreases with target accounting quality. The study of Xie et al. (2013) differs from the other papers by distinguishing target firms by auditor brand. They argue that deals involving targets with Big N auditors are more likely to be completed due to lower information risk and higher financial reporting quality. In addition, acquirers prefer to choose potential target firms with Big N auditors due to their “deep pockets”, meaning that acquirers can charge target auditors with misrepresenting the viability of the business being sold in the litigation process. Thus, it is expected that acquirers are more willing to complete the deal due the availability of a potential recovery

from the target Big N auditor. In their results, Xie et al. (2013) find that the likelihood of M&A deal completion is higher when the target's auditor is Big N auditor rather than a non-Big N auditor.

2.6 Hypothesis Development

As mentioned in Section 2.1.2, the successful bidder tends to be the one that pays too much for an asset with an uncertain value (Varaiya & Ferris, 1987). The bidder who most overestimates the target's value will typically win the auction (Bazerman & Samuelson, 1983). The test of the winner's curse in my thesis relates acquirer returns to uncertainty in the value of the target firm. If the uncertainty in the target's value increases, the variance of bids also increases, which leads to higher winning bids. Bazerman & Samuelson (1983) argue that failure to discount bids in response to more uncertainty will increase the probability and magnitude of the winner's curse. Therefore, I expect that the acquirer is able to successfully bid less for a target when it can more precisely value the target. If the value of the target has a greater uncertainty, completed acquisitions are more likely to be characterized by higher payments and lower returns to the acquirer. Thus, if valuation uncertainty causes less profitable acquisitions, then to the extent a company's accounting information helps in valuing the target, the prediction of this study is that it can lead to more profitable acquisitions for acquiring firms. Previous literature has demonstrated that accounting information aids in explaining stock prices (e.g. Ball & Brown, 1968; Dechow, 1994). However, what they did not take into account was that the quality of accounting information varies across companies. When targets provide high-quality accounting information, the expectation is that the acquirer can better value the target and therefore earn higher returns. However, the hypothesis might be rejected if there is a possibility that the overpayment is less likely since low target accounting quality leads to a higher cost of capital for target firms, resulting in a built-in discount to acquiring firms and lower purchase-price premiums for target firms (Black et al., 2007). Both short-term and long-term measurements are used to test the effect of target accounting quality. The first hypothesis is as follows:

H1: Acquisitions are more profitable for acquiring firms when target accounting quality is higher.

This study also examines non-return tests in addition to return test. More specifically, this study investigates whether target accounting quality has an impact on the speed of the M&A process. The focus here is on the role of accounting quality in the due diligence process. As mentioned earlier, Lajoux & Elson (2000) observe that a fast due diligence guarantees minimal disruption to ongoing business activities and minimization of out-of-pocket costs to both acquirers and targets. Marquardt &

Zur (2014) find a negative association between target accounting quality and the length of time between the initial discussion of the proposed transaction and the merger announcement in the preannouncement phase, as well as length of time needed to reach final stage of the proposed deal in the postannouncement phase. Therefore, I expect that if target accounting quality is useful in the due diligence process, an improvement in target accounting quality results in a decrease in the length of time required for the M&A process. Thus, the second hypothesis is as follows:

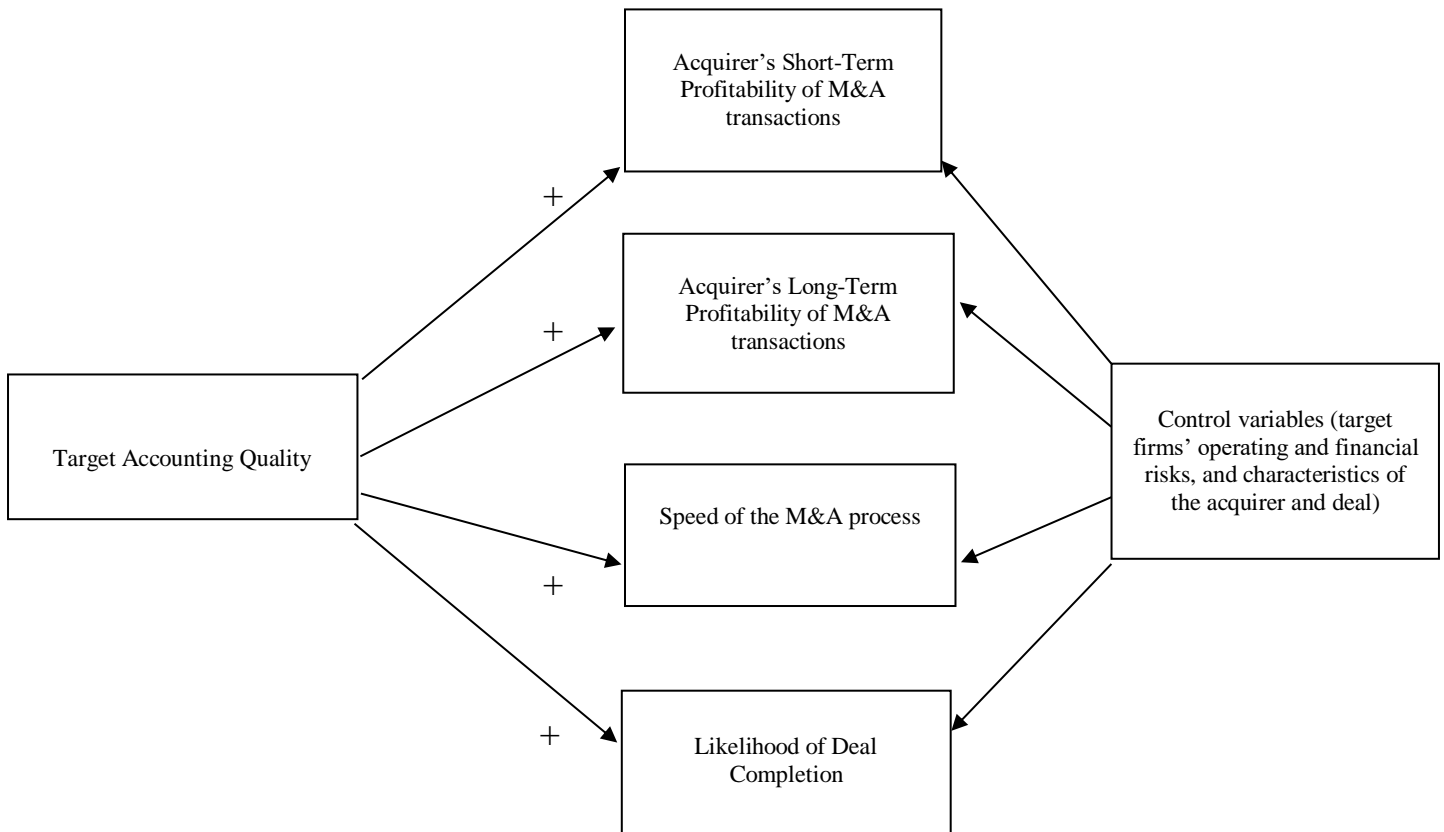
H2: A higher target accounting quality leads to a decrease in the length of time required for the M&A process.

Finally, this study examines whether target accounting quality has an impact on the likelihood that a proposed acquisition is ultimately completed. Bates & Lemmon (2003) report in their results that 21% of announced deals are terminated prior to completion. SDC reports a similar termination rate as Bates & Lemmon (2003). Discontinuation of merger agreement occurs for various reasons, including the manifestation of material adverse change, the receipt of a higher bid after the agreement is publicly announced, a negative market reaction to the deal announcement, or revealing issues during the due diligence phase of the acquisition (Luo, 2005). Thus, in general, the probability of a deal termination increases with the probability that new information about the target's true value will be available between the announcement and completion date (Marquardt & Zur, 2014; Skaife & Wangerin, 2013). To be more specific, the likelihood of the acquirer to discover negative information about the target from the announcement date to the completion date is expected to decrease with the pre-acquisition level of target accounting quality (Martin & Shalev, 2009). As a consequence of discovering negative information about the target, the acquirer is likely to revise downward its common-value estimate and withdraw from the deal. Therefore, the more uncertain the target's valuation, the lower the target accounting quality and the more likely it is that the deal will be terminated. Hence, the last hypothesis is as follows:

H3: A higher target accounting quality increases the likelihood that M&A deals will ultimately be completed.

Figure 1 shows the conceptual framework which summarizes the hypotheses. First, the effect of target accounting quality on the acquirer’s short-term and long-term profitability will be tested. Thereafter, this paper will analyze whether a higher target accounting quality increases the speed of the M&A process. Finally, this paper tests whether a higher target accounting quality increases the likelihood of deal completion. To control for innate firm characteristics correlated with target accounting quality that potentially are also related to acquirer returns, this study includes control variables that capture target firms’ operating and financial risks and characteristics of the acquirer and the deal. This will be further explained in Section 3.2.5.

Figure 1
Conceptual Framework



3. Methodology

This chapter describes the data collection and sampling method, the variables measurement, and the statistical methods applied to test the hypotheses. A description of robustness tests will be presented as well.

3.1 Data Collection and Sampling

The sample is collected from a population of all publicly listed companies in Western Europe, and contains all deals that are announced between 1997 and 2012. The relevant data that are necessary to conduct the study are available through database within the Wharton Research Data Services (WRDS) system and ThomsonOne (T1) database. Daily and monthly stock returns can be found in the Datastream database. All the accounting data are available through Compustat Global database. ThomsonOne provides extensive data about mergers and acquisitions, e.g. the method of payment, deal size, and deal attitude. This study includes all industries, except for the financial industries. Financial industries are excluded from the sample because the financial ratios of the firms within these industries are not comparable to these of others due to significant differences in capital structure, liquidity and operations. The accounting data is based on fiscal year and winsorized on 1% and 99% in order to limit extreme values and thus reduce the effect of possibly spurious outliers.

Table 2 describes the sample selection procedure. The sample should meet the following criteria:

- a) Deal value is disclosed in ThomsonOne database and should be larger than €1 million
- b) Both acquiring and target firm are publicly listed firms
- c) The acquiring firm owns (or seeks to own) 100% of the target's shares after the transaction
- d) Include only deals with available accounting data to calculate accounting quality, and acquirer and target stock returns around the acquisition announcement

After identifying deals that meet those criteria, the final dataset consists of 1684 announced deals between 1997 and 2012. There are 1504 completed deals and 180 terminated deals, as exhibited in Table 2.

Table 2

Sample Selection Procedure

	No. of Observations
Announced M&A deals for years 1997-2012	507131
Less:	
Deals without value information	(312758)
Deals in which target and acquirer are not publicly listed	(149247)
Deals in which the bidder owned or sought to own less than 100% of the target's shares after the transaction	(10636)
Deals in which less than 50% of the target was acquired (or sought to be acquired)	(12734)
Deals in which the acquirer and target are not a Western European company	(19505)
	2251
Less:	
Deals with missing target accounting quality data	(354)
Deals with missing other accounting data	(213)
	1684
By outcome:	
Completed deals	1504
Terminated deals	180
	1684

3.2 Measurements**3.2.1 Measures of Accounting Quality**

To select a measure of accounting quality, it is important to consider the roles that this construct must play in the specific decision context (Marquardt & Zur, 2014). High target accounting quality should help both the target and acquirer in firm valuation. In addition, it should also ease the due diligence process by improving transparency and helping to guarantee that the target's financial statements are free of accounting distortions. Furthermore, this study expects a relation between target firm accounting quality and the course of the M&A process regardless of whether managers intentionally manage earnings. Considering these criteria, the measure is based on the accounting quality on Dechow & Dichev's (DD) (2002) model, which posits a relation between current period accounting accruals and operating cash flows in the prior, current, and future periods. This measure is less vulnerable to managerial manipulation than alternative earnings measures such as earnings persistence and smoothing (Dechow et al. 2010). In addition, this study follows McNichols (2002) and modifies the DD (2002) model by including current sales growth and the current level of PPE into a regression of current accruals on past and present cash flow from operations. Thereafter, absolute residuals from Equation (1) are multiplied by -1 so that this variable increases as accounting quality

increases, as described in the second equation. Marquardt & Zur (2014), Lim et al. (2015) and Raman et al. (2013) use the same model to measure the accounting quality of target firms.

