

The Effect of the Financial Advisor's Reputation in M&A Deals by European Firms

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Abstract

We study the role of the reputation of investment banks as financial advisors and the role of investment banks in general in M&As taking place among firms incorporated in the member countries of the European Monetary Union (EMU). Surprisingly, the reputation of bidder advisors does not influence bidder CARs. Results indicate that the usage of an advisor in general is value increasing for the bidder. We also look at the impact of bidder advisors separately for acquirers of public, private and subsidiary targets. Using an advisor is value decreasing for public bidders that bid for public targets, while it is value increasing for public bidders that bid for subsidiary targets. Bidder CARs are higher when the target uses an advisor. However, bidder CARs are lower if the target advisor is a top-tier advisor. Further, bidder advisors increase bidder CARs in domestic deal, whereas they do not influence bidder CARs in cross-border deals. Results for other deal outcomes indicate that top-tier advisors used by the bidder are not associated with higher completion rates and that top-tier advisors used by the bidder are associated with a longer time to resolution.

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1. Introduction

While usage of league tables as a proxy for investment banks' reputation is common practice, studies examining the effect of the reputation of advisors on bidder CARs in M&As have mixed results² and furthermore this effect has not been examined for the European market. We examine the role of advisors in general, and of top-tier advisors especially, in terms of value creation for the bidding firm. In line with Golubov *et al.* (2012) we also investigate these effects separately for bidders acquiring public, private or subsidiary targets, as we expect the advisor reputation to be especially value increasing in bids on public targets, due to the complexity of the deals, as well as to the risk of reputational exposure of the advisor.

We focus on firms belonging to the EMU as deals among the EMU members differ from other cross-border deals due to the elimination of the exchange rate risk by the common currency. We assume that, even though the firms in our sample are from different nations, the commonalities are bigger compared to those of firms outside the EMU. Lastly, we also evaluate the impact of top-tier advisors on deal outcomes.

We execute various tests to check the robustness as well as the endogeneity issue regarding advisor selection. For the latter, we perform the two-stage Heckman (1979) procedure and conclude that there is no endogeneity issue in the choice of advisors in general or in the choice between hiring top-tier versus non-top-tier advisors.

Our results are as follows. First, while we find that the employment of a financial advisor by acquirers increases bidders' announcement returns, we do not find significant evidence on the impact of advisor *reputation* on bidder CARs. This is in contrast to Golubov *et al.* (2012) who present evidence that top-tier advisors generate value for the bidder when looking at public deals. Going one step further, we do not even find evidence that advisors in general. Similarly, we do not find evidence supporting the notion, advanced by Golubov *et al.* that reputable advisors create value for bidders in public deals. Our analyses suggest that advisors are increasing value for bidders in subsidiaries, but not in public deals.

We also add to the work of Francis *et al.* (2014a) and Arena and Dewally (2017) who investigate various characteristics of advisors, different from their reputation, for cross-border mergers and the effect of these characteristics on different deal outcomes. We do not find evidence that the reputation of advisors or advisors in general are associated with value creation in cross-border M&As. Thus, other characteristics and skills of advisors could be more important in cross-border M&As.

² Bowers and Miller (1990), Michel *et al.* (1991), Servaes and Zenner (1996), Rau (2000) and Hunter and Jagtiani (2003) do not find evidence for a significant relationship between reputable advisors and the value generated by bidders in M&As. However, Kale *et al.* (2003), Ismail (2010) and Golubov *et al.* (2012) present evidence that highly reputable advisors create value.

Our results indicate that managers of bidding firms located in the EMU member states should be careful in relying on league tables in supporting their decision of what advisor to hire for an M&A deal as hiring a prestigious top-tier advisor is not associated with value creation in terms of bidder CARs.

The remainder of the thesis is structured as follows. Section 2 reviews the related literature to our study. Section 3 describes our research questions and the hypotheses associated with them. Section 4 sheds light on sample collection, research method and the descriptive statistics of the variables in our sample. Section 5 documents the empirical analysis and the results of our study. The discussion of the results and additional robustness tests are presented in Section 6. Section 7 concludes.

2. Literature review

2.1 The Role of financial advisors in M&As

The role of financial advisors in M&As has been widely studied throughout the last decades. A considerable amount of research has been conducted regarding the effect of investment banks as financial advisors, and especially of top-tier investment banks, on the wealth creation for shareholders.

2.1.1 The relationship between advisor reputation and shareholder wealth in M&As

Bowers and Miller (1990) advance the bargaining power hypothesis, positing that top-tier advisors are able to negotiate a higher share of the gains generated through the merger for their. However, they fail to find evidence that hiring top-tier investment banks as advisors increases the total wealth created, and therewith support the better merger hypothesis. This hypothesis assumes that top-tier advisors are associated with the ability to scout targets and negotiate deals in a way that the total wealth created is higher, compared to the case in which no top-tier advisor is hired. In similar vein, Michel *et al.* (1991) fail to find a significant positive influence of advisor reputation on the returns to acquirers in M&As. Their study examines 713 deals (of which 710 by US acquirers) from 1981 through 1987. For the most part, their sample includes deals with acquirers based in the US. Furthermore, the authors found that acquirers hiring Drexel Burnham Lambert, an advisor of lower prestige in their sample, generated higher bidder CARs compared to deals advised by top-tier banks in their sample.

In a study mainly concerning contract types and forms of compensation of investment banks, McLaughlin (1992) reports that for his sample of US M&As, bidders supported by lower-tier advisors offer substantially lower premiums and gain higher announcement returns, compared to bidders supported by top-tier advisors. He provides two possible, but opposing explanations for this relationship. On the one hand, more reputable advisors might encourage their clients to higher bids, what consequently results in destruction of value. Alternatively, reputable advisors might be hired in case of more challenging transactions, that require higher premiums, leading to lower acquirer returns.

The inability of top-tier advisors to significantly create value for clients is further supported by Servaes and Zenner (1996). They evaluate the role of financial advisors in M&As between 1981 and 1992 for a sample including 198 transactions, in which an advisor is hired by the acquirer, and 99 transactions, in

which no advisor is hired by the acquirer. The deals in their sample are collected from a list of the largest deals per year between 1981 and 1992. This makes their results not transferable to all kinds of M&As since large deals differ widely from small or medium-sized deals. They neither find evidence for the influence of advisors in general, nor for the influence of top-tier advisors especially, on the announcement returns of the acquirer.

In his study, based on a sample of 2683 mergers and 438 tender offers, Rau (2000) does not find a significant positive relationship between the market share of the advisor and the post-acquisition performance of acquirers supported by these advisors. However, he reports a significant positive relationship between the incentive fee charged by the advisor and the market shares of the advisors in the advisory market. He shows that top-tier banks charge higher fees that are contingent on completion of the deal and he finds evidence for a positive relationship between market share and completion rates. All in all, his results support the view that investment banks and especially top-tier banks are falsely incentivized to complete deals, without necessarily creating value for their clients. He does not find support for a self-regulating mechanism in the advisory market, meaning that top-tier banks are not punished by the market for arranging value-destroying deals and keep on receiving mandates based on their high market share.

Hunter and Jagtiani (2003) provide additional evidence that top-tier advisors are not creating value for acquirers in M&As. They study a sample of 5337 acquisitions involving publicly traded acquirers as well as publicly traded targets from 1995 to 2000. Their sample does not have a clear geographical focus. They state that the synergistic gains realized by the bidders are negatively related to the usage of a top-tier advisor. Thus, they conclude that top-tier advisors are not creating value for their clients. In line with Rau (2000) they additionally report that top-tier advisors are associated with higher completion rates and are more efficient and faster in completing deals. They also state that, based on their results, a higher proportion of the advisory fee being contingent to deal completion leads to a faster time to completion.

In his study, based on 6379 M&A transactions carried out by US-based acquirers that acquire public, private or subsidiary targets, Ismail (2010) studies the effects, top-tier advisors have on deal outcomes. He reports that acquirers supported by top-tier advisors lose at the merger announcement, while acquirers supported by lower-tier advisors gain at the announcement. When taking out the deals creating huge losses for the acquirers, he reports that acquirers supported by top-tier advisors are outperforming those advised by lower-tier advisors. He concludes that large loss-generating deals are driving the former mentioned interpretation of value destruction by top-tier advisors. In line with Rau (2000), he concludes that using league tables based on market share could be misleading in evaluating the ability of acquirer advisors to generate gains for their clients. He proposes that acquirers should be more interested in the performance of past clients of the advisor rather than hiring a specific advisor based on the positioning in league tables. His results for target firms are opposing to the ones for acquiring firms, since he reports that top-tier advisors outperform lower-tier advisors for target firms.

In contrast to the studies mentioned so far, which do not find a positive wealth effect of using top-tier advisors on the acquirer side in M&As, another stream of literature finds support for value creation by top-tier advisors. Kale *et al.* (2003) investigate the relationship between advisor reputation and the wealth gains in takeovers, based on a sample of worldwide tender offers between 1981 and 1994. Using a measure of relative reputation of the advisors, meaning the reputation of the bidder advisor relative to the reputation of the target advisor, they report that the absolute wealth gain as well as the bidder's share of the total wealth increases with the relative reputation of the bidder advisor. Accordingly, the share of wealth accruing to the target is negatively related to the bidder advisor's relative reputation. They also note that the total wealth created by takeovers is positively related to both, the reputation of the bidder advisor as well as to the reputation of the target advisor. Their findings support the better merger hypothesis as well as the skilled negotiation hypothesis. Kale *et al.* (2003) also look at other deal outcomes besides the creation of wealth through synergies. They do find that, in line with other studies (e.g. Rau, 2000), that the higher the reputation of the advisor on the bidder side of the deal, the greater the likelihood for deal completion. Nevertheless, they are not providing evidence for the proposition that advisors are only motivated by the contingent fee, which will be received only upon deal completion, as they report that reputable advisors are more likely to withdraw from value destroying deals. Thus, they provide evidence that bidder advisors are acting in the best interest of their clients.