The Dechow and Dichev's model for accounting quality based on annual data is as follows:

$$\Delta WC_{t-1} = \beta_0 + \beta_1 CFO_{t-2} + \beta_2 CFO_{t-1} + \beta_3 CFO_t + \beta_4 \Delta REV_t + \beta_5 PPE_{t-1} + \varepsilon_t \quad (1)$$

$$AQ = (-1) * |\varepsilon_t| \quad (2)$$

where:

ΔWC_{t-1} = change in working capital from year $t - 1$ to t ,

CFO_t = cash flow from operations

ΔREV_t = change in revenue

PPE_{t-1} = gross value of property, plant, and equipment

AQ = accounting quality (measured by accrual quality)

ε_t = random error term

The definitions and the source of all the variables can be found in Appendix B.

3.2.2 Models of Acquirers' Profitability

As mentioned in Section 2.1, the acquirer will pay an acquisition price and receive in return the intrinsic value of the target plus any synergies generated from the combination (McNichols & Stubben, 2015). This study uses acquirer stock returns to measure the market's assessment of this value exchange as this is commonly used in the literature. The assumption is that the market is able to judge the value of target accurately and precisely.

Andrade et al. (2001) argue that short-window event studies provide the most statistically reliable evidence on the value created by acquisitions. More specifically, event studies that use the abnormal stock price reaction at acquisition announcement should be used to estimate the value creation or destruction. In an efficient capital market, stock prices are found to be quickly adjusting following an acquisition announcement and incorporate any expected value changes. Following McNichols & Stubben (2015) and Moeller et al. (2004), this study uses the three-day market-adjusted stock return of the acquirer, centered on the date of announcement in order to measure the economic benefit of the acquisition to the shareholders of acquirers.

However, as argued earlier, it is also important to examine the long-term effect. A short event window may not capture the full impact of acquisitions if there is bid speculation or information leakage prior to the formal bid announcement. It might be possible that there is new price-sensitive information released after the initial bid announcement (e.g. information regarding the entry of a competitive bidder or revision of the offer terms). Using both short-term and long-term performance

can provide more insight regarding the impact of target accounting quality. For long-run abnormal performance, buy-and-hold abnormal return (BHAR) seems to be a conceptually better measure compared to CAR. BHAR is defined as the difference between the long-run return for a sample asset and that of a benchmark asset selected to capture expected return (Loughran & Ritter, 1995). According to Barber & Lyon (1997), the main argument against using CARs in long-run event studies is that they do not measure the variable of interest. This study uses the control firm approach of Barber & Lyon (1997). This approach is used because it eliminates certain biases such as the new listing bias, rebalancing bias and the skewness problem. In this approach, sample firms are matched to a control firm on the basis of specified firm characteristics. First, matches are made within the same two-digit SIC code range. From this set of firms, firms are selected based on their size and book-to-market ratio. These two characteristics of the firms need to be as close as possible to the sample firm. Size is defined here as the market value of equity. All firms are identified with market value of equity between 70 percent and 130 percent of the market value of equity of the sample firm. Within this selection of firms, the firm with the book-to market ratio closest to that of the sample firm will be chosen. This study computes abnormal returns for one- and three-year periods, beginning at the date of the initial announcement. This is in contrast to the methodology of Black et al. (2007), in which they compute abnormal returns beginning one month after the merger completion date. By incorporating the whole period, this study is able to capture the short-term effect as well. The one- and three-year BHARs are calculated by using the following formula:

$$BHAR_i = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{b,t}) \quad (3)$$

Following Black et al. (2007) and Barber & Lyon (1997), the abnormal return for a sample firm is calculated as the difference between the sample firm return (i.e. actual return) and the average of the returns on a control firm (expected return), as shown below:

$$AR_{i,t} = R_{i,t} - E(R_{p,t}) \quad (4)$$

Since the BHAR is the difference between the sample firm return and the average return on a control firm, the distribution of individual firm BHARs is strongly positively skewed (Barber & Lyon, 1997; Mitchell & Stafford, 2000) and generally does not have a zero mean. Therefore, the statistical significance of abnormal returns should be based on bootstrapped t-statistics. To calculate this, a random resample is drawn: for each sample firm with acquisition month t , a replacement firm is drawn

from the matched control firms in month t . After forming a resample (size $n_b = n/4$)⁵, abnormal performance is computed in the resample as described above. This resample process is repeated 1,000 times to form an empirical distribution of long-term abnormal returns. A p-value is calculated as the fraction of the mean BHARs from the pseudo-samples that are larger in magnitude (but with the same sign) than the original mean BHAR.

3.2.2 Measures of Uncertainty

This study examines the effect of uncertainty directly on acquirer and target returns, and controls for uncertainty when examining the effect of accounting quality on acquirer and target returns. It will be difficult to make inferences on accounting quality if target uncertainty is not controlled. As explained by McNichols & Stubben (2015), if there is no control for target uncertainty, the results could be affected by an omitted variable bias due to the uncertainty's high correlation with both returns and accounting quality. Therefore, it is important to include target uncertainty as a control variable. This means that with the control for target uncertainty included, the effect of accounting quality is conditional on uncertainty. Existing research has relied on proxies of uncertainties, such as the implied or realized volatility of stock market returns, the cross-sectional dispersion of firm profits or forecasts (Jurado et al., 2015). McNichols & Stubben (2015), Pastor & Veronesi (2003), and Wei & Zhang (2006) use volatility of the target firm's monthly stock returns to estimate the level of uncertainty related to profitability. This study uses the volatility of the target firm's monthly stock returns, measured over the most recent fiscal years ending before the acquisition announcement, as a measure for uncertainty of the target firm's value (UN_RET). The advantage of using this measure is that it is directly observable.

3.2.3 Measures of Speed of the M&A Process

Similar to Marquardt & Zur (2014), the speed of the M&A process is defined as the log of the number of days in the pre- and postannouncement periods. During the preannouncement period, *Days* is equal to the number of days between signing of the confidential agreement with a prospective bidder and merger announcement date. During the postannouncement period, *Days* is equal to the number of days between the merger announcement date and the date that the deal is either completed or terminated.

⁵ The skewness adjustment results in more conservative test statistics if the size of the bootstrap resample is decreased. According to Bickel, Gotze & Van Zwet (1997) and Shao (1996), bootstrap resample sizes of $n/2$ also results in well-specified inferences, while bootstrap resample sizes of n do not.

3.2.4 Measures of Likelihood of Completeness

Similar to Skaife & Wangerin (2013) and Martin & Shalev (2009), this study uses indicator variable that equals one if the proposed acquisition is completed and 0 if terminated. Logistic regression is used to test the prediction that a higher target accounting quality increases the likelihood that M&A deals will ultimately be completed. However, as noted by Skaife & Wangerin (2013), the acquirer might renegotiate the offer in order to lower the purchase price rather than terminating the deal as a response to greater risk to the takeover of a target with low accounting quality. Therefore, this study also uses a specification in which the dependent variable is equal to zero if the deal is completed with renegotiation (i.e. final offer price is less than the initial offer price), and one if the deal is completed without renegotiation,

3.2.5 Other Variable Measurements

Prior studies report that firm-specific operating characteristics affect the quality of firms' financial information (Dechow et al., 1995; Dechow & Dichev, 2002; Francis et al., 2005; Skaife & Wangerin; 2013) and find that targets' operating characteristics also affect acquirer returns. Thus, it is important to control for innate firm characteristics correlated with target accounting quality that potentially are also related to acquirer returns in an attempt to reduce the threat of a correlated omitted variables problem. This study includes control variables that capture target firms' operating and financial risks and characteristics of the acquirer and the deal applied in prior research to explain acquirer returns.

First, size of the acquirer and target is captured by ACQ_SIZE and TAR_SIZE. Whereas ACQ_SIZE is the natural log of the acquirer's market value of equity, TAR_SIZE is the natural log of the target's market value of equity. Also, the relative size of the target to acquirer is measured in this study. REL_SIZE is the target's market value of equity divided by the acquirer's market value of equity. ACQ_SIZE, TAR_SIZE and REL_SIZE are measured two days prior to the initial announcement of acquisition. Second, leverage of the target firm is captured by LEVERAGE, measured as the ratio of total liability to total assets. Third, TAR_GROWTH is the ratio of the target's annual revenue to the revenue of the prior year. The fourth control is DIFF_IND, an indicator variable that equals one if the acquirer and target have different two-digit SIC code, and 0 otherwise. CASH is the fifth control, an indicator variable that equals one if the deal is paid using cash only, and 0 otherwise. The sixth control is TENDER which is also an indicator variable that equals one if the acquisition is a tender offer, and 0 otherwise. The seventh control is FRIENDLY that equals one if deal is friendly, and 0 otherwise. The eighth control is EARNOUT that equals one if deal includes an earnout, and 0 otherwise. COMPETING is the ninth control that equals one if there are additional bids for the target, and 0 otherwise. POSIONPILL equals one if the target firm has a poison pill, and 0 otherwise.

PRIOR_BID equals one if there was a prior bid for the target that terminated within the 365 calendar years, and 0 otherwise. TOEHOLD is the percentage of target firm's outstanding shares held by the bidder prior to the deal. The variable LIT_RISK equals one if the firm is a member of an industry with high litigation risk, and 0 otherwise. Finally, the empirical model includes annual fixed effects in order to control for changing economic conditions over time and their effect on acquirer returns. For an overview of the measurements of independent and dependent variables, see Libby boxes in Appendix A. Variable definitions are provided in Appendix B.

3.3 Empirical models

To date, the literature has not yet converged on a single model for acquirer returns. However, based on the prior literature, important factors that should be included are likely to be the payment method, deal attitude, and acquirer size. This study also includes the factors identified in Marquardt & Zur (2014), McNichols & Stubben (2015) and Lim et al. (2015) as determinants of profitability of acquiring/target firm. To test the effect of accounting quality on the profitability of the acquisition to acquiring firms, the following model is used and estimated using OLS regression:

$$\begin{aligned}
 ACQ_RET_CAR = & \beta_0 + \beta_1AQ + \beta_2UN + \beta_3ACQ_SIZE + \beta_4REL_SIZE + \beta_5TAR_SIZE \\
 & + \beta_6LEVERAGE + \beta_7TAR_GROWTH + \beta_8DIFF_IND + \beta_9CASH \\
 & + \beta_{10}TENDER + \beta_{11}FRIENDLY + \beta_{12}EARNOUT + \beta_{13}COMPETING \\
 & + \beta_{14}POISONPILL + \beta_{15}PRIOR_BID + \beta_{16}LIT_RISK + \beta_{17}TOEHOLD \\
 & + \gamma_n Year\ dummies + \varepsilon
 \end{aligned} \tag{5}$$

where ACQ_RET_CAR is the three-day market-adjusted stock return of the acquiring firm, centered on the date of the initial announcement of an acquisition, and UN is split into UN_RET and UN_CF, as previously defined. The prediction of the first hypothesis is that a higher target accounting quality will lead to a higher profitability for acquiring firms. Since mixed results are provided regarding the control variables included in Equation (5), no predictions are made.