Like Ismail (2010), Golubov *et al.* (2012) also base their research about the effect of advisor reputation on a sample of acquisitions of public, private and subsidiary targets, but only for acquirers and targets based in the US. Different from Ismail (2010), they run regressions, next to one for the whole sample, also for each of the three groups regarding target public status. Thus, they are able to show that top-tier advisors are associated with higher announcement returns to the bidder in public acquisitions, but not in private or subsidiary acquisitions. The higher bidder gains in the public subsample are due to the ability of top-tier advisors to mediate deals associated with higher synergies, and due to the bargaining power of these top-tier advisors, that results in the ability to negotiate a higher share of the synergies for their clients. The higher reputational exposure, as well as the larger set of skills and effort needed, are provided as possible explanations for the significant effect of top-tier advisors in public deals only. They also report that paying a higher fee for a top-tier investment bank compared to a lower fee-payment for a non-top-tier investment bank is value enhancing for the bidder in case of public acquisitions. Lastly, Golubov *et al.* (2012) also report that top-tier advisors are more likely to complete deals, and that they are completing deals faster compared to non-top-tier advisors.

Chemmanur *et al.* (2014) study the relationship between the human capital of the investment banker and the acquisition outcome for the acquirer. As proxies for acquisition outcome they use announcement period CARs, their proxy for short term performance of the acquirer, as well as returns on assets (ROA), their proxy for long term performance of the acquirer. They base their study on a sample of 513 deals carried out by US public acquirers, which acquired US targets between 2001 and 2010. Additionally, they require that the investment bankers in their sample have advised on at least two deals between 2001 and 2010. They find that investment banker fixed effects are significantly related to acquisition

outcomes of the acquirer, and that prior deal experience of the investment banker is positively and significantly related to CAR and to ROA. Lastly, they also report that the likelihood that an acquirer changes to another investment bank increases, in case of an employer change by a certain investment banker. Thus, the human capital of investment bankers themselves creates value in terms of deal outcome for the acquirer, additional to the effect of a specific investment bank on the acquirer returns.

2.1.2 Factors influencing the decision to hire financial advisors in general and top-tier advisors in particular

Regarding investment banks in M&As, another literature stream examines the factors leading to the employment of advisors in general and in particular to the employment of top-tier advisors compared to lower-tier advisors. Main research results in this field are presented in the following.

In the already above-mentioned study, Servaes and Zenner (1996) also study the effects inducing the acquiring firm to hire an advisor in general, and the factors leading to the employment of a top-tier advisor in particular. Factors increasing the likelihood to hire an advisor in general are the complexity of the transaction, the lack of experience in M&As by the acquirer, the fact that the target is operating in various industries, the public status of the target and lastly the existence of insider-ownership. They show that top-tier advisors are more likely to be hired compared to lower-tier advisors when deals are large and when the firms involved do not have extensive acquisition experience. Additionally, they report that deal size and type of acquisition are influencing the choice between a top-tier advisor compared to not hiring an advisor, but these factors are no significant determinants affecting the choice between a second-tier advisor and not hiring an advisor.

Cao and Madura (2013) investigate the factors leading to the hiring of an investment bank in M&As on the bidder, as well as on the target side, for a sample only including acquisitions of private targets. They conclude that the factors driving the probability to hire an investment bank on the bidder side are the size of the deal, the relative size of the deal, the use of stock as means of payment, the lack of experience of the bidding firm in dealing with corporate transactions and lastly the bidder's affiliation to the high-tech industry. They also note that the private targets in their sample are more likely to seek for the assistance of an advisor, if a deal is large, when the bidder has low growth opportunities and when there is the risk of bankruptcy of the bidder. They also look at the factors influencing the propensity to hire a top-tier investment bank, compared to hiring a lower tier advisor. They show that the probability to hire a top-tier bank on the bidder side increases with the size of the target, the relatedness in terms of industry between the two firms and the fact that the target is operating in the high-tech industry. The target firm's decision to hire a top-tier advisor is driven by the same factors that influenced the decision to hire an advisor in general. They note that the target is less likely to hire a top-tier advisor, if it is not operating in the high-tech industry and when the corporate transaction takes place in a crisis period.

In line with Rau (2000), Bao and Edmans (2011) find that the market share of banks is not related to the past CARs of clients advised by these banks. They study a sample of M&As announced between 1980 and 2007 and report that clients are not performance chasing. Firms rather base their decision on what

advisor to hire, on league tables, which are constructed regarding the market shares of the investment banks. They interpret the fact that clients are selecting banks based on high-market shares, rather than based on past CARs, generated by their former clients, that there might be relationship-specific capital that makes the client reluctant to change the advisors. This leads to a behavior of banks to also accept value-destroying deals since it will boost income, increase market share and build up the relationship with the client even further, which will lead to more mandates in the future. These future mandates seem to be unrelated to the performance of prior clients of the financial advisors.

Sibilkov and McConnell (2014) find opposing results compared to Bao and Edmans (2011), as they report that prior client performance is influencing the likelihood that a future bidder will choose a specific investment bank as advisor in M&As. They also state that this prior client performance also influences the investment bank's market share in the advisory industry over time. They base their results on a sample of 11324 acquisition attempts between 1984 and 2011. Their results indicate that an acquirer's decision to employ a financial advisor is influenced by the performance of past clients of the potential advisor and that a self-regulating mechanism is present in the advisory market, which aligns the interests of acquirers and advisors.

2.1.3 Findings from other classifications of financial advisors

Several authors use other classifications of advisors, different from the classification into different tiers, to study the financial advisor's impact on M&A outcomes.

Bodnaruk *et al.* (2009) investigate the various effects of holdings by acquirer advisors in M&A target firms. For their sample, including only US targets between 1984 and 2003, they report that deals, in which the acquirer advisor has a holding in the target firm, are associated with value destruction for the acquirer. There is a negative relationship between advisory stake in the target and profitability of the deal for the bidder. However, they provide explanations, why these advisors are hired regardless of the value destruction. The advisory stake is positively related to the likelihood of deal completion, as well as to the target premium. The size of the advisory stake is also positively related to the presence and size of termination fees. They conclude that advisors exploit their information for investing in the target and realize a capital gain, when the deal is announced and the target's share price goes up. They report that the results also lead to the conclusion that advisors are actively shaping the deal in the most profitable way for themselves to increase the gain on the stake in the target. They conclude that acquirers hire these banks as advisors when they have strong incentives to get the deal done, regardless of the value destruction for shareholders.

In line with Bodnaruk *et al.* (2009), Francis *et al.* (2014b) examine M&A outcomes in relation to prior relationship, in their case the relationship between the acquirer and the advisors and not as in the case of Bodnaruk *et al.* (2009), the relationship between acquirer advisor and target firm. Francis *et al.* (2014b) study the choice of acquirer advisors, as well as the impact of the chosen advisor on the acquirer announcement returns, based on a sample of US public acquirers, that engage in a merger or an acquisition between 1990 and 2003. They report that firms with little M&A experience tend to choose

their underwriters as advisors, and that they especially do this, if stock is used as means of payment. Regarding the announcement returns, they state that announcement returns are lower if inexperienced acquirers hire their underwriter, while announcement returns are higher if experienced acquirers keep the advisor that already supported them in past M&A transactions.

Forte *et al.* (2010) investigate the factors influencing the decision of target firms in M&As to hire an investment bank as financial advisor. They base their research on a sample of 473 transactions, only involving European firms, from 1994 through 2003. They report that hiring an advisor in general is influenced by deal complexity and by the reputation of the bidder's advisor. In case a main bank, meaning a bank the target firm has ongoing relationships with, and conditional upon hiring an advisor, the likelihood to hire the main bank as advisor in the M&A transaction increases with deal complexity and the intensity of the previous relationship. They also find that a closer relationship with the bank increases the announcement returns of the target. They conclude that the main bank has a certification role in signaling deal quality, by using the extensive knowledge acquired throughout the previous relationship.

Further relating to the relationship between advisors and acquirers or targets, Allen *et al.* (2004) investigate the role of commercial banks as M&A advisors for their already existing clients. They mention that, in case the role of the financial advisor in the corporate transaction is to acquire information, commercial banks already doing business with a firm that is looking for an advisor to engage in a merger or an acquisition, are in a superior position compared to unrelated investment banks. This is due to the fact that these commercial banks already have insights about the firm. They relate to this as the bank certification effect. Nevertheless, commercial banks also face a conflict of interest, since they might have the repayment of a loan, or future profits from lending activity in mind, when certifying the value of their client within a M&A transaction. They report that hiring the commercial bank by the target is value increasing – a net certification effect exists – while it has no significant effect for acquirers. They find that acquiring firms still hire their commercial banks as advisors, even if these banks are not associated with value generation, as using the commercial bank increases the acquiring firm's access to financing.