To examine whether the effect of high target accounting quality also holds in the long term, the following model is used:

$$\begin{aligned}
 ACQ_RET_BHAR = & \beta_0 + \beta_1AQ + \beta_2UN + \beta_3ACQ_SIZE + \beta_4REL_SIZE + \beta_5TAR_SIZE \\
 & + \beta_6LEVERAGE + \beta_7TAR_GROWTH + \beta_8DIFF_IND + \beta_9CASH \\
 & + \beta_{10}TENDER + \beta_{11}FRIENDLY + \beta_{12}EARNOUT + \beta_{13}COMPETING
 \end{aligned}$$

$$\begin{aligned}
& +\beta_{14}POISONPILL + \beta_{15}PRIOR_BID + \beta_{16}LIT_RISK + \beta_{17}TOEHOLD \\
& + \gamma_n Year\ dummies + \varepsilon
\end{aligned} \tag{6}$$

where ACQ_RET_BHAR represents the buy-and-hold abnormal returns. The prediction is that a higher target accounting will also result in a higher acquirers' profitability in the long term. This study examines the profitability for one- and three-year periods, beginning at the initial announcement date. Similar to Equation (5), no predictions are made for the control variables due to mixed results in prior studies.

For the second hypothesis, this study regresses the log of the number of days in the pre- and postannouncement periods on the accounting quality measures and other control variables to test the relation between accounting quality and the length of the M&A process. The model tested takes the following form and is estimated using log-linear regression⁶:

$$\begin{aligned}
Ln(Days + 1) = f(AQ, UN, ACQ_SIZE, REL_SIZE, TAR_SIZE, LEVERAGE, \\
TAR_GROWTH, DIFF_IND, CASH, TENDER, FRIENDLY, \\
EARNOUT, COMPETING, POISONPILL, PRIOR_BID, \\
LIT_RISK, TOEHOLD, \gamma_n Year\ dummies)
\end{aligned} \tag{7}$$

where *Days* in the preannouncement period is equal to the number of days between signing of an agreement with a prospective bidder and merger announcement date, and *Days* in the postannouncement period is equal to the number of days between the merger announcement date and the date that the deal is either completed or terminated. The second hypothesis predicts that target accounting quality will speed the due diligence process and thus reduce the time required for the transaction. This suggests that a negative estimated coefficient on AQ is expected in Equation (7). In addition to the set of control variables defined in the third and fourth equation, this equation considers whether the bidder already has a toehold in the target, a prior bid for the target, and whether the target operates in an industry with high litigation risk. In general, prior bidding (PRIOR_BID) is expected to decrease the length of the M&A process and cash (CASH), litigation risk (LIT_RISK) and different industry (DIFF_IND) to increase the length of time required for the deal. No predictions are made for the remaining control variables.

⁶ Log-linear model has an advantage over logistic regression because of its ability simultaneously to test relationships between multiple outcome and multiple explanatory variables (Fienberg, 1980).

To test the prediction that a higher target accounting quality increases the likelihood that M&A deals will ultimately be completed, the following logistic regression model is estimated:

$$\begin{aligned} \text{Prob}(\text{COMPLETED} = 1) = f(\text{AQ}, \text{UN}, \text{ACQ_SIZE}, \text{REL_SIZE}, \text{TAR_SIZE}, \text{LEVERAGE}, \\ \text{TAR_GROWTH}, \text{DIFF_IND}, \text{CASH}, \text{TENDER}, \text{FRIENDLY}, \\ \text{EARNOUT}, \text{COMPETING}, \text{POISONPILL}, \text{PRIOR_BID}, \\ \text{LIT_RISK}, \text{TOEHOLD}, \gamma_n \text{Year dummies}) \end{aligned} \quad (8)$$

where *COMPLETED* equals one if the proposed acquisition is completed and 0 if terminated. All other variables are as previously defined. Based on the fourth hypothesis, a positive estimated coefficient on AQ is expected, i.e. acquisitions of targets with high accounting quality are more likely to be ultimately completed than terminated. As mentioned earlier, it might be possible that the deal is renegotiated instead of terminated altogether. Thus, an additional regression will be conducted that includes renegotiation as an outcome for each transaction. The dependent variable Y_j is thus set equal to one of the two outcomes:

$$Y_j \begin{cases} \bullet Y_R = 0 \text{ RENEGOTIATED} \\ \bullet Y_C = 1 \text{ COMPLETED} \end{cases}$$

When estimating the logistic regression, this study uses a subsample in which renegotiation is most likely to occur by excluding deals involving tender offers as these transactions involve negotiating directly with target shareholders rather than target directors (Skaife & Wangerin, 2013). This study predicts that the relation between AQ and RENEGOTIATED to be negative because acquirers are likely to attempt to renegotiate the offer once they determine that the financial information of target with low accounting quality is not representative of the target's underlying economic value after gaining access to target's private financial information during transactional due diligence (Skaife & Wangerin, 2013). If the parameter estimate for AQ is negative and statistically significant, acquisitions of targets with low-quality financial reporting are more likely to be renegotiated.

The deal characteristics variables defined above are attributes that prior research documents are associated with the likelihood that the deal is either completed or terminated (Betton & Eckbo, 2000; Hsieh & Walkling, 2005). Deals where the acquirer and target are involved in negotiation (e.g. friendly deal) regarding the combination are more likely to be completed, so the prediction is that there is a positive relation between FRIENDLY and the likelihood that the deal is completed. If multiple firms

are competing for a particular target, the competition consequently leads to an increase in the likelihood that the deal will be terminated. Thus, a negative coefficient on COMPETING is predicted.

Previous research suggests that the probability of the deal being completed increases when the acquirer has already established an ownership relationship (Hsieh & Walkling, 2005). However, according to Skaife & Wangerin (2013), the cost of obtaining control may outweigh its benefits for certain targets. Thus, the coefficient on TOEHOLD is left unsigned. Furthermore, mixed evidence is shown on whether deals involving acquiring firms' tender offers are more or less likely to be completed/terminated. Therefore, no prediction regarding the coefficient on TENDER is made.

Prior bidding (PRIOR_BID) and litigation risk (LIT_RISK) decreases the probability of deal completion (Bates & Lemmon, 2003). Finally, for completeness, this study includes the control variables ACQ_SIZE, TAR_SIZE, REL_SIZE, CASH, DIFF_IND, EARNOUT, but has no priors regarding their expected sign in Equation (8).

3.4 Robustness tests

To provide confidence in the results and to address potential endogeneity problems (i.e. target accounting quality affects return volatility), another measure of target uncertainty is examined. An alternative measure is the volatility of annual cash flows from operations divided by total assets. According to Zhang (2006), this measure is more likely to capture the uncertainty than other proxies such as firm size, analyst coverage, and the analyst forecast revisions. Similar to Zhang (2006) and McNichols & Stubben (2015), this study uses the volatility of annual cash flows to measure uncertainty.

4. Empirical results and analysis

This section presents the descriptive statistics, and outlines the test results to answer the main research question. Also, robustness test results will be discussed.

4.1 Sample Description

Table 3 provides the descriptive statistics for the variables that are used in this study as proxies for the different hypotheses. The data requirements yield a sample of 1684 acquisitions between 1997 and 2012 involving acquiring firms and targets in Western Europe. To protect the results against the influence of outliers, all continuous variables are winsorized at the 1% and 99% levels. Table 3, Panel A, shows a positive average three-day market-adjusted stock return to acquirers centered on the initial acquisition announcement ($ACQ_RET_CAR = 0.041$), which means that the market reaction on the announcement date of the acquisition is positive on average. This is similar to the results in studies of the US acquisitions. On the other hand, the long-term term market-adjusted stock return shows a negative mean for both one-year and three-year period ($ACQ_RET_BHAR_{1yr} = -0.015$, $ACQ_RET_BHAR_{3yr} = -0.039$). The negative acquirer returns are consistent with overpayment resulting from the winner's curse or agency problems (McNichols & Stubben, 2015). This contrast of short-term with the long-term results suggests that the market's optimism at the outset regarding the merger was unwarranted (Black et al., 2007). The mean and median values for accrual quality (AQ) are -0.118 and -0.121 respectively. The negative values are consistent with the results of Lim et al. (2015) and McNichols & Stubben (2015). According to Marquardt & Zur (2014), a negative AQ indicates the difficulties of firms with poor financial reporting quality in becoming target. Furthermore, Panel A of Table 3 shows that among 1,684 takeover bids, 89.5 percent of such deals have been ultimately completed. In this sample, 35.3 percent of the deals are in different industries and 92.5 percent of those deals are friendly. Other studies also find a high percentage of friendly deals. According to Marquardt & Zur (2014), an overwhelming majority of M&A transactions are usually friendly acquisitions. The descriptive statistics in this study also find that 79.3 percent of the deals are financed with cash only and a small 1.1% percent of the deals entails the use of poison pills. 18.2% of the deals are on tender offer basis. Generally, the deal characteristics of the sample firms are generally consistent with those reported in prior studies (e.g. Marquardt & Zur, 2014; Officer, 2003; Raman et al., 2013; Schwert, 2000).

Table 3, Panel B, presents correlations. The market perceives acquisitions to be more profitable when the target firm has a good accounting quality. The correlation between acquirer returns in both short and long term and accounting quality is positive and statistically significant. Both measures of uncertainty are negatively correlated with acquirer returns, indicating that a higher target value uncertainty decreases

the profitability of the acquirer. Also, the market perceives acquisitions to be more profitable when deals are financed fully with cash. This is consistent with the findings of Martin (1996), who find that bidders making cash offers enjoy greater abnormal returns at the bid announcement than do those making stock offers. The correlation table also shows that target value uncertainty is negatively correlated with cash as payment method. This is in line with the findings of previous research (Travlos, 1987; Martin, 1996). Bidders are likely to make stock offers in cases of uncertainty due to the “contingency pricing effect”. The target is forced to share part of the risk if the bidder overpays when evaluating a stock offer. Therefore, bidders should make stock offers when there is high uncertainty on the target’s value and cash offers when there is less uncertainty. Similar to the results of McNichols & Stubben (2015), acquirer returns are positively correlated with tender offers, which indicates that acquisitions appear to be more profitable when a tender offer is used as a public takeover bid. Consistent with the findings of Marquardt & Zur (2014) and Biddle et al. (2009), accounting quality is significantly positively associated with leverage. In contrast to the findings of McNichols & Stubben (2015), the correlations show that competing bids are significantly negatively associated with acquirer returns. This confirms the winner’s curse theory because in the event of competition for a takeover candidate, the successful bidder tends to be the one that pays too much for a target firm. The correlation of relative size of the deal to the acquiring firm and cash payment is negative, which is in line with previous research (Grullon, Michaely & Swary, 1997). When the relative size of the target is large, the chance of paying with cash decreases. One concern here is whether including these control variables induces or mitigates estimation bias in the analyses. To assess the extent to which the results of this study are affected by multicollinearity, variance inflation factors (VIF) for each matrix of explanatory variables will be examined when estimating the regression equations. The results show that none are greater than a VIF of 5, which is well below the recommended ceiling of 10 that would indicate a severe multicollinearity issue (Greene, 2007).

As shown in Table 3, Panel C, the number of mergers in the sample declines after the year of crisis. In 2012, the number of mergers is significantly lower than in the other years (2.67%). Panel F of Table 3 also shows that there were less completed deals after the economic crisis. Over one-half of the sample involves targets in four countries: The United Kingdom (25.06%), France (13.00%), Germany (9.86%), and Sweden (9.14%). Other countries make up between 0.06% and 8.08% of the sample (Table 3, Panel D). Furthermore, Table 3, Panel E shows that almost 19% of the acquiring firms in the sample, and 21% of the targets, are merchandising firms (SIC Codes: 2000-2999). Another 19% of the acquiring firms and almost 20% of the targets are from SIC Codes 7000-7999 (services).

Table 3

Descriptive Statistics

Table 3 presents descriptive statistics for 1684 acquisitions from 1997 to 2012. Panel A presents summary statistics. The statistics include the number of firm years (N), mean, standard deviation (SD), median, first (Q1) and third quartiles (Q3). Panel B presents the composition of sample by settlement year. Panel C presents Pearson (above diagonal) and Spearman (below diagonal) correlation coefficients among regression variables. The primary source for accounting and stock data is Compustat Global. For information on mergers and acquisitions, ThomsonOne (T1) is used. Accounting data is based on the fiscal year end and is winsorized at the 1% and 99% levels. Correlations significantly different from zero at p-values less than 10% are in bold. See the appendix for variable definitions.

Panel A: Summary Statistics						
Variable	N	Mean	SD	Q1	Median	Q3
ACQ_RET_CAR	1684	0.041	0.082	0.012	0.035	0.046
ACQ_RET_BHAR _{1yr}	1684	-0.015	0.097	-0.009	-0.012	-0.018
ACQ_RET_BHAR _{3yr}	1684	-0.039	0.433	-0.189	-0.031	-0.042
ACQ_SIZE	1684	7.521	2.122	6.023	7.249	8.218
AQ	1684	-0.118	0.069	-0.157	-0.121	-0.072
CASH	1684	0.793	0.491	1.000	1.000	1.000
COMPETING	1684	0.055	0.223	0.000	0.000	0.000
COMPLETED	1684	0.895	0.351	1.000	1.000	1.000
Days, Preannouncement	1684	4.853	3.266	2.000	5.000	8.000
Days, Postannouncement	1684	68.871	106.051	0.000	36.000	91.25
DIFF_IND	1684	0.353	0.134	0.000	1.000	1.000
EARNOUT	1684	0.002	0.071	0.000	0.000	0.000
LEVERAGE	1684	0.454	0.322	0.353	0.446	0.501
LIT_RISK	1684	0.028	0.014	0.009	0.024	0.038
FRIENDLY	1684	0.925	0.141	1.000	1.000	1.000
POISONPIL	1684	0.011	0.082	0.000	0.000	0.000
PRIOR_BID	1684	0.011	0.083	0.000	0.000	0.000
REL_SIZE	1684	0.352	0.451	0.414	0.162	0.438
TAR_GROWTH	1684	0.287	0.477	0.012	0.201	0.318
TAR_SIZE	1684	2.648	0.314	2.152	2.598	2.809
TENDER	1684	0.182	0.371	0.000	0.000	0.000
%TOEHOLD	1684	0.007	0.131	0.001	0.006	0.011
UN_RET	1684	0.041	0.02	0.023	0.035	0.051
UN_CFO	1684	0.081	0.062	0.044	0.066	0.102

Table 3 - continued

Panel B: Correlations among regression variables		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1	ACQ_RET_BHAR		0.026	0.012	0.029	0.111	-0.018	0.133	-0.108	0.056	-0.01	-0.323	0.477	-0.221	0.178	-0.299	-0.209	0.402	0.156	-0.309	-0.145	0.135
2	ACQ_RET_CAR	0.027		-0.021	0.053	0.124	-0.015	0.082	-0.011	0.156	-0.145	-0.102	0.841	-0.024	0.071	-0.032	-0.103	0.133	0.035	-0.025	-0.041	0.122
3	ACQ_SIZE	0.012	-0.213		0.089	0.465	0.314	0.154	0.076	0.098	0.103	0.143	0.183	0.191	0.162	0.156	0.235	0.253	0.354	0.273	0.105	0.106
4	AQ	0.029	0.055	0.091		0.042	-0.012	0.041	-0.105	0.014	-0.112	-0.138	0.109	-0.038	0.023	0.345	0.294	0.392	0.104	-0.359	-0.401	0.114
5	CASH	0.101	0.105	0.472	0.211		0.147	0.104	0.352	0.082	0.048	0.108	0.139	0.205	0.033	-0.042	0.023	0.055	0.129	-0.316	-0.111	0.306
6	COMPETING	-0.022	-0.231	0.314	-0.013	0.152		0.249	0.394	0.233	0.434	0.565	0.122	0.501	0.321	0.323	0.571	0.412	0.321	0.344	0.256	0.279
7	COMPLETED	0.134	0.102	0.142	0.041	0.103	0.349		-0.256	0.114	-0.175	-0.198	0.253	-0.345	0.339	0.239	0.583	-0.038	0.631	-0.141	-0.129	0.112
8	DIFF_IND	-0.11	-0.149	0.079	-0.106	0.352	0.384	-0.256		0.109	0.231	0.181	0.204	0.103	0.244	0.371	0.102	0.223	-0.167	0.439	0.239	0.452
9	EARNOUT	0.047	-0.124	0.122	0.018	0.093	0.234	0.114	0.109		0.293	0.322	0.293	-0.472	0.387	0.283	0.472	0.172	0.382	0.178	0.218	-0.169
10	LEVERAGE	0.339	-0.291	0.103	-0.111	0.047	0.464	-0.175	0.231	0.293		-0.175	0.231	0.293	0.234	0.183	0.188	0.039	0.318	0.349	-0.471	0.097
11	LIT_RISK	-0.321	-0.192	0.143	-0.138	0.106	0.588	-0.198	0.181	0.322	-0.155		0.181	0.322	0.129	-0.192	0.035	0.129	0.273	0.672	0.182	0.103
12	FRIENDLY	0.461	0.541	0.182	0.107	0.142	0.123	0.253	0.204	0.293	0.231	0.183		0.293	0.236	0.127	0.485	0.203	0.741	0.273	0.372	0.220
13	POISONPIL	-0.22	-0.114	0.201	-0.039	0.215	0.511	-0.345	0.103	-0.472	0.273	0.325	0.297		0.613	0.024	0.104	0.101	0.113	0.203	0.124	0.308
14	PRIOR_BID	0.173	0.192	0.152	0.026	0.036	0.322	0.339	0.244	0.387	0.234	0.125	0.235	0.613		0.014	0.082	0.233	0.114	0.109	0.212	0.429
15	REL_SIZE	-0.298	-0.034	0.251	0.442	-0.041	0.344	0.239	0.371	0.283	0.193	-0.193	0.127	0.224	0.014		0.249	0.111	0.211	0.481	0.213	0.102
16	TAR_GROWTH	-0.211	-0.104	0.234	0.321	0.025	0.571	0.583	0.102	0.472	0.189	0.235	0.495	0.104	0.082	0.249		0.205	0.501	-0.345	0.103	0.150
17	TENDER	0.403	0.133	0.329	0.393	0.057	0.412	-0.038	0.223	0.172	0.139	0.128	0.213	0.151	0.233	0.111	0.227		0.139	0.019	0.009	0.187
18	%TOEHOLD	0.158	0.023	0.365	0.192	0.128	0.321	0.631	-0.167	0.382	0.321	0.273	0.841	0.114	0.114	0.211	0.511	0.119		0.033	0.203	0.121
19	UN_RET	-0.31	-0.025	0.288	-0.357	-0.315	0.344	-0.141	0.439	0.178	0.352	0.674	0.373	0.233	0.109	0.481	-0.245	0.039	0.083		0.679	0.204
20	UN_CFO	-0.145	-0.042	0.106	-0.402	-0.112	0.256	-0.129	0.239	0.218	-0.471	0.192	0.672	0.124	0.212	0.213	0.105	0.019	0.272	0.239		0.267
21	TAR_SIZE	0.135	0.099	0.103	0.114	0.305	0.278	0.102	0.422	-0.199	0.096	0.104	0.119	0.306	0.411	0.099	0.151	0.162	0.122	0.204	0.283	

Table 3 – continued

Panel C: Transaction Frequency by Years

Year	Number	Percentage
1997	94	5.58%
1998	81	4.81%
1999	129	7.66%
2000	157	9.32%
2001	134	7.96%
2002	118	7.01%
2003	103	6.12%
2004	96	5.70%
2005	126	7.48%
2006	138	8.19%
2007	128	7.60%
2008	96	5.70%
2009	74	4.39%
2010	86	5.11%
2011	79	4.69%
2012	45	2.67%
Total	1684	100.00%

Panel D: Transaction frequency by target country

Country	Number	Percentage
Austria	15	0.89%
Belgium	23	1.37%
Cyprus	3	0.18%
Denmark	43	2.55%
Finland	86	5.11%
France	219	13.00%
Germany	166	9.86%
Greece	14	0.83%
Guernsey	3	0.18%
Iceland	4	0.24%
Ireland	24	1.43%
Isle of Man	2	0.12%
Italy	92	5.46%
Jersey	3	0.18%
Luxembourg	1	0.06%
Netherlands	136	8.08%
Norway	87	5.17%
Portugal	14	0.83%
Spain	84	4.99%
Sweden	154	9.14%
Switzerland	89	5.29%
United Kingdom	422	25.06%
Total	1684	100.00%

Table 3 – continued

Panel E: Frequency of Acquiring Firms and Target Firms by One-Digit SIC code

SIC Code	Industry	Number of Acquirers	Percentage of Acquirers	Number of Targets	Percentage of Targets
0000-0999	Agriculture, Forestry and Fishing	18	1.07%	20	1.19%
1000-1999	Mining and Construction	143	8.49%	120	7.13%
2000-2999	Merchandising	318	18.88%	355	21.08%
3000-3999	Manufacturing	373	22.15%	340	20.19%
4000-4999	Transportation, Communications, Electric, Gas and Sanitary service	302	17.93%	269	15.97%
5000-5999	Wholesale and Retail Trade	128	7.60%	156	9.26%
7000-7999	Services	314	18.65%	325	19.30%
8000-8999	Public Administration	88	5.23%	99	5.88%
Total		1684	100.00%	1684	100.00%

Panel F: Composition of sample by settlement year

Year	Completed deals	Terminated deals	Total
1997	86	8	94
1998	74	7	81
1999	101	28	129
2000	136	21	157
2001	122	12	134
2002	108	10	118
2003	98	5	103
2004	91	5	96
2005	117	9	126
2006	121	17	138
2007	115	13	128
2008	86	10	96
2009	63	11	74
2010	79	7	86
2011	70	9	79
2012	37	8	45

4.2 Main Regression Results

Table 4 presents results relating to the determinants of acquirers' acquisition announcement period abnormal stock returns. In Table 4, model 1 shows estimates from the base model, which includes a measure of uncertainty (UN_RET) but not accounting quality (AQ). Returns to the acquirer's shareholders for acquisition of targets with uncertain values are lower, consistent with expectations ($t = -3.389$). Model 1 also indicates that, on average, acquisitions are less profitable when there are competing bids ($t = 3.477$). This can be explained by the winner's curse hypothesis that was highlighted in Section 2.1.2. In the event of competition for a takeover candidate, the successful bidder will tend to be the one who pays too much for an asset with an uncertain value. If there are multiple bidders, it is highly likely that the bidder will overbid when acquiring target firms. Bradley, Desai & Kim (1988) also report a negative association between competing bids and acquirer returns, and Schwert (2000) reports that multiple bidder contests increase target returns and reduce acquirer returns. Also, abnormal stock returns for targets in different industries are less than when the targets are in the same industries as the acquirers ($t = -1.997$). Asymmetric information concerns are found to be greater when targets and acquirers are not in the same industries (Raman et al., 2013). Since a higher uncertainty leads to lower acquirer's profitability, a negative coefficient on DIFF_IND is in line with expectations. In addition, Table 4 shows that there is a negative association between a target firm with high litigation risk and acquirer's returns ($t = -3.108$). Since litigation generates an information risk to appraise the firm's situation and a higher uncertainty is negatively correlated with acquirer's profitability, a negative coefficient on LIT_RISK is also expected.