Differentiating advisors by the past client's performance is another way used in research to study M&A outcomes. Bao and Edmans (2011) report that investment banks belonging to the top quintile regarding past acquirer performance, offer better services compared to those belonging to the last quintile regarding past acquirer performance. They also note that these banks do not only show outstanding skills in scouting targets and negotiation, but also responsibility for the client in withdrawing from value-destroying deals.

Song *et al.* (2013) compare the effects of boutique financial advisors in contrast to full-service banks on deal outcomes between 1995 and 2006. Boutique financial advisors in their sample are often smaller, specialized in an industry and have a higher degree of independence compared to full-service banks. They provide evidence that acquirers supported by boutique financial advisors pay lower premiums to public targets, but this does not translate into higher abnormal returns. Additionally, the fees charged by

boutique advisors are similar to those charged by full-service banks and deal completion as well does not differ for the two types of banks. Their findings show that time to resolution is significantly longer in the case of boutique financial advisors. Boutique financial advisors are hired in case of more complex deals, when their skills and expertise is valuable.

Chang *et al.* (2016) study the impact of the advisor's industry expertise on the likelihood to be chosen as an advisor, as well as the impact of industry expertise on the announcement returns of bidder and target. Regarding the impact on the likelihood to be chosen as an advisor due to industry expertise, they report two contrary effects. Industry expertise on one hand is valuable for clients, but especially acquiring firms are negatively influenced by choosing such an advisor, as the risk of information leakage to product-market rivals increases. However, apart from industry expertise influencing the choice for and against an advisor, they state that the advisor's industry expertise is not associated with higher announcement returns for bidders or targets. As they do find evidence that higher industry expertise is associated with higher likelihood of deal completion, they conclude that advisors are incentivized by the fee structure to complete deals, without acting in best interest of the client.

Summing up the existing empirical knowledge on investment banks as financial advisors in M&As, several conspicuities and inconsistencies are worth highlighting. Firstly, the impact of top-tier investment banks on shareholder wealth creation is uncertain. While some researchers find evidence that top-tier banks are creating value for the client's shareholders (e.g. Kale *et al.*, 2003; Golubov *et al.*, 2012), others do either find no significant effect of the top-tier advisors on shareholder wealth, or even value destroying effects (e.g. Bowers and Miller, 1990; Michel *et al.*, 1991; McLaughlin, 1992; Servaes and Zenner, 1996; Rau, 2000; Hunter and Jagtiani, 2003; Ismail, 2010). There is already inconsistency existing whether advisors in general create value for their clients (e.g. Servaes and Zenner, 1996; Ismail, 2010). In line with these inconsistencies, the functioning of the advisory market is rejected by some authors (Rau, 2000; Ismail, 2010; Bao and Edmans, 2011), while others conclude that banks are acting in interest of their clients and are not chasing the fees upon completion (Kale *et al.*, 2003; Sibilkov and McConnell, 2014). Past literature seems to be comparably consistent in the factors that lead to hiring an investment bank and a top-tier investment bank as financial advisor. Nevertheless, past research mainly focusses on M&A transactions involving US firms (e.g. Michel *et al.*, 1991; McLaughlin, 1992). While Forte *et al.* (2010) study the factors influencing target firms in hiring a financial advisor, based on a sample including firms from European countries only, to our best knowledge, the effect of advisor reputation on deal outcomes for M&As taking place in the EMU has not been studied so far, even though the European M&A market is no longer negligible. Moschieri and Campa (2014) note that since the beginning of this century, the volume of M&A accounted for by European acquirers has reached US M&A volumes, making Europe, next to Asia and the US, another important player in the M&A market. To get a better understanding of the European, and especially the EMU M&A environment, we will now look at existing literature on M&As in Europe and in the EMU.

2.2 Peculiarities about the European M&A environment

One of the goals of the creation of the European Union (EU) and especially of the EMU is the integration of financial markets and the creation of a unique and single market for financial services, fostering investment and therewith also the M&A activity. An important feature of the EMU market is the single currency, the euro. The euro was introduced on January 1, 1999 as electronic currency, and notes and coins entered circulation on January 1, 2002. With the introduction of the euro, a currency union was created among a part of the member countries of the European Union. The impact of currency unions on a macroeconomic level, and especially the effect of the euro on a general macroeconomic level is widely studied (e.g. Baele *et al.*, 2004; Meller and Nautz, 2012). As this is far out of the scope of this thesis, we will not further look at the general macroeconomic matters, but only at these matters providing insights on the M&A market in Europe, in the EU and especially within the EMU.

2.2.3 Influences on returns to shareholders in the European M&A environment

Campa and Hernando (2004) study the CARs of acquirer shareholders and of target shareholders for a sample only including firms located in the EU. They further require that that acquirers as well as targets are listed. This results in a sample of 262 M&A announcements between 1998 and 2000. They find that the target firms in their sample on average receive CARs of 9% in the one-month event window, while the CARs to the shareholders of the acquiring firms are zero on average. They additionally evaluate the difference of CARs comparing domestic versus cross-border deals and comparing deals regarding industry regulation. They report that abnormal returns in M&As in regulated industries are lower than abnormal returns in M&As in unregulated industries. According to them, the decrease of CARs with the regulation of the industry worsens in case the transaction is a cross-border transaction. They interpret this as confirming the obstacles, that are still present and hinder the likelihood of deal completion. They mention cultural, legal and transaction barriers between EU member states as examples for these obstacles.

Martynova and Renneboog (2011) study the returns to shareholders of the acquiring firm and of the target firm for 2419 deals taking place in the fifth takeover wave between 1993 and 2001. The firms on both sides of the deals are located in either Continental Europe or the UK. As a further restriction, they require that at least bidder or target needs to be listed on a stock exchange. They report high announcement returns due to the M&A for the target shareholders in their sample. These are on average 9.13%, while the average CARs to the acquirer shareholders only add up to 0.53%. They also find that hostile takeovers and tender offers reduce the returns to bidders but increase the returns to targets. They further report that bidder CARs are higher in case of the acquisition of a private target, but they are lower in case of a stock-only payment. Regarding the impact of the presence of a takeover wave, they mention that returns to both, bidders and targets are lower when the general takeover activity is slowing down. These relationships have already been investigated throughout various US-based studies (e.g. Andrade *et al.*, 2001; Moeller *et al.*, 2004). Martynova and Renneboog (2011) also provide evidence for

relationships that have not been studied prior to their research. Due to many private transactions, information of European transaction is rather limited compared to US deals, since the disclosure requirements in case of private transaction is minor in comparison to the disclosure requirement in case of public deals. They note that partial acquisitions as well as deals with undisclosed terms of transactions cause losses to shareholders of both, bidder and target. This is due to the risk of expropriation of the right of shareholders, especially of minority ones. Furthermore, CARs to target firm shareholders are higher in the UK compared to continental Europe, whereas UK bidders earn significantly lower CARs than their Continental European peers. The weaker investor protection and corporate governance mechanisms in Continental Europe compared to those in the UK are provided as explanation.

Faccio *et al.* (2006) evaluate the effect of the target's listing status on the bidder CARs for a sample of 4429 deals carried out by acquirers from 17 Western European public companies between 1996 and 2001. The location of the targets is not limited to European countries only. They find that CARs earned by acquirers of listed targets account for -0.38% while acquirers of unlisted targets earn CARs of 1.48%. They mention that the difference in returns might be due to a universal difference in the acquisition of public versus unlisted targets, since a similar pattern can be observed in studies using US samples.

In their European-wide study, Goergen and Renneboog (2004) investigate the wealth effect of the 1990s merger wave for acquirers and targets from the UK and Continental Europe only. They restrict their sample to large acquisitions. Based on their sample of 228 deals, they find a similar structure of target and bidder returns as already stated in US studies. They report high announcement returns for targets of 9.00% while the returns to bidders only reach 0.7%. Additionally, they find that wealth effects for domestic deals within European countries versus cross-border deals among European countries differ significantly. They note that domestic M&As create higher CARs than their cross-border counterparts do. In case of value-generating deals, synergy creation is the primary motivation to enter a merger or an acquisition. On the other hand, in case of wealth destroying deals, they indicate managerial hubris as motivation and thus as a value destroying trait of some managers to carry out the deal.

Besides the already mentioned research of Forte *et al.* (2010), who study the factors influencing the decision to hire an investment bank as financial advisor and the factors leading to hire the main bank, the role of investment banks as financial advisors in European deals has, to our best knowledge, not been studied so far. The role of financial advisors for M&As within the EMU only has not been studied at all. Additionally, to our best knowledge, no research regarding the role of financial advisors in M&As in currency unions in general exists. This is probably due to the fact, that the EMU is by far the biggest current currency union, and other currency unions lack the economic power for similar M&A volumes, as they can be observed in the EMU. When looking at the EMU, acquirers and advisors are facing both, domestic as well as cross-border M&As. Therefore, we will look at evidence regarding the role of financial advisors in cross-border, compared to domestic deals, in the following chapter.

2.3 Financial advisors in cross-border M&As

When talking about M&As among firms in the EMU, compared to M&As focusing on acquirers and targets based in the US (e.g. Golubov *et al.*, 2012), we clearly look at both, domestic and cross-border

deals. However, cross-border deals in the EMU are different from cross-border deals between countries that are not part of a monetary union. While several studies mention the integration of financial markets and the market for corporate takeovers in the EMU, M&As among different members of the EMU are still cross-border deals and a significant home-bias and fragmentation exists (e.g. Balta and Delgado, 2009; Ueber *et al.*, 2014). In this last section of our literature review, we highlight shortly the particularities of cross-border deals, compared to domestic deals, already studied in existing literature. We will in particular investigate prior literature on the role of financial advisors in cross-border M&As. General literature about cross-border deals indicates that next to general aspects like geography, also quality of accounting disclosure and bilateral trade foster cross-border M&As. Cross-border mergers include mostly private firms from outside the US (Arena and Dewally, 2017). However, most of the literature so far focusses on cross-border mergers using samples including firms based in the US and/or publicly traded firms (Erel *et al.*, 2012). Francis *et al.* (2014a) investigate the factors influencing the choice of financial advisors in cross-border mergers as well as their impact on the bidder CARs. Their sample consists of 376 cross-border M&As carried out by US-based acquirers between 1990 and 2003. Their results indicate that in case of deals characterized by a high degree of uncertainty, acquirers are more likely to choose advisors with experience in the home country rather than those with experience in the target country. Thus, Francis *et al.* (2014a) do not reject the certification hypothesis. They show that acquirers value the certification of the advisor based in their jurisdiction more than experience regarding deals in the target country of advisors not located in the home country of the acquirer. They also report that the choice of the US acquirer to hire an US-based advisor is appreciated by the acquirer's shareholders as CARs are significantly higher for this type of advisor-acquirer pair, especially in transactions paid entirely in cash in which the acquirer assumes the whole risk.

Arena and Dewally (2017) investigate the role of the financial advisor's expertise in cross-border M&As, based on a larger and more international sample of deals announced between 1994 and 2012. In the same way as Francis *et al.* (2014a), they find evidence supporting the certification hypothesis, meaning that acquirers are more likely to choose advisors with a relevant presence in the home country and without significant expertise in the target country, especially when the potential deal is characterized by a high degree of uncertainty and when the payment is made in cash. Additionally, they find that advisors with local experience in the target country are associated with a higher probability of deal completion in a shorter timeframe. They report that the expertise of the advisors in the target country is associated with the identification of better targets and consequently larger synergies. They also note that the return to the acquirer in terms of CARs around the announcement, and in terms of operating performance in the three years after the transaction, are greater for deals advised by investment banks with significant expertise in the target country.

While literature exists regarding the choice and effect of financial advisors, regarding the advisor's experience in the target country and regarding the advisor's presence in the home country, to our best knowledge, no one has so far studied the effect of advisor reputation on bidder CARs in cross-border M&As yet.

Looking at the different aspects that have been investigated by researchers so far and the research gaps that have already been highlighted throughout the literature review, we will present our hypotheses as well as the positioning of our analysis within present literature in the following section.

3. Hypotheses development

Investment banks play a major role in the market for corporate takeovers. In their role as advisors to bidder or target firms, they are mainly producing and processing information (Allen *et al.*, 2004). They support in asset valuation, ascertain the reservation price for the merger counterparty, investigate the potential synergies that can be achieved through the deal, educate their client about the risk of the transaction and give technical and strategic support throughout the whole process (e.g. Allen *et al.*, 2004; Bodnaruk *et al.*, 2009). In advising participants in M&As on an ongoing basis, investment banks continuously become experts in dealing with these transactions and navigating their clients through these corporate transactions. Consequently, they are expected to perform these tasks better and more efficient compared to unexperienced managers. As deals become more complex and the financial industry becomes more integrated, the need for skilled advisors to help in creating value for shareholders of both, targets and bidders, increases.

The decision to hire financial advisors can be based on various motivations. The firms experience and internal capabilities to deal with such a corporate transaction could be insufficient to handle it on their own. The firm could internally lack the knowledge about the target firm's nation and the regulations to be taken into consideration, when structuring deals in this case. The deal itself might be too complex, to be taken care of without the support of an experienced financial advisors. For the bidding firm - the side of M&As we focus on within this thesis - there could be a special motivation to employ an investment bank. As it can be seen in the present literature on M&As, returns to the acquirers in M&As are often zero or even slightly negative (e.g. Andrade *et al.*, 2001). Thus, the acquiring firm could be motivated to employ an experienced financial advisor to structure deals in a way that results in less value destruction for the shareholders and in the best case in value creation. Additionally, while the average returns to bidders in M&As are, as mentioned, often zero or slightly negative, there are also deals creating comparably high returns for the acquirer. Theoretically, managers deciding about whether to engage in M&As could be motivated by the possibility to be one of these acquiring firms earning comparably high returns. Thus, the acquirer can be motivated to employ an experienced investment bank for scouting a target and arranging a deal that can be expected to earn these comparably high returns for the shareholders.

Lastly, the decision to employ an investment bank for supporting the management of the bidder in a merger or an acquisition can be seen as an exogenous decision that can be taken by the management to influence deal outcome. Several factors, like the means of payment, the size of the target and the public status of the target are also influencing the returns to the bidder and influence the value destruction or creation. These factors have in common, that they cannot be completely influenced by the management of the bidder during the deal structuring. In contrast to the factors mentioned above, managers

responsible for M&As within a firm can actively take the decision to hire an investment bank. Of course, one might argue that in a situation where no internal M&As expertise is available, employing an investment bank as financial advisor is a rather exogenous factor influencing the bidder abnormal returns. However, at this point we take the decision of hiring an investment bank as experienced support in M&As as exogenous.

Putting together the tasks investment banks as financial advisors are carrying out on an ongoing basis and the motivations of acquirers to hire investment banks, we formulate our first hypothesis:

Hypothesis 1: Employing an advisor creates value for the bidder.

The investment bank market is clearly dominated by some investment banks, referred to as top-tier banks or bulge bracket banks in past literature (e.g. Bowers and Miller, 1990; Rau, 2000; Ismail, 2010) as well as in the real business world. These top-tier banks appear on one of the top-positions in the so-called league tables, which are rankings of investment banks according to their market share. Dependent for the rank in the league table, and thus for having the status of a top-tier investment bank, are the revenues the investment banks are able to generate. Thus, banks earning higher incomes through the fees they charge their clients for supporting them in M&As, occupy the top places in these rankings. Top-tier banks are thus highly reputable banks in the market for corporate control, since they are able to attract more clients and earn higher fee incomes than banks located at lower ranks in the league tables. Additionally, past literature indicates that top-tier banks not only rank higher, as they are able to attract more clients, they also rank higher as they charge higher fees compared to non-top-tier competitors (e.g. Golubov *et al.*, 2012) or at least a higher portion of the fee contingent upon completion of the deal (Rau, 2000). The question is how banks acquire a high rank in the league table, meaning a high market share in the market for corporate control. The concept of reputation-building and the link between higher price and higher quality has already been studied for the product market. Shapiro (1983) states that in markets, in which the quality of a product cannot be completely assessed before the transaction, producers of high quality products signal the superior quality of their products by the higher price they charge their clients, compared to the price charged by competitors. Shapiro (1983) notes that, due to the lack of the ability to observe product quality prior to the transaction, producers could be incentivized to decrease quality, thus having lower costs. Nevertheless, he states that in case there is an equilibrium leading to a higher price for products with high quality and of highly reputable sellers, firms are incentivized to keep up the quality as they get remunerated through the higher fee payment. In line with Shapiro (1983), Klein and Leffler (1981) also investigate the product market and find that in a market, which is characterized by repeat-purchases, consumers can use premium prices as an assurance of contractual performance and as assurance of quality in case the transaction costs are high and it is difficult to assess the quality prior to the closing of the contract. Allen (1984) also investigates product quality and price, and states that in markets, in which the product quality is not observable *ex ante*, there is the possibility to observe a market equilibrium with a price above the marginal cost. This higher price serves as assurance of the product quality for the consumer and is paid by the consumer, as the informed consumer

knows, that with decreasing prices through cost-cutting, the firm would not be able to produce products of a comparable quality. Decreasing the quality by leaving the price on the same high level would allow the seller to make profits only in the short run, but would lead to a decrease in profits in the long run, due to a decrease in reputation.

We can compare investment banks to the sellers in the above-mentioned product markets. Investment banks also appear on the market for advisory services on an ongoing basis, as they continuously look for clients they can support in M&As. Additionally, when closing the contract between the investment bank and the client, the quality of the service provided by the investment bank, is not observable upfront. Thus, we can transfer the observed mechanisms from the product market to the market for advisory services by investment banks and assume that the higher fees charged by the top-tier banks assure the clients of their reputation. This is also known as reputational capital from past literature (e.g. Booth and Smith, 1986). Investment banks want to build up reputation, since high reputation, measured by high market shares, allows them to charge higher fees for their services and ensures ongoing business since clients will choose those banks with a good reputation as advisors. We additionally assume that top-tier investment banks that are advising on value destroying deals, and that are incentivized by the fee income, are gaining in the short run but loose in the long run. These banks burn their reputation, since they are punished in the functioning market for advisory services in form of market-share losses in case of not offering above-average services. Looking at a long-term horizon, top-tier investment banks should offer better services compared to their non-top-tier colleagues. Based on this, we formulate our second hypothesis:

Hypothesis 2: Hiring a top-tier advisor creates a higher value for the bidder than hiring any advisor.