Turning to model 2, consistent with Hypothesis 1, returns to acquirers are significantly higher when the target has higher accounting quality ($t = 3.482$). Even though model 3 shows that controlling for uncertainty attenuates the effect of target accounting quality, the effect remains significantly positive ($t = 2.227$). Model 2 also indicates that the abnormal stock return for cash acquisition is more than that of stock acquisitions ($t = 2.299$). This is consistent with the results of Travlos (1987) and Martin (1996), who find that bidders making cash offers enjoy greater abnormal return than do those making stock offers. As mentioned before, bidders make stock offers when there is high uncertainty on the target's value (Eckbo & Thorburn, 2000).

The regression also shows that tender offers (TENDER) is positively associated with acquirer's profitability, which is statistically significant ($t = 3.980$). This is consistent with the results of Jensen and Ruback (1983) in which they find that the abnormal returns for bidder in tender offers are significantly positive and range from 2.4% to 6.7%, with a weighted average return of 3.8%. Previous empirical research show that corporate acquisitions by tender offers provide significant and positive abnormal returns to the stockholders of both the target and the acquiring firms (Bradley, 1980; Bradley et al., 1982; Dodd & Ruback, 1977). This might be due to the reason that tender offers are an attempt

by the bidding firm to exploit some specialized resource by gaining control of the target and implementing a higher-valued operating strategy. This strategy may involve more efficient management, economies of scale, improved production techniques, increased market power, or any number of value-creating mechanisms (Bradley et al., 1983). An alternative explanation posits that the revaluation of the target shares is due to new information that is generated during the tender offer process. According to Bradley et al. (1983), there are two forms of the information hypothesis. The first one argues that the dissemination of the new information prompts the market to revalue previously undervalued target shares. The second form argues that the new information allows the current target management to implement a higher-valued operating strategy on its own.

Furthermore, the regression results show that the size of the acquirers has a negative coefficient ($t = -3.569$). This indicates that larger acquirers have lower announcement abnormal returns than small acquirers. Moeller et al. (2004) explain in their study why negative abnormal returns associated with acquisitions are more pertinent for acquisitions by large firms. Large acquirers offer larger acquisition premiums than small acquirers and enter acquisitions with negative dollar synergy gains, which is consistent with managerial hubris playing more of a role in the decisions of large firms. They find that the abnormal return associated with acquisition announcements for small acquirers exceed the abnormal return associated with acquisition announcement by large acquirers by 2.24 percentage points. The regression results show a negative coefficient ($t = -2.412$) for the size of the target as well, which is consistent with the findings of prior literature. Alexandridis et al. (2013) find that acquisitions of large targets destroy more value for acquirers and result in sharper increases in their return uncertainty around the announcement date, which implies that investors perceive these deals as more uncertain projects.

The findings are consistent with the results of McNichols & Stubben (2015) and in support of Hypothesis 1 for short-term profitability.

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Table 4**Regression Results - Short Term**

Table 4 presents coefficients and t-statistics of determinants of acquiring firms' 3-days abnormal stock returns (ACQ_RET_CAR). The sample consists of 1504 completed deals over the 1997-2012 period. Table 4 presents the regression results using volatility of the target firm's monthly stock returns as a measure of target uncertainty. The first column includes a measure of target value uncertainty, but no target accounting quality. The second column includes a measure of target accounting quality and no target value uncertainty. The third column includes both measures. Tests for multicollinearity are conducted using variance inflation factors (VIF), and no multicollinearity is found. Standard errors are corrected for heteroscedasticity. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, *** significant at the 0.01 level.

Multivariate Analysis Dependent Variable: 3-days Abnormal Stock Return			
	Model 1	Model 2	Model 3
Intercept	0.043** (2.073)	0.046 (1.480)	0.079** (2.583)
AQ		0.234*** (3.482)	0.156** (2.227)
UN_RET	-0.382*** (-3.389)		-0.599*** (-3.232)
ACQ_SIZE	-0.014*** (-3.638)	-0.004*** (-2.691)	-0.012*** (-3.569)
REL_SIZE	0.009 (0.465)	0.008 (0.211)	-0.002 (-0.079)
LEVERAGE	-0.057 (-1.331)	-0.054 (-1.425)	-0.046 (-1.312)
TAR_GROWTH	0.018 (0.212)	0.009 (0.022)	0.012 (0.091)
DIFF_IND	-0.361* (-1.685)	-0.254* (-1.691)	-0.299* (-1.997)
CASH	0.127* (1.724)	0.216** (2.299)	0.121* (1.688)
TENDER	0.217*** (5.085)	0.255*** (3.967)	0.244*** (3.980)
FRIENDLY	0.218*** (3.461)	0.278*** (3.611)	0.214*** (3.197)
EARNOUT	0.016 (0.272)	0.011 (0.265)	0.005 (0.288)
COMPETING	-0.389*** (-3.477)	-0.375*** (-3.239)	-0.343*** (-3.185)
POISONPILL	-0.023 (-1.455)	-0.467 (-1.339)	-0.458 (-1.239)
PRIOR_BID	0.108 (1.421)	0.167 (1.510)	0.153 (1.469)
LIT_RISK	-0.164*** (-3.125)	-0.129*** (-3.089)	-0.123*** (-3.108)
TOEHOLD	0.025* (1.709)	0.039* (1.712)	0.021* (1.751)
TAR_SIZE	-0.153** (-2.461)	-0.149** (-2.358)	-0.151** (-2.412)
Year fixed effects	Included	Included	Included
Adjusted R-squared	0.236	0.236	0.238
N	1504	1504	1504

Table 5 reports results for three-year abnormal returns⁷, where ACQ_RET_BHAR represents the buy-and-hold abnormal returns. As mentioned earlier, the prediction is that a higher target accounting quality will also result in a higher acquirer's profitability in the long term. Similar to the results for short term, Table 5 shows that the relationship between target uncertainty and acquirer's profitability is negative in the long term ($t = -3.146$). The results also indicate that a higher target accounting quality benefits the acquirer's shareholders significantly in terms of profitability ($t = 1.734$). The findings are in contrast to the results of Black et al. (2007) in which they find negative abnormal returns over a three- to five-year period following completion of mergers.

Other variables are generally similar to the ones reported in Table 4. For instance, the size of the target is also significantly negative. According to Alexandridis et al. (2013), acquirers of large firms continue to underperform small target acquirers in the long term, indicating that they fail to deliver the assumed synergies. Moreover, the coefficient on cash is significantly positive ($t = 1.937$), which is in line with the long-term performance study of Megginson et al. (2004). They conducted an empirical study of the long-term performance resulting from mergers and confirmed that a cash payment is a reliable signal of the future creation of value. Furthermore, the results in this study show that competition decreases the return of an acquirer in the long term ($t = -2.499$). Competing bids drive up the price needed to buy the target. It is thus highly likely that the bidder will overbid when acquiring the target firm.

Regarding the deal attitude, bidders of deals that are characterized as friendly earn significantly higher abnormal returns than bidders of hostile deals ($t = 3.130$). This is also confirmed by the study of Schwertz (2000) in which the author finds that bidders of hostile deals have lower abnormal returns than bidders of friendly deals. Goergen & Renneboog (2004) find similar results for large European firms, where hostile bidders have on average 5.37% worse abnormal returns in a 5-day event-window. The regression results in this paper also find that the abnormal returns for bidders in tender offers are significantly positive in the long term ($t = 1.711$). As aforementioned, Jensen & Ruback (1983) find that tender offers result in small, but significant positive returns.

As expected, the coefficients on DIFF_IND and LIT_RISK are significantly negative ($t = -2.714$ and $t = -1.826$ respectively), which indicate that when acquirers and targets are in two different industries and when the target is in an industry with high litigation risk, there is more target value uncertainty. Consequently, the acquirer's returns will be lower.

Overall, the findings are in support of Hypothesis 1 for both short and long term. This means that a higher target accounting quality leads to a higher acquirer's profitability in the short and long term in Western European countries.

⁷ Results over the one-year period, not reported, are similar.

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Table 5**Regression Results - Long Term**

Table 5 presents coefficients and t-statistics of determinants of acquiring firms' 3-year Abnormal Stock Return, (ACQ_RET_BHAR). Long-run abnormal performance is measured by buy-and-hold abnormal return (BHAR) here. The sample consists of 1504 completed deals over the 1997-2012 period. The first column includes a measure of target value uncertainty, but no target accounting quality. The second column includes a measure of target accounting quality and no target value uncertainty. The third column includes both measures. Tests for multicollinearity are conducted using variance inflation factors (VIF), and no multicollinearity is found. Standard errors are corrected for heteroscedasticity. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, *** significant at the 0.01 level.

Multivariate Analysis Dependent Variable: 3-year Abnormal Stock Return			
	Model 1	Model 2	Model 3
Intercept	0.055 (1.481)	0.063 (1.561)	0.070 (1.529)
AQ		0.193* (1.734)	0.189* (1.722)
UN_RET	-0.276*** (-3.142)		-0.309*** (-3.466)
ACQ_SIZE	0.065 (1.498)	0.061 (1.593)	0.065 (1.615)
REL_SIZE	0.033 (0.598)	0.035 (0.584)	0.028 (0.573)
LEVERAGE	-0.250* (-1.911)	-0.130 (-1.591)	-0.137 (-1.557)
TAR_GROWTH	0.105 (0.398)	0.081 (0.372)	0.091 (0.350)
DIFF_IND	-0.341** (-2.577)	-0.325** (-2.576)	-0.320** (-2.714)
CASH	0.311* (1.921)	0.319* (1.943)	0.314* (1.937)
TENDER	0.358* (1.669)	0.345 (1.599)	0.355* (1.711)
FRIENDLY	0.289*** (3.114)	0.288*** (3.139)	0.272*** (3.130)
EARNOUT	0.013* (1.701)	0.018* (1.715)	0.019* (1.698)
COMPETING	-0.298** (-2.546)	-0.289** (-2.488)	-0.289** (-2.499)
POISONPILL	-0.110* (-1.808)	-0.114* (-1.889)	-0.079 (-1.522)
PRIOR_BID	0.098 (1.510)	0.111 (1.525)	0.088 (1.499)
LIT_RISK	-0.103* (-1.791)	-0.113* (-1.749)	-0.122* (-1.826)
TOEHOLD	0.106 (1.520)	0.204* (1.899)	0.179* (1.701)
TAR_SIZE	-0.099* (-1.791)	-0.096* (-1.788)	-0.098* (-1.790)
Year fixed effects	Included	Included	Included
Adjusted R-squared	0.202	0.206	0.210
N	1504	1504	1504

The results of the test of Hypothesis 2 regarding accounting quality and the speed of the M&A process are presented in Table 6. In model 1, the dependent variable is the log of the total number of days required for deal resolution. In model 2, the length of the pre-announcement period is examined; and in model 3, the postannouncement period is examined. As shown in model 1 of Table 6, the estimated coefficient on AQ is significantly negative at -0.588 ($t = -1.799$), indicating that targets with high accounting quality are associated with a shorter deal process. This finding is consistent with Hypothesis 2. Similar results are reported when examining only the length of the preannouncement phase in model 2 ($t = -2.376$). Regarding the target value uncertainty, the coefficients are significantly positive in all models, indicating that the more uncertain the target value is, the longer it takes to reach deal resolution ($t = 2.368$, $t = 2.223$, $t = 2.134$). The results show that competing bids (COMPETING) requires significantly more time for deal resolution – its estimated coefficient is positive and significant in all three models ($t = 2.369$, $t = 2.455$, $t = 2.008$). Deals involving a target and bidder in different industries (DIFF_IND) have significantly longer process times ($t = 2.976$, $t = 2.789$, $t = 1.711$). Possible explanation for this is that acquirers find it harder to value the targets from another industry since they are not familiar with an industry that is different from their own. It requires substantially more time to gather information about the target from another industry. In addition, when the target is in an industry with high litigation risk (LIT_RISK), it requires significantly more time for deal resolution ($t = 1.752$, $t = 1.710$, $t = 1.689$). As mentioned before, litigation generates an information risk to appraise the firm's situation and consequently results in a higher target value uncertainty. Thus, more time is needed to value the target firm with high litigation risk.