When acquiring another firm, the public status of the target can differ. Targets can be either public, private or a subsidiary of another firm. The public status of the target consequently implies differences in the transaction. Additionally, bidder returns are affected by the public status of the target. In their study on frequent bidders in the US, Fuller *et al.* (2002) find that bidder CARs around the announcement date are positive when acquiring private or subsidiary targets. Opposed to that, bidders earn negative CARs in case of acquiring public firms. Having this in mind, it seems especially important for the management of the acquirer company to be supported when acquiring a public target, since value-destroying deals can have consequences for the management and as the support by experts dealing with M&As on an ongoing basis can help to structure deals in a way that leads to value creation.

In line with Golubov *et al.* (2012) we do subdivide our sample into deals with public targets, private targets and subsidiary targets. The public status of the target might have significant impact on the role of the advisor and the value the advisor is able to generate for its client. Golubov *et al.* (2012) do find, for their US sample of M&As, a significant positive influence of the usage of a top-tier advisor on bidder CARs in case a public target is acquired. They argue that this is due to several factors setting acquisitions of public targets apart from acquisitions of private and subsidiary targets, which are both unlisted. In line with Fuller *et al.* (2002) and Officer (2007) they mention the increased difficulty to account for

positive bidder returns in case of the acquisition of a public target, due to its bigger bargaining power compared to unlisted targets. Indeed, the fact that acquiring public targets results in negative, or at least lower returns for the bidder's shareholders compared to deals including unlisted targets, and that the acquisition of unlisted targets is on average associated with positive gain for the bidder's shareholders has been widely experienced in past literature (e.g. Chang, 1998; Moeller *et al.*, 2004; Faccio *et al.*, 2006; Capron and Shen, 2007; Feito-Ruiz *et al.*, 2014). The other two factors making it more important to be supported by a top-tier advisor in the acquisition of public targets are the higher disclosure and regulatory requirements, and the dispersed ownership structure. In particular the last aspect results in the risk of having "no identifiable party to stand behind any hidden or undisclosed liabilities of the target firm after closing the deal, which inhibits the ability of the bidder to arrange any form of post-deal indemnification from the seller, and thus puts ex ante pressure on the bidder's investment banker to perform" (Golubov, *et al.* 2012, p.272).

One peculiarity about unlisted targets that leads to the positive returns to acquirers is the so-called liquidity discount. According to Akerlof (1970), in case a firm without a clear market valuation cannot credibly signal its value to potential bidders, it has to accept a discounted offer price to reflect its limited transparency. Makadok and Barney (2001) claim that the lack of information available on private firms provides more opportunities for bidders to exploit private information situations and gain higher abnormal returns. Nevertheless, also the acquisition of private and subsidiary targets, has peculiarities that might need to be tackled by professional investment banks in case the firm itself does lack the abilities to manage these issues with internal management. Following Makadok and Barney (2001), bidders could offer a price that is higher than the true value of the target when they cannot estimate the true value of the target. The lack of transparency may cause large differences in opinion between the bidder and private target about the appropriate value that should be paid for the target. When the divergence in opinions is large, bidders and targets can obtain opinions from investment banks. In this case, the bidders reduce the risk of over-paying while the targets can improve their bargaining power. Taking all these differences between public, private and subsidiary targets into account and in line with the findings of Golubov *et al.* (2012), we expect the impact of advisors, also due to the higher reputational exposure of the investment bank to be more severe in public compared to private and subsidiary deals. Nevertheless, we expect advisors to produce significant value for the bidder also in acquisitions of private and subsidiary targets.

We follow the findings of Golubov *et al.* (2012) even though we are looking at deals in the EMU in contrast to US deals, since Faccio *et al.* (2006) argue, based on their research of acquirers of listed and unlisted targets in Western European countries, that the effects of the listing status on the abnormal announcement returns of bidders are comparable to the implications from studies using samples of US firms. They note that the difference in returns might be due to a universal difference in the acquisition of public versus unlisted targets. We formulate the following hypothesis:

Hypothesis 3: Advisors create more value for the bidder in public deals than in private and subsidiary deals.

In the first three hypotheses, we mainly look at the effects of an advisor, and especially of a top-tier advisor, hired by the bidder, leaving out the advisors to the target firms. In the negotiation process itself, the counterparty of the acquirer advisor, or of the management of the acquiring firm, might influence the deal outcome for the acquirer in terms of abnormal returns. In the same logic, that we used for the reasoning of Hypothesis 1, we assume that in case the target firm is supported by an advisor, the returns to the target will be greater compared to a situation in which no skilled advisor is employed by the target management. However, as this leads to a situation in which the target firm has higher bargaining power by using the advisor, the bidder faces a stronger counterparty. Taking this into account we formulate our fourth hypothesis:

Hypothesis 4: Using an advisor on the target side decreases the value for the bidder.

Besides the decision to employ an advisor at all, the management of the target firm can, as the management of the acquirer, decide whether to employ any advisor or a highly reputational advisor. Coming back to the two hypotheses investigated by Kale *et al.* (2003) the reputation of the target advisor also has two effects on the wealth generated in the merger or acquisition. According to the better merger hypothesis, the higher the reputation of the advisors, regardless of whether they are employed on the acquirer side or on the target side, the more valuable mergers are originated and M&As are structured in a way that more synergies are created. Next to the fact that the total value of the merger or the acquisition increases with the reputation of the advisor of either party engaged in the deal, Kale *et al.* (2003) also formulate the strategic bargaining hypothesis which states that the bidder's wealth gains and its share of the combined wealth gains is positively related to the reputation of the own advisor but negatively related to the reputation of the target advisor. Employing a top-tier advisor on the target side results in a further increased bargaining power of the target and consequently in a higher share of total merger gains attributed to the target and inversely a lower share attributed to the bidder (Ertugrul, 2015). In line with the reasoning behind Hypothesis 2, we formulate our next hypothesis:

Hypothesis 5: Using a top-tier advisor on the target side decreases the value for the bidder even more than using any advisor on the target side.

Looking at the deal characteristics of deals taking place in the EMU, we are dealing with domestic deals, including acquirer and target from the same nation, as well as with cross-border deals, including acquirer and target from different EMU member states. As prior research has shown, cross-border mergers add additional levels of complexity to M&As (Weber *et al.*, 1996; Ahern *et al.*, 2015; Arena and Dewally, 2017) that need to be tackled by the acquirer and thus by the acquirer's advisor in case an advisor is hired. According to Apollon (2014), culture is just one of many important factors that need to be taken care of in cross-border business negotiations, but that the ignorance of those additional levels of complexity can cause conflicts during the negotiation and later on. According to Weber *et al.* (1996), national culture differentials between merger parties increase stress, entail negative attitudes regarding

the transaction and limit the cooperation among the two firms involved in the merger or acquisition. Arena and Dewally (2017) find that investment banks are crucial for the outcome of cross-border mergers. The EMU is, as already mentioned, a special environment for cross-border deals, since some layers of complexity are not present in comparison to cross-border deals among firms not incorporated in the EMU. Assessing reputation of investment banks, as market share over a certain period of time, only for deals among firms located in EMU member states – domestic deals as well as cross-border deals – we conjecture that the banks ranking in the top positions, have a higher reputation and higher skills for dealing with cross-border-deals as well as with domestic deals in this region. Since we assume the complexity in cross-border deals to be higher, we expect that the above-average skills of the top-tier investment banks are especially helpful and value increasing in these cases. Accordingly, we formulate our sixth hypothesis:

Hypothesis 6: Using a top-tier advisor increases the value for bidders especially in cross-border deals compared to domestic deals.

Next to the value creation in terms of CARs, investment banks as financial advisors to the acquirers in M&As also influence other deal outcomes.

Another outcome of M&As is the share of synergies, that can be negotiated for either party, meaning acquirer or target, throughout the M&A process. The advisor's impact on the synergies as a whole, as well as on the share of synergies assigned to the acquirer has been already taken in consideration by prior researchers (Kale *et al.*, 2003 and Golubov *et al.*, 2012). As mentioned above, two hypotheses proposed by Kale *et al.* (2003) investigate the relationship between the reputation of the advisor and the total synergies created and the relationship between the reputation of the advisor and the share of synergies the advisor can negotiate for the firm it represents. The underlying assumption of the relationship between the advisor's reputation and the total synergy is, that it can be expected that due to their skill set, top-tier advisors are able to structure M&As in a better way or that they are superior in identifying targets that allow for creating more synergies. Based on the skilled negotiation hypothesis, we assume in line with Kale *et al.* (2003) that highly reputational advisors have superior negotiating skills and can negotiate terms, that result in a higher share of synergies for the firm they are representing. In line with this reasoning, we state as next hypotheses:

Hypothesis 7: Using a top-tier advisor by the bidder increases the total synergies created through a merger.

Hypothesis 8: Using a top-tier advisor by the bidder increases the share of synergies assigned to the bidder.