Similar to the results of Marquardt & Zur (2014), deals involving targets with high leverage (LEVERAGE) require significantly longer process times. This is the case during the entire due diligence process, preannouncement due diligence period, and the postannouncement due diligence period ($t = 2.560$, $t = 2.375$, $t = 3.212$). According to Gaughan (1993), the issue of a proper due diligence process becomes quite apparent in the fraudulent conveyance litigation that has followed the failure of many deals involving high leverage. Further to that, the time required for deal resolution is significantly reduced when there is a prior bid (PRIOR_BID) in the previous year, but only in the preannouncement phase ($t = -3.755$). This is consistent with expectations since an acquirer already gathered information about the target when they made their first bid. Also, the target is already familiar with the acquirer and therefore less time is required for deal resolution. For the same reason, bidders with a toehold in targets have significantly shorter process time ($t = -2.199$, $t = -2.001$, $t = -2.422$). Regarding the size of the target (TAR_SIZE), the coefficient is significantly positive in all models ($t = 3.891$, $t = 3.887$, $t = 3.890$). This might be due to the fact that a larger firm is more difficult to value. On the other hand, the coefficient on the size of the acquirer is significantly negative ($t = -1.830$, $t = -1.782$), except in model 3 ($t = -1.568$). One reason for the negative

coefficient is that large acquirers generally have more expertise in due diligence and valuation, thereby reducing the time for deal resolution.

To gain more insight regarding the difference between completed and terminated deals, another log-linear regression is conducted for the entire due diligence period. Model 1 includes completed deals, whereas model 2 only included terminated deals. The results in Table 7 show that targets with high accounting quality are associated with a shorter deal process, for both completed and terminated deals ($t = -1.890$, $t = -1.814$). More importantly, a higher target value uncertainty is strongly associated with a longer deal process ($t = 2.165$, $t = 2.769$). Results are similar as the ones reported in Table 6. However, the relation between acquirer's size and the length of the due diligence period is significant and negative in model 1, whereas in model 2, the relation between those two variables are not significant. This indicates that acquirer's size does not have an influence on the length of the due diligence period in case of terminated deals.

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Table 6**Log-Linear Regression of Length of the Due Diligence Period**

Table 6 reports regression results where the dependent variable is defined as the log of the number of days in the due diligence period. The dependent variables are the log of number of days during the entire due diligence process, during the preannouncement due diligence period, and during the postannouncement due diligence period. All data are winsorized at the 1% and 99% levels. Tests for multicollinearity are conducted using variance inflation factors (VIF), and no multicollinearity is found. Standard errors are corrected for heteroscedasticity. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, ***significant at the 0.01 level

Variable	Model 1	Model 2	Model 3
	Total Days	Preannouncement	Postannouncement
Intercept	2.242*** (8.118)	1.511*** (4.332)	2.174*** (8.832)
AQ	-0.588* (-1.799)	-0.389** (-2.376)	-0.789* (-1.695)
UN_RET	0.688** (2.368)	0.583** (2.223)	0.486** (2.134)
ACQ_SIZE	-0.238* (-1.830)	-0.215* (-1.782)	-0.192 (-1.748)
REL_SIZE	-0.005 (-0.362)	-0.003 (-0.292)	0.001 (0.010)
LEVERAGE	0.480** (2.560)	0.965** (2.375)	0.358*** (3.212)
TAR_GROWTH	0.125 (0.893)	0.121 (0.890)	0.098 (0.767)
DIFF_IND	0.195*** (2.976)	0.186*** (2.789)	0.105* (1.711)
CASH	0.009 (0.201)	0.049 (0.742)	0.001 (0.746)
TENDER	0.016 (0.382)	0.020 (0.958)	0.380 (0.168)
FRIENDLY	0.005 (0.432)	0.008 (0.291)	0.001 (0.194)
EARNOUT	0.030 (0.756)	0.039 (0.770)	0.027 (0.698)
COMPETING	0.219** (2.369)	0.223** (2.455)	0.189** (2.008)
POISONPILL	0.156 (0.877)	0.189 (0.913)	0.145 (0.768)
PRIOR_BID	-0.038*** (-3.233)	-0.054*** (-3.775)	-0.112 (-0.793)
LIT_RISK	0.201* (1.752)	0.196* (1.710)	0.184* (1.689)
TOEHOLD	-0.006** (-2.199)	-0.007** (-2.001)	-0.003** (-2.422)
TAR_SIZE	0.359*** (3.891)	0.348*** (3.887)	0.355*** (3.890)
Year fixed effects	Included	Included	Included
Adjusted R-squared	0.231	0.258	0.267
N	1684	1684	1684

Table 7

Log-Linear Regression of Length of the Due Diligence Period (completed – terminated)

Table 7 reports regression results where the dependent variable is defined as the log of the number of days in the due diligence period. The dependent variables are the log of number of days during the entire due diligence period. Model 1 presents completed deals, whereas model 2 presents terminated deals. All data are winsorized at the 1% and 99% levels. Tests for multicollinearity are conducted using variance inflation factors (VIF), and no multicollinearity is found. Standard errors are corrected for heteroscedasticity. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, ***significant at the 0.01 level

Variable	Model 1	Model 2
	COMPLETED	TERMINATED
Intercept	1.954*** (6.126)	1.641** (2.392)
AQ	-0.609* (-1.890)	-0.474* (-1.814)
UN_RET	0.588** (2.165)	0.713** (2.769)
ACQ_SIZE	-0.252* (-1.933)	-0.199 (-1.294)
REL_SIZE	-0.010 (-0.465)	-0.002 (-0.189)
LEVERAGE	0.377** (2.890)	0.565* (1.875)
TAR_GROWTH	0.275 (0.901)	0.199 (0.877)
DIFF_IND	0.201*** (3.076)	0.179*** (2.981)
CASH	0.018 (0.192)	0.032 (0.646)
TENDER	0.014 (0.389)	0.024 (0.994)
FRIENDLY	0.003 (0.491)	0.007 (0.301)
EARNOUT	0.029 (0.791)	0.140 (0.871)
COMPETING	0.217** (2.388)	0.464** (2.698)
POISONPILL	0.150 (0.892)	0.179 (0.902)
PRIOR_BID	-0.104*** (-3.201)	-0.049*** (-3.696)
LIT_RISK	0.191* (1.806)	0.188* (1.699)
TOEHOLD	-0.007** (-2.209)	-0.005* (-1.695)
TAR_SIZE	0.344*** (3.799)	0.248** (2.187)
Year fixed effects	Included	Included
Adjusted R-squared	0.248	0.104
N	1504	180

Finally, this paper turns to testing whether a higher target accounting quality increases the likelihood of deals being completed. The first model in Table 8 reports logistic regression where the dependent variable, COMPLETED, is an indicator variable equal to one if the deal is completed, and zero otherwise. In the second model, the dependent variable is coded equal to zero if the deal is completed and the final offer price is less than the initial offer price, and one if the deal is completed without renegotiation. The findings in model 1 shows that the coefficient on AQ is significantly positive ($p = 0.090$), indicating that higher target accounting quality increases the likelihood of the deal to be completed. In addition, the marginal effect of AQ indicates that a small increase in AQ increases the likelihood of the deal to be completed by 7.5 percent. Regarding the control variables, the coefficient on COMPETING is negative and significant ($p = 0.001$), indicating that deals involving more competition are less likely to be completed. On the other hand, the coefficient on FRIENDLY is positively significant ($p = 0.001$), which indicates that friendly deals are more likely to be completed. The significantly positive coefficient on TENDER ($p = 0.041$) indicates that offers made directly to target shareholders are more likely to be completed. Skaife & Wangerin (2013) have similar findings and explain that this finding is potentially due to the fact that tender offers are often completed more quickly than other takeovers because an approval through a special meeting of shareholders is not required. The results also show that there is a negative and significant relation between DIFF_IND and the likelihood of completion ($p = 0.001$). This suggests that acquirers and targets operating in different industries encounter more frictions in their efforts to complete the deal. In contrast to the finding of Skaife & Wangerin (2013), the results show a significantly positive relation between TOEHOLD and the likelihood that the deal will be completed ($p = 0.023$). This finding is consistent with the conjecture that acquirers succeed to gain control of a firm in which it had partial interest.

To analyze more fully the consequences of target accounting quality in M&A, this paper explores whether target accounting quality affects the likelihood of completion or renegotiation. A subsample is used in which renegotiation is most likely to occur by excluding deals involving tender offers as these transactions involve negotiating directly with target shareholders rather than target directors. Within the subsample excluding tender offers ($n = 1377$), we find 37 transactions where the acquirer renegotiates a lower final bid and 180 terminated deals. This indicates that renegotiation is not pervasive, but occurs at a rate of roughly 20 percent relative to the frequency of termination. Results are reported in the second column of Table 8. The key finding is the parameter estimate for AQ is negative. However, the relation is statistically insignificant. This might imply that acquirers do not necessarily attempt to renegotiate the offer once they determine that the financial information of target with low accounting quality is not representative of the target's underlying economic value.

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Table 8

Logistic Regression of Deal Completion

Table 8 reports logistic regression results where the dependent variable in the first model, COMPLETED, is an indicator variable coded equal to one if the deal is completed, zero otherwise. In the second model, the dependent variable is coded equal to zero if the deal is completed and the final offer price is less than the initial offer price and zero if the deal is completed without renegotiation. The marginal effect for AQ is estimated at the median of its distribution, holding all control variables constant at the sample means. All data are winsorized at the 1% and 99% levels. The p-values are presented in parentheses. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, ***significant at the 0.01 level

Variable	Model 1	Model 2
Intercept	1.689*** (0.001)	
AQ	0.757* (0.090)	-0.293 (0.165)
UN_RET	-0.501* (0.079)	-0.544* (0.090)
ACQ_SIZE	0.081 (0.146)	0.077 (0.081)
REL_SIZE	0.264 (0.129)	0.047 (0.108)
LEVERAGE	-0.127* (0.062)	-0.142* (0.059)
TAR_GROWTH	0.081 (0.164)	0.075 (0.114)
DIFF_IND	-0.233*** (0.001)	-0.298*** (0.001)
CASH	-0.028* (0.088)	-0.035** (0.039)
TENDER	0.695** (0.041)	
FRIENDLY	0.401*** (0.001)	0.544*** (0.001)
EARNOUT	0.103 (0.304)	0.109 (0.378)
COMPETING	-0.411* (0.055)	-0.229*** (0.001)
POISONPILL	-0.198* (0.067)	-0.228** (0.051)
PRIOR_BID	0.233* (0.059)	0.240* (0.045)
LIT_RISK	-0.609*** (0.001)	-0.709*** (0.001)
TOEHOLD	0.101** (0.023)	0.150*** (0.001)
TAR_SIZE	0.095 (0.158)	0.091 (0.115)
Year fixed effects	Included	Included
Pseudo R-squared	0.222	0.181
Marginal effect of AQ	0.075**	
N	1684	1197

4.3 Results of Robustness Test

To provide confidence in the results and to address potential endogeneity problems (i.e. target accounting quality affects return volatility), another measure of target value uncertainty is examined. An alternative measure is the volatility of annual cash flows from operations divided by total assets. Table 9 presents results using an alternative measure of uncertainty in the target firm's value. As expected, the coefficient on target accounting quality (AQ) is significantly positive in model 2 and 3 ($t = 2.993$ and $t = 2.810$ respectively). Similar to the results above, uncertainty has a negative coefficient ($t = -2.182$), which indicates that higher target uncertainty leads to lower acquirers' profitability. Similarly, although controlling for uncertainty weakens the effect of target accounting quality, the effect remains significantly positive ($t = 2.810$). Untabulated results show that the use of alternative measure of target value uncertainty produces similar results for the long-term profitability of the acquirer. In addition, untabulated results show that the use of alternative measure produces similar results for the second and third hypotheses regarding the length of the due diligence period and the likelihood of deal completion.

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Table 9**Robustness Test of acquirer's profitability using alternative measure of target value uncertainty**

Table 9 presents coefficients and t-statistics of determinants of acquiring firms' 3-days abnormal stock returns (ACQ_RET_CAR). The sample consists of 1504 completed deals over the 1997-2012 period. This regression uses an alternative measure of target uncertainty, i.e. the volatility of annual cash flows from operations divided by total assets. The first column includes a measure of target value uncertainty, but no target accounting quality. The second column includes a measure of target accounting quality and no target value uncertainty. The third column includes both measures. Tests for multicollinearity are conducted using variance inflation factors (VIF), and no multicollinearity is found. Standard errors are corrected for heteroscedasticity. See Appendix B for variable definitions. *Significant at the 0.10 level, **significant at the 0.05 level, *** significant at the 0.01 level.

Regressions using alternative measure of target uncertainty			
	Model 1	Model 2	Model 3
Intercept	0.033 (1.124)	0.039 (1.411)	0.042 (1.561)
AQ		0.288*** (2.993)	0.273*** (2.810)
UN_CF	-0.113** (-2.182)		-0.046 (-0.764)
ACQ_SIZE	-0.003** (-2.343)	0.002** (2.379)	-0.002** (-2.387)
REL_SIZE	0.002 (0.130)	0.001 (0.139)	0.002 (0.146)
LEVERAGE	-0.039 (-1.356)	-0.044 (-1.255)	-0.046 (-1.181)
TAR_GROWTH	0.101 (1.078)	0.979 (1.002)	0.992 (0.869)
DIFF_IND	-0.379* (-1.789)	-0.355* (-1.699)	-0.348* (-1.699)
CASH	0.203** (2.461)	0.189** (2.101)	0.191** (2.057)
TENDER	0.362*** (2.893)	0.362*** (2.909)	0.355*** (2.797)
FRIENDLY	0.306*** (3.412)	0.311*** (3.399)	0.301*** (3.213)
EARNOUT	0.018 (0.352)	0.011 (0.275)	0.007 (0.259)
COMPETING	-0.029* (-1.721)	-0.028* (-1.728)	-0.034* (-1.759)
POISONPILL	-0.071* (-1.759)	-0.047 (-1.445)	-0.057 (-1.499)
PRIOR_BID	0.115 (1.522)	0.136 (1.598)	0.112 (1.544)
LIT_RISK	-0.167** (-2.361)	-0.141** (-2.301)	-0.190** (-2.341)
TOEHOLD	0.122* (1.698)	0.136* (1.711)	0.129* (1.699)
TAR_SIZE	-0.125** (-2.167)	-0.120** (-2.162)	-0.124** (-2.165)
Year fixed effects	Included	Included	Included
Adjusted R-squared	0.200	0.209	0.210
N	1504	1504	1504

5. Conclusion

Financial information is important to corporate decision-making. Considering the prominence of acquisitions as investment decisions, it is interesting to investigate how the quality of target's accounting information affects the profitability of acquisitions for acquirers. More specifically, this paper investigates whether a higher accounting quality of target firms lead to more profitable acquisitions for a sample of Western European firms. Since due diligence is an important process to conduct a successful merger & acquisitions (M&A) transaction, this study also examines the relation between target accounting quality and the due diligence process. The prediction is that target accounting quality is positively associated with abnormal returns of the acquirer in short and long term. In addition, this study predicts that there is a positive association between target accounting quality and the speed of M&A process and between target accounting quality and the likelihood of deal completion.

Using a sample of 1684 deals during the period of 1997-2012, this study finds that, controlling for uncertainty, acquirer returns are higher when the target has higher accounting quality. Thus, high target accounting quality may successfully mitigate information asymmetry between acquirers and target firms, resulting in more profitable acquisitions. The effect on acquirer's returns is positive and significant in both short and long term. Moreover, the findings indicate that targets with high accounting quality are associated with a shorter deal process. Thus, accounting quality is an economically significant determinant of the speed of the M&A process. Furthermore, this study finds that targets with high accounting quality increases the likelihood of deal completion. Using a subsample in which renegotiation is most likely to occur by excluding deals involving tender offers, the results indicate that target accounting quality does not have an impact on the likelihood of renegotiation. Overall, the empirical evidence in this study is consistent with each of these hypotheses.

The results in this study speak to the value of accounting information in economic decisions generally. Prior research has sought to understand whether better accounting quality improves outcomes for investors. For instance, several studies seek to assess whether investors reward the equity of firms with high-quality accounting information with a lower cost of capital (e.g. Cohen, 2003; Francis et al., 2005). By focusing on returns at acquisition announcements, this study identifies an alternative measure to assess the effect of accounting quality on investment decisions. By further linking target accounting quality to the due diligence process, this study complements several recent papers that solely examine return tests (e.g. McNichols & Stubben, 2015). This study on Western European M&A market contributes to the extant literature on M&A that has so far focused primarily on the M&A markets of the U.S. Given the differences in the capital markets and risk allocation between U.S. and Europe, it is interesting to examine whether the effect of target accounting quality is different in Europe compared to U.S.

One limitation of this study is that it was only possible to examine M&A transactions that were announced to the general public after the target and bidder had completed a merger agreement. Due to the lack of available data, transactions that did not proceed as far as a signed agreement are not included in the analysis, which may bias the sample selection procedure. Furthermore, it is reasonable to expect that proposed deals involving target firms with poor accounting quality are less likely to successfully reach the merger agreement stage of the transaction. Thus, the sample in this study may be biased toward targets with relatively high accounting quality. This may limit the generalizability of the results. Therefore, the results in this study should be interpreted with this caveat in mind.

Future research could further investigate the role of accounting information in acquisition decisions. For instance, one could explore why firms acquire targets with uncertain value and low accounting quality, given that these acquisitions tend to be less profitable. In addition, future research could investigate how the targets trade off the ongoing benefits of more information disclosures against potentially lower one-time gains from a possible future acquisition if they have some influence over the quality of their accounting information. Furthermore, it would be interesting to examine how target accounting quality in completed M&A deals affect the quality of financial reporting of the combined entity.

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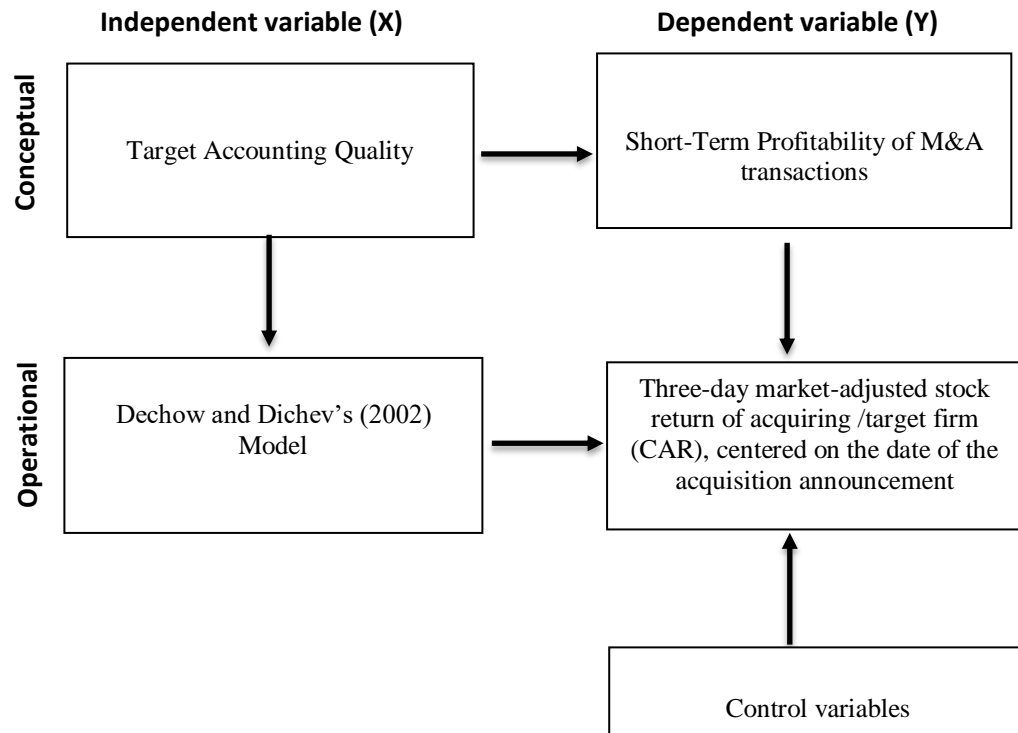
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Appendix A - Libby Boxes

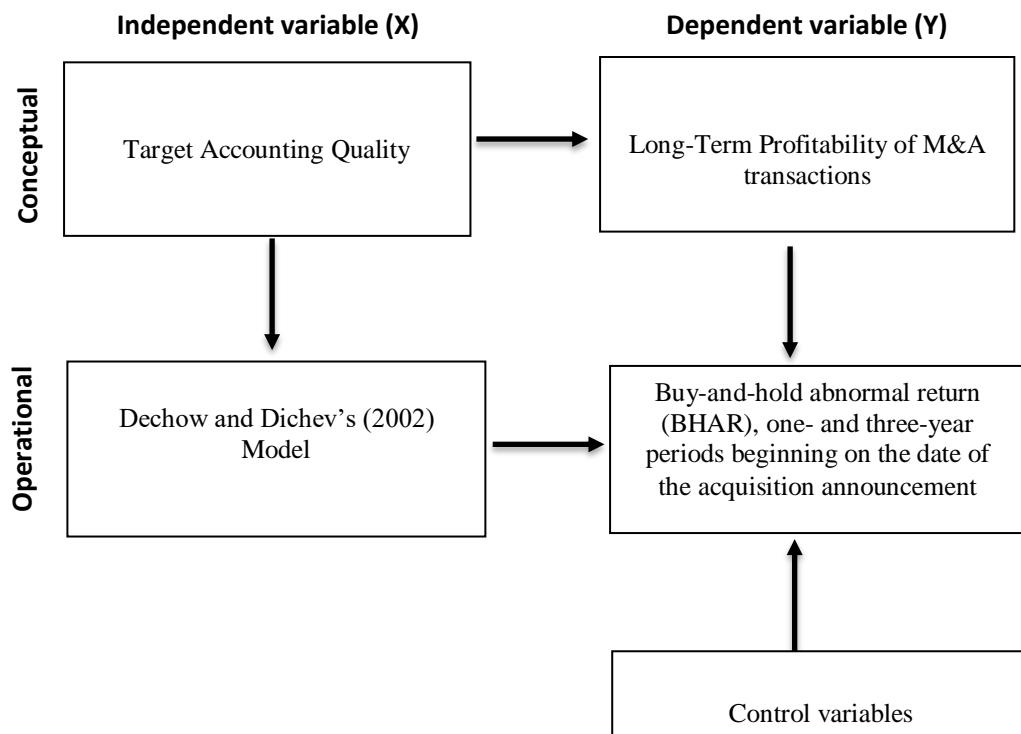
Hypothesis 1

Acquisitions are more profitable for acquiring firms when target accounting quality is higher