Past research on how investment banks and the reputation of investment banks influence the probability of deal completion varies. Following Forte *et al.* (2010), investment banks prefer to advise on the sell-

side of a merger or an acquisition, meaning being advisor to the target firm. This is due to the compensation scheme investment banks are facing for their service in M&As. The so-called success fee, being an agreed-on percentage of the deal value, is only received upon successful completion of the deal. Especially in case of auctions, the advisors to the target can be reasonably certain to earn a success fee as the target will probably be sold, while the advisors of the bidder cannot rely on such an assumption and the receipts in form of the success fee are less predictable (Forte *et al.*, 2010). Some researchers state that investment banks are falsely incentivized by the remuneration structure they face, as part of the fee income is only earned upon deal completion. Thus, deal completion in their reasoning is forced and they additionally state that top-tier investment banks in part occupy their positioning in league tables due to this behavior. They state that there are no self-regulating mechanisms that punish investment banks for advising their clients on value-destroying deals and consequently motivating them to replicate this behavior. Other studies do not support this view, as they do not find a significant relationship between the reputation of the acquirer advisor and the probability of deal completion. Some of them even find evidence that top-tier banks are especially likely to withdraw from value-destroying deals (Kale *et al.*, 2003). In line with the reasoning behind Hypothesis 1 and Hypothesis 2, we assume that the market for financial advisory services is functioning. We assume that investment banks, associated with completion of deals that are value destroying for the acquirers they advise, are punished and cannot keep a high-position in the league tables over a longer time. Thus, we state our hypothesis:

Hypothesis 9: Employing a top-tier advisor does not increase the likelihood of deal completion for the acquirer.

Next to the mere outcome of whether a deal is completed, also the time until a deal is either completed or the acquirer withdraws from the bid can be influenced by the advisor. Following Golubov *et al.* (2012), two theoretical scenarios regarding the relationship between advisor reputation and deal completion are possible. Highly reputable advisors can be expected to close or withdraw from deals faster, since their skills and routine in dealing with M&As enables them to tackle the different issues concerning M&As faster and more efficient. Nevertheless, there is also a possible justification for assuming that highly reputable advisors on average need more time to complete or withdraw from deals, as they might use more time for carefully evaluating the target and preparing the negotiations since they could see their high reputation at risk. According to Golubov *et al.* (2012), we refer to the first possible explanation as the skilled advisor hypothesis and to the second explanation as the diligent advisor hypothesis. Prior research on the influence of the acquirer advisor's reputation on the speed of the M&A process is limited but consistent. Both, Hunter and Jagtiani (2003) and Golubov *et al.* (2012) find that top-tier advisors significantly reduce the time that is necessary to complete deals. However, significant results regarding the effect of the advisor's reputation on the speed in unsuccessful bids is not available. In line with these two studies, we anticipate advisor reputation and time to resolution to be negatively correlated and devise our tenth hypothesis as follows:

Hypothesis 10: The employment of a top-tier advisor by the bidder decreases the time to resolution.

For getting a better understanding of where our work stands compared to existing M&A research, we will briefly document the studies, our work is related to. Our work is related to several other research streams. First of all, our study is related to the studies of Bowers and Miller (1990), Michel *et al.* (1991), McLaughlin (1992), Servaes and Zenner (1996), Rau (2000), Hunter and Jagtiani (2003), Kale *et al.* (2003), Ismail (2010) and Golubov *et al.* (2012). We will add up to their work in studying the relationship between advisor reputation and deal outcomes for bidders in European deals and see if their findings, that are based on US M&As, are transferable to the European context. We thus will be able to indicate whether the usage of league tables in the European M&A context can be supported. Our work is especially related to the work of Servaes and Zenner (1996), as we also investigate if advisors in general are value generating in European deals. They investigate this relationship only on a sample of large deals. We add up to their research and improve the transferability of the results, since we study a broader sample of deals. Our work is very closely related to the work of Golubov *et al.* (2012), since we evaluate the impact of advisors and their reputation separately for public, private and subsidiary deals. Our study is also related to the studies of Martynova and Renneboog (2011), Campa and Hernando (2004), Goergen and Renneboog (2004) and Forte *et al.* (2006), as we investigate factors influencing bidder CARs for deals taking place in the EMU. These studies look at characteristics influencing the returns to bidders, different from the advisor reputation or the usage of an advisor in general, in European M&As. Our work adds up to the work of Forte *et al.* (2010). They are the first ones to look at the effect of investment banks as financial advisors in European deals, however the effect on the returns to the target. Our work is related to the work of Arena and Dewally (2017). We will add up to their work in evaluating another advisor characteristic's impact on the returns to bidders in cross-border compared to domestic deals, in our case the reputation of the advisor.

4. Research design

In the following we will first of all present the sample collection of our study and later discuss the research method, including descriptions of our main variables and of the control variables, as well as the summary statistics for our sample.

4.1 Sample collection

For our sample, we collected data on M&As from the ThomsonOne.com Investment Banking database. The sample contains M&As announced between January 1, 2002 – the date of introduction of the euro as notes and coins – and December 31, 2015. The sample only includes deals from those countries that introduced the euro on January 1, 2002. Thus, the initial sample consists of deals among bidding and target firms from the following countries: Austria, Belgium, Finland, France, Ireland, Italy, Germany, Greece, Luxemburg, Netherlands, Portugal and Spain. M&As including either bidding firms or target firms from countries having introduced the euro as notes and coins at a later stage are not included in

the sample. Bidding firms in the sample are public firms, target firms are either public, private or subsidiary firms. Following these restrictions, we obtain an initial sample of 14,121 deals. Leaving only successful and unsuccessful deals in the sample – excluding deals with a differing deals status (intended, pending, rumor, unknown) – leaves a sample of 10,516 transactions. Further excluding deals with a missing transaction value reduces our sample to 4,125 transactions. Further taken out are liquidations, restructurings, leveraged buyouts, reverse takeovers, privatizations, bankruptcy acquisitions and going private transactions, leaving a sample of 3,920 deals. For our analysis, we require a transfer of control as result of the transaction. Therefore, only transactions in which the bidding firm owned less than 10% of the target’s shares before the deal and sought to acquire more than 50% of the target’s share through the deal remain in the sample, yielding to 2,031 deals. For the following analysis, we need to be able to calculate CARs around the announcement for the bidding firms in our sample. We obtain daily returns using the Compustat – Capital IQ Securities Daily database. The bidding firms are identified within the Compustat – Capital IQ Securities Daily database, using the SEDOL codes of the respective firm. Due to missing SEDOL codes within the ThomsonOne.com Investment Banking data, we only transfer SEDOL codes of 1,979 transactions to Compustat – Capital IQ Securities Daily. The latter database covers in total 1,597 of the transactions in our sample. As we use the International Event Study (Global Insight) analytics tool within Wharton Research Data Services (WRDS) to conduct the event study for computing the bidder CARs, we exclude the transactions with bidding firms being incorporated in Luxemburg, since Luxemburg is not covered by the International Event Study (Global Insight) analytics tool. This last step reduces our sample by only 14 transactions, arriving at our final sample of 1583 M&As.

4.2 Research method

4.2.1 Measuring advisor reputation

In prior research, reputation of investment banks has been classified in different ways. While some authors base the advisor’s reputation on the advisor’s position in tombstone advertisement (e.g. Bowers and Miller, 1990; Carter and Manaster, 1990), others use market shares as a proxy for reputation (e.g. Megginson and Weiss, 1991; Rau, 2000; Saunders and Srinivasan, 2001; Kale *et al.*, 2003; Isamil, 2010; Golubov *et al.*, 2012). Following the second group of authors, which is also characterized by more recent studies, we use market share based on deal volume the bank has advised on, as a proxy for reputation. In line with Golubov *et al.* (2012) we subdivide the financial advisors into two groups, top-tier advisors and non-top-tier advisors. Following Fang (2005) it is econometrically preferable to rely on this binary classification compared to the usage of a continuous measure. Fang (2005) argues that the usage of a continuous measure requires the variable to capture the advisor’s reputation exactly and requires additionally that the relationship between the relative reputation measure and the dependent variable is constant. Next to the difference in the variable used as proxy for reputation, as well as the difference in how to use market share as a proxy, there is also divergence regarding the number of banks classified as top-tier advisors. In line with Hayes (1971), Bowers and Miller (1990), Rau (2000) and Saunders and

Srinivasan (2001), we classify the first five investment banks in our sample as top-tier banks, while the investment banks ranked 6th rank and higher are classified as non-top-tier banks. Following Kale *et al.* (2003) we assign credit for the whole deal value to bidder and target advisor in each transaction. In case multiple advisors are employed by either bidder or target firm, we assign full deal value to each advisor. We obtain the data on financial advisor market shares, number of deals advised on and total accumulated deal value from the ThomsonOne.com Investment Banking database. The ranking is presented in Table I. Transferring the already mentioned theoretical split among the investment banks to our league table, Goldman Sachs & Co, Morgan Stanley, Bank of America Merrill Lynch, JP Morgan and BNP Paribas are classified as top-tier banks in this thesis, while the other banks are classified as non-top-tier banks³. In line with several other authors (e.g. Rau, 2000; Servaes and Zenner, 1996; Golubov *et al.*, 2012), we classify deals, in which at least one advisor on the acquirer side is a top-tier advisor, fully as advised by a top-tier advisor, regardless of the rank of other advisors employed by the bidder. We proceed in the same manner regarding advisors on the target side and the status of whether or not the target is classified as advised by a top-tier advisor or not.

Lastly, we also take care of deals among financial advisors themselves, to accurately assign top-tier status. Consequently, we consider deals advised by Merrill Lynch prior to its acquisition by Bank of America on January 1, 2009 as advised by a top-tier investment bank. Deals advised by Bank of America prior to January 1, 2009 are classified as non-top tier deals.

In our later conducted empirical analysis we mostly investigate the advisor's impact in a multi-step process. We first of all examine whether employing any advisor has impact, using the dummy variable *AquUsedAdv* which takes the value of one in case the acquiring firms employs an advisor. In case the acquirer does not employ an advisor and manages the merger or acquisition internally, the variable takes the value zero. In a second step, we look at what impact the five above-mentioned top-tier advisors have. Therefore, we include the binary variable *AcquTOP5*, taking the value one, in case one of the five investment banks defined as top-tier banks is employed by the acquirer, and taking the value zero in case an advisor that is not classified as top-tier advisor is used or the acquirer does not use an advisor at all. We further run the models including both indicators to test what additional value is generated by a top-tier advisor compared to any advisor.

4.2.2 Bidder CARs around the announcement

Ideally, the motivation to engage in a merger or an acquisition, should be the creation of value for shareholders (Erel *et al.*, 2012). In the first part of our analysis, we will look at the impact advisors and top-tier advisors have on the bidder CARs. More precisely, we use CARs around the announcement date in the 11-day event window. Using CARs as measure for returns, and to assess the wealth increase or decrease triggered by the merger or acquisition to the parties involved, is common within the M&A research. The CARs over a certain event window are the sum of the abnormal returns in that event

³ The composition of the group of top-tier banks in our sample does not change when generating the league table for the same period, but not including deals with acquirers or targets from Luxemburg.

window (McCarthy and Dolfsma, 2015). Theoretically, the reaction of the acquirer's stock at the announcement reflects the expectation on the changes in future returns to the shareholders. We calculate CARs around the day of the deal announcement, using the International Event Study (Global Insight) from WRDS. We upload the events obtained from our prior search in ThomsonOne.com Investment Banking and the according stock returns obtained for each acquirer from Compustat – Securities Daily (uploading SEDOL code and announcement date). Acquirers are grouped by acquirer nation, as the abnormal returns using the market model will be calculated separately for each nation, due to the different market indices. Due to this procedure, we lose, as already explained above, the deals with acquirers incorporated in Luxemburg, since WRDS does not provide the market indices for Luxemburg within the International Event Study application. Security and index returns are taken from Global Insight. The market model parameters are estimated for the period starting 240 days and ending 41 days before the announcement date, similar to Golubov *et al.* (2012). We use the (-5,+5) day CARs of the acquiring firm around the deal announcement as our measure of acquisition outcome regarding value creation. We also refer to it as *Car11*, since it includes the abnormal returns of the five days prior to the announcement, the abnormal returns at the day of the announcement, as well as the abnormal returns of the five days following the announcement day. It is common practice to include the abnormal returns of some days prior to the announcement and the returns of the days right after the announcement, to include the reactions to rumors and the reactions when the deal has been announced.

4.2.3 Control variables

In our analysis, we control for acquirer characteristics as well as for deal characteristics. All variables, also the dependent variables in our regressions, are defined in the Appendix.

4.2.3.1 Acquirer characteristics

Prior research shows that the size of the bidder itself has impact on the announcement returns associated with an acquisition. Moeller *et al.* (2004) report that small bidders outperform large bidders in terms of abnormal returns. They argue that large firms are more tempted to undertake acquisitions also in case of negative synergy gains, and that large firms offer higher acquisition premiums compared to small firms. This implicates that managerial hubris is more of an issue for larger firms, compared to smaller firms. We include the variable *BidderLnSize* in our models to control for this effect and expect it to be negatively related to the bidder CARs. The variable *BidderLnSize* is the natural logarithm of the of the € million bidder market value four weeks prior to the deal announcement.

We also include the bidder's book-to-market ratio as control variable. Prior literature shows that there are positive significant effects between the bidder's book-to-market ratio and the CARs generated due to the merger or the acquisition (Lang *et al.*, 1991; Dong *et al.*, 2006; Golubov *et al.*, 2012). Rau and Vermaelen (1998) additionally find that the book-to-market ratio of the bidder plays an important role in explaining the long-term returns to bidders engaging in M&As. They differentiate between value bidders, bidders with high book-to-market ratios, and glamour bidders, these with low book-to-market

ratios. They note that value bidders show a better long-term return performance, compared to glamour bidders. They argue that managers of glamour firms are less intensively monitored from board members and from the market, as the high past stock returns lead to trust in the ability of the management to also have the skills needed for managing the acquisition. As a result, more value destroying acquisitions are undertaken by glamour bidders and these managers are more likely to engage in managerial hubris and empire building. As their results are based on long-term returns to bidders, we are aware of being conservative in applying their results fully to our sample. Nevertheless, they mention the same positive significant influence of the book-to-market ratio on the bidding firm's returns, as prior research dealing with announcement returns. We include the variable *BookToMarket* as a control variable. The variable *BookToMarket* is calculated dividing the book value of equity in € million at the fiscal year end prior to the announcement by the market value of equity in € million four weeks prior to the deal announcement. We further include the bidder's leverage as a control variable because prior literature indicates that leverage is positively related to the CARs of the bidder (Maloney *et al.*, 1993; Masulis *et al.*, 2007). Maloney *et al.* (1993) additionally state that often times smaller firms have higher leverage levels compared to large firms and that this is another reason, why small firms are associated with better acquisition outcomes than large firms. Masulis *et al.* (2007) also note that leverage limits managerial discretion since it reduces future free cash flows, due to higher interest payments. The variable *Leverage* is the total financial debt of the acquirer, calculated as the sum of long-term debt and debt in current liabilities, divided by the book value of assets. It is calculated at the fiscal year end prior to the deal announcement. In line with prior findings, we expect the indicator *Leverage* to be positively related to the bidder CARs.

Consistent evidence exists regarding the effect of the bidder's cash flows-to-equity on the announcement period returns. Evidence shows that bidding firms with excessive cash are destroying value through overbidding. Thus, the expected relationship between cash flows-to-equity and bidder announcement returns is negative. Additionally, excessive cash holdings are often associated with managerial empire-building and managerial hubris (e.g. Jensen, 1986; Servaes, 1991). Lang *et al.* (1991) report that cash flows-to-equity are negatively influencing bidder returns, meaning that higher cash flows-to-equity ratios are associated with lower bidder returns at the announcement. The same significant negative relationship is supported by Golubov *et al.* (2012) in case of the acquisitions of public or subsidiary target firms. Their results are not significant for M&As of private targets. We include the control variable *CFtoEquity*. It is calculated as the cash flows at the fiscal year end prior to the announcement divided by the market value of equity four weeks prior the announcement. Cash flows are calculated as income before extraordinary items plus depreciation minus dividends on common and preferred shares.

4.2.3.2 Deal characteristics

We control for the public status of the target, since evidence shows that returns to acquirers in M&As vary depending on the status of the target, they bid for or acquire. Fuller *et al.* (2002) show that returns are higher in case of the acquisition of unlisted targets, namely private and subsidiary targets, compared to the announcement returns to the bidder when acquiring a public target. They show that announcement

returns for acquisitions of private and subsidiary targets are positive while returns for public targets are on average negative. This effect of target listing status on announcement returns to the bidder is also reported by other researchers (e.g. Moeller *et al.*, 2004; Faccio *et al.*, 2006; Doukas *et al.*, 2014). Moeller *et al.* (2004) additionally mention that the on average highest bidder returns are earned within acquisitions of subsidiary targets. We introduce the three dummy variables *Public*, *Private* and *Subsidiary* to control for the effect of the public status of the target. Each of them takes the value of one if the target has the according public status, and zero otherwise. We also use this classification to subdivide our sample in some of the later conducted analyses.

Looking at past literature, the relative size of the deal is often significant in explaining returns to the acquirer in M&As. Nevertheless, there is no consistency regarding the sign of this relationship between announcement returns to the bidder and the relative size of the deal. Asquith *et al.* (1983) report that relative size is positively related to bidder announcement returns, while the opposite is reported by Travlos (1987), who concludes that there is a negative relationship between relative size and bidder announcement returns. In line with Asquith *et al.* (1983), Moeller *et al.* (2004) report a positive relationship between relative size and announcement returns to the bidder. However, they note that the relationship is negative in case of large acquirers. Fuller *et al.* (2002) show that the effect of relative size of the target on the announcement returns to the bidder differs according to the public status of the target. They report that returns increase with the relative size of the target in private and subsidiary deals. He reports the opposite effect in case a public target is acquired. We therefore include the variable *RelativeSize* in our analysis. The variable *RelativeSize* is calculated, dividing the value of the transaction in € million by the bidder's market value of equity in € million four weeks prior to the transaction.

Results of prior research on the effect of hostility on bidder returns are varying. Schwert (2000) fails to find evidence for a relationship between hostility of the bid and returns to the bidder in M&As. On the contrary, Servaes (1991) does find a negative relationship between hostility of a bid and the bidder CARs. As hostility may explain some part of the announcement returns of the bidder, we include the dummy variable *Hostile* as a control variable in our analysis, which takes to value of one in case the deal is classified as hostile, and zero otherwise.