Short Term

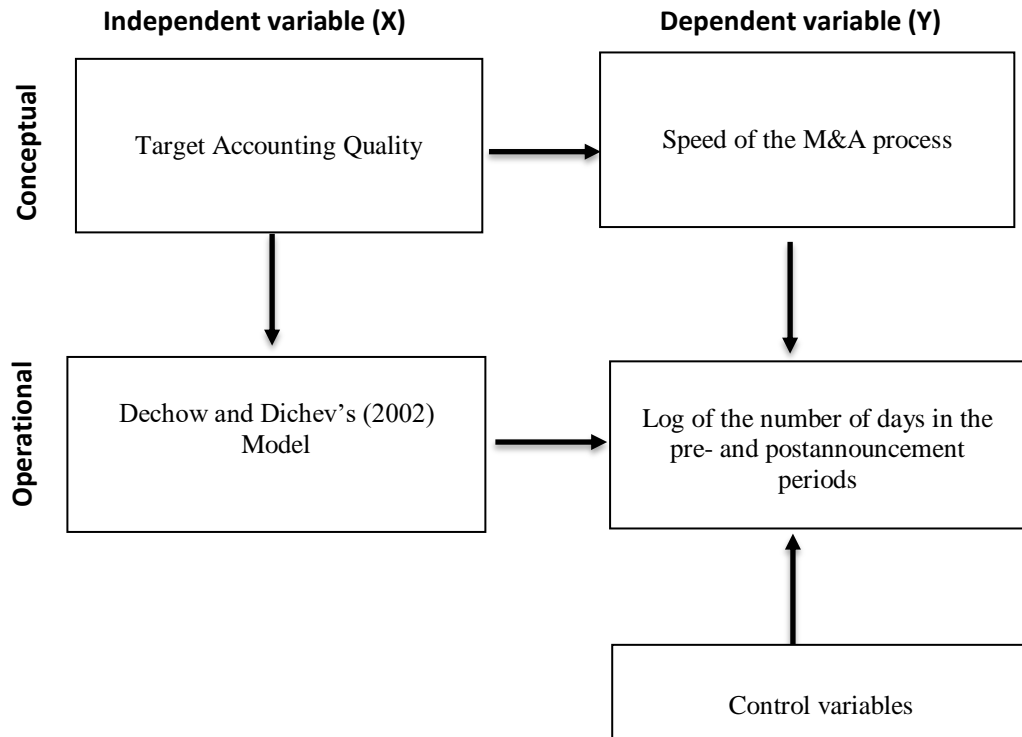


Long Term



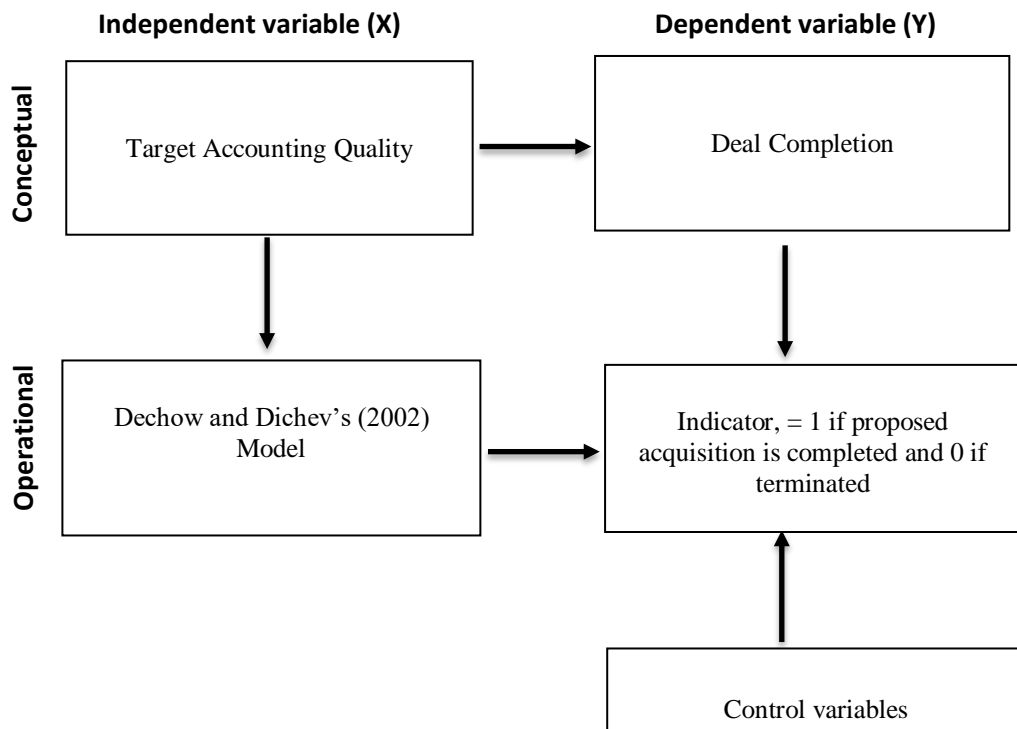
Hypothesis 2

A higher target accounting quality leads to a decrease in the length of time required for the M&A process



Hypothesis 3

A higher target accounting quality increases the likelihood that M&A deals will ultimately be completed



Appendix B – Overview of variables

Description of variables

Variable	Definition	Study	Source
ACQ_RET	CAR: Three-day market-adjusted stock return of acquiring firm, centered on the date of the initial announcement of acquisition. BHAR: One- and three-year buy-and-hold abnormal returns	Lim et al. (2015), Martin & Shalev (2009), McNichols & Stubben (2015)	Datastream
ACQ_SIZE	The log of the acquirer's market value, measured two days prior to the initial announcement of acquisition	Martin & Shalev (2009), McNichols & Stubben (2015)	ThomsonOne (T1)
AQ	Accruals Quality = $-1 \times$ standard deviation, where ε_n is the residual from Equation (1)	Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)	Compustat Global
CASH	Indicator, = 1 if the deal is paid using cash only, and 0 otherwise	Black et al. (2007), Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)	ThomsonOne (T1)
CFO	Cash flow from operations	Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)	Compustat Global
COMPETING	Indicator, = 1 if there are additional bids for the target, and 0 otherwise	McNichols & Stubben (2015)	ThomsonOne (T1)
COMPLETED	Indicator, = 1 if the attempted M&A transaction is ultimately completed, and 0 if terminated	Marquardt & Zur (2014), Martin & Shalev (2009), Skaife & Wangerin (2013)	ThomsonOne (T1)
Days, Preannouncement	The number of days between the day that the target firm first signs a confidentiality agreement with a potential buyer to the Merger and Acquisition announcement date	Marquardt & Zur (2014)	ThomsonOne (T1)
Days, Postannouncement	The number of days between the Merger and Acquisition announcement date and the completion or termination date.	Marquardt & Zur (2014)	ThomsonOne (T1)
Days	The Sum of Pre- and Postannouncement days	Marquardt & Zur (2014)	ThomsonOne (T1)
DIFF_IND	Indicator, = 1 if the acquirer and target have different two-digit SIC code, and 0 otherwise	Lim et al. (2015)	Compustat Global
EARNOUT	Indicator, = 1 if deal includes an earnout, and 0 otherwise	McNichols & Stubben (2015)	ThomsonOne (T1)
FRIENDLY	Indicator, =1 if deal is friendly, 0 otherwise	Marquardt & Zur (2014), McNichols & Stubben (2015)	ThomsonOne (T1)

2015/2016

LEVERAGE	Total liability divided by assets	Lim et al. (2015)	Compustat Global
LIT_RISK	Indicator, = 1 if the firm is a member of an industry with high litigation risk (SIC Codes with 2833-2836, 3570-3577, 3600-3674, 5200-5961, or 7370), and 0 otherwise	Marquardt & Zur (2014)	ThomsonOne (T1)
PPE	Gross value of property, plant, and equipment	Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)	Compustat Global
POISONPILL	Indicator, =1 if the target firm has a poison pill, and 0 otherwise	McNichols & Stubben (2015)	ThomsonOne (T1)
PRIOR_BID	Indicator, = 1 if there was a prior bid for the target that terminated within the last 365 calendar days, and 0 otherwise	Marquardt & Zur (2014)	ThomsonOne (T1)
REL_SIZE	Ratio of deal value to the acquirer's market value measured at the fiscal year-end prior to the announcement of the acquisition	Lim et al. (2015), McNichols & Stubben (2015)	ThomsonOne (T1)
RENEGOTIATED	Indicator, = 1 if the deal is completed and the final offer price is less than the initial offer price, zero otherwise	Skaife & Wangerin (2013)	ThomsonOne (T1)
ΔREV	Change in revenue	Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)	Compustat Global
TAR_GROWTH	Ratio of the target's annual revenue to the revenue of the prior year	Lim et al. (2015), McNichols & Stubben (2015)	Compustat Global
TAR_RET	Three-day market-adjusted stock return of the target firm, centered on the date of the initial announcement of the acquisition	Lim et al. (2015), Martin & Shalev (2009) McNichols & Stubben (2015)	Compustat Global
TERMINATED	Indicator, = 1 if the takeover bid is terminated, zero otherwise	Skaife & Wangerin (2013)	ThomsonOne (T1)
TENDER	Indicator, = 1 if the acquisition is a tender offer, and 0 otherwise. Defined as a broad solicitation by a company to purchase a substantial percentage of a company's registered equity shares.	Marquardt & Zur (2014), McNichols & Stubben (2015), Raman et al. (2013)	ThomsonOne (T1)
%TOEHOLD	Percentage of target's outstanding shares held by the bidder prior to the deal.	Marquardt & Zur (2014), Skaife & Wangerin (2013)	ThomsonOne (T1)
UN_RET	Volatility of the target firm's monthly stock returns over the recent two fiscal years prior to the initial announcement of the acquisition	McNichols & Stubben (2015)	Compustat Global
UN_CFO	Volatility of the target firm's annual cash flows from operations divided by total assets. This is measured over the 8 years leading up to the acquisition announcement	McNichols & Stubben (2015)	Compustat Global

2015/2016

ΔWC

The change in working capital from year t-1 to t, or change in current assets minus change in current liabilities, minus change in cash and short-term investments, and plus change in debt in current liabilities.

Lim et al. (2015), Marquardt & Zur (2014), Raman et al. (2013)

Compustat Global