We classify those M&As as diversifying, in which bidder and target do not operate in the same industry, defined by the two-digit SIC level. Morck *et al.* (1990) report that the relationship between the lack of relatedness in terms of industry between bidder and target, negatively impacts bidder returns und thus destroys shareholder value. They argue that diversification is motivated by bad management to diversify themselves and make themselves more valuable and less replaceable for the firm. However, more recent studies report the opposite relationship. They explain that there is a diversification discount (e.g. Villalonga, 2004a; Villalonga, 2004b). In this stream of research, also Campa and Kedia (2002) report that the effect of diversification on firm value varies and that it is not always value destroying, but indeed value increasing in some cases. Thus, the effect of diversification on the bidder's announcement returns is unclear. However, we know from prior literature that an effect – in doubt whether there is a positive or a negative correlation - between returns to the bidder and diversification exists. To control for

diversification, we include the dummy variable *DiversifyingDeal* in our analysis. This variable takes the value of one, if bidder and target are from the same industry, measured by the above mentioned two-digit SIC level, and zero otherwise.

Similar to other authors (e.g. Golubov *et al.*, 2012; Chemmanur *et al.*, 2014), we control for whether the deal occurred through a tender offer or not. Past literature shows that returns of bidders are generally higher in case of tender offers compared to those deals in which there is a merger bid. Jensen and Ruback (1983) also report that bidder announcement returns are higher if the acquisition is carried out through a tender offer. Loughran and Vijh (1997) find the same positive relationship between existence of a tender offer and acquirer returns. Nevertheless, they look at the long-term returns to the acquirer during the five-year period after the M&A. We include the dummy variable *TenderOffer* in our analysis, which takes the value of one, in case the deal is classified as a tender offer, and zero otherwise. We expect it to be positively related to the bidder CARs.

Several papers examine the effect of method of payment on the returns the bidder in M&As. Combining the method of payment with the target's listing status, Fuller *et al.* (2002) note that bidders are, regarding the price they pay and the wealth they create for their shareholders, best off when acquiring private firms and subsidiaries with equity, followed by the acquisition of private firms and subsidiaries with cash. For public targets, they report that using cash or a mix of cash and stock as method of payment, does not have significant effects on the returns to the bidder, while bidder returns are significantly negatively affected when paying for a public target with equity. They explain this effect as a liquidity discount for private and subsidiary targets, meaning that acquirers pay a lower price for unlisted targets compared to listed targets due to the fact, that public firms are more easily and faster bought and sold, and this liquidity is not available in the market for private and subsidiary targets. Therefore, acquirers of unlisted targets acquire these at a comparably better price, considering that selling their stake later is more difficult compared to selling a stake in a public target. Another possible explanation for the superiority of stock payment on the returns of acquirers of private or subsidiary targets is on one hand the possibility for block holder formation among the acquirer's shareholders and thus more intense management monitoring. On the other hand, a reduced price could be due to the possibility of a tax deferral for the target's shareholders who are paid with equity by the acquirer. The findings of Fuller *et al.* (2002) are in line with those of Chang (1998), who also reports that bidders of private targets experience positive abnormal returns around the announcement date in case the transaction is paid with stock and that no abnormal returns can be observed in case of payment with cash. Looking at another dimension of the method of payment effect on acquirer CARs, Martynova and Renneboog (2011) report that the effect differs due to the geographic regions M&As take place in. They state that US studies indicate that abnormal returns to the bidder are significantly negatively affected by using stock as method of payment, compared to all-cash payments. In contrast to this, European studies specify that equity-financed transactions are associated with positive returns to the bidder. This is in line with the findings of Goergen and Renneboog (2004). As the way, the merger or acquisition is financed clearly impacts the returns to the acquirer we include several dummy variables as control variables in our analysis. We include the

dummy variables *AllCash*, taking the value of one if the deal is sought to be completely financed with cash and zero otherwise, *AllStock*, taking the value of one if the deal is sought to be completely financed with equity and zero otherwise. We additionally include the dummy variable *MixedPayment*, taking the value of one if the deal is sought to be financed with a mix of cash and equity and zero otherwise, and lastly the dummy variable *PaymentInclStock*, taking the value of one if the deal is sought to be fully or partly financed with equity and zero otherwise.

In line with Golubov *et al.* (2012) we also include the premium paid by the acquirer to the target as a control variable in our analysis. In their study, the control variable for the premium paid by the acquirer is a positive and significant predictor of the announcement returns to the bidder in case a top-tier advisor is employed. Following their study, we expect our control variable *Premium* to be positively related to bidder CARs.

4.2.4 Descriptive statistics

4.2.4.1 CARs

As already mentioned, for most of the hypotheses, our dependent variable is the return to the bidder and specifically the CARs around the deal announcement. We calculate announcement returns for different time windows. The summary statistics on the different CARs are presented in Table II. *Car0* measures the CAR on the announcement date itself. *Car3* correspondingly measures the CARs including the abnormal returns on the day prior the announcement, on the day of the announcement itself and on the day after the announcement of the merger or acquisition. Similar to that, *Car11* sums up the abnormal returns in the 5-day window prior the announcement, the announcement day itself and the 5-day window after the announcement. Lastly, *Car21* sums up the abnormal returns in the 10-day window before and after the announcement plus the abnormal return on the announcement day itself. The larger the event-window, the higher the CARs with a mean *Car0* of 0.77% and a mean *Car21* of 1.46%. Due to the higher significance and the comparability to other CAR-based studies we only use *Car11* as our dependent variable in the following analysis⁴. We will check the robustness of our results by also running the regressions when substituting *Car11* by the abnormal announcement returns over different time windows. The results of the robustness check will be presented in Section 7.

4.2.4.2 Bidder and deal characteristics

We split up the analysis of the summary statistic in bidder characteristics and deal characteristics. Furthermore, we analyze the summary statistics for the whole sample as well as comparing the different characteristics for different subsamples. We check the statistical significance of the difference in the deal and bidder characteristics between the subsample including deals advised by a top-tier advisor versus deals advised by a non-top-tier advisor. We do the same for the subsample of deals supported by

⁴ When talking about CAR in our following analysis, we refer to *Car11*.

an advisor versus inhouse deals, and for the cross-border versus the domestic subsample. The results are presented in Table III.

All in all, our sample consists of 1583 deals between January 1, 2002 and December 31, 2015. The bidders of these deals are advised by a financial advisor in 624 deals. Within 172 of the 624 deals, at least one of the advisors on the bidder side is a top-tier advisor. Within the remaining 452 deals, bidders use advisors different from the top-tier ones. Next to the 624 deals in which the bidder is supported by an advisor, we have 959 in-house deals in our sample. Looking at cross-border versus domestic deals, we have 1121 domestic deals and 462 cross-border deals in our sample. We also have completed and withdrawn bids in our sample. While 1545 of the 1583 bids are completed, in only 38 out of the 1583 bids, the bid was not successful.

The mean (median) *BidderSize* in our sample is €5,560.21 million (€751.11 million). The mean (median) of the *BidderSize* is larger for deals advised by one of the five top-tier advisors in our sample with a mean (median) *BidderSize* of €11,585.53 million (€4,224.70 million) compared to the *BidderSize* for deals advised by advisors different from the top-tier ones with a mean (median) size of the bidder of €6,779.02 million (€875.04 million). We can also see a difference in the *BidderSize* between deals advised by an advisor in general compared to deals managed by the bidder internally. Mean (median) *BidderSize* is with a value of €8,182.45 million (€1,482.86) for the subsample that uses an investment bank as advisor for the deal structuring, larger than the *BidderSize* for the subsample of those deals in which no advisor is hired. In the latter case, mean (median) *BidderSize* amounts to €3,766.43 million (€488.75 million). Comparing cross-border with domestic deals, the mean (median) *BidderSize* for cross-border deals is with a value of €8,287.44 million (€1,332.29 million) bigger compared to the mean (median) *BidderSize* for domestic deals with a value of €4,408.60 million (€589.20 million).

Looking at our bidder characteristic *BookToMarket*, we do not find a significant difference between the mean (median) book-to market ratios between any of the pairs of subsamples. The mean (median) book-to-market ratio for the overall sample is 68.98 (0.58).

Mean (median) *Leverage* for all bidders in our sample is 0.27 (0.26), while bidders advised by top-tier advisors appear to be levered more compared to bidders advised by a non-top tier advisor. The mean (median) *Leverage* of bidders advised by a top-tier advisor is 0.31 (0.27), while the mean (median) *Leverage* of bidders advised by a non-top tier advisor amounts to 0.24 (0.23). The *Leverage* for bidders that are supported by any advisor throughout the merger or acquisition is significantly lower compared to the *Leverage* of bidders that did not employ an advisor for the deal. Comparing cross-border and domestic deals, we find that bidders in our sample that engage in a domestic deal are significantly levered more than the bidders that acquired a target from another country.

As a last variable describing the characteristics of the bidders in our sample, we look at the cash flows-to-equity ratio. For the overall sample, we note a mean (median) *CFtoEquity* ratio of 5.78 (0.06). There is no statistically significant difference between the mean cash flows-to-equity ratios among the three pairs of subsamples. The difference between the median cash flows-to-equity ratio between bidders advised by a financial advisor, with a value of 0.07, and the median *CFtoEquity* ratio of bidders engaging

in in-house deals, with a value of the median *CFtoEquity* ratio of 0.06, is statistically significant. Statistically significant is also the difference in the median *CFtoEquity* ratio between bidders acquiring a foreign and bidders acquiring a domestic target. The values of the *CFtoEquity* ratios are 0.07 and 0.06 respectively.

Proceeding with the descriptive analysis of deal characteristics, we see that the mean (median) *DealValue* for all deals in our sample is €371.51 million (€39.71 million). With a mean (median) *DealValue* of €1,770.85 (€534.25 million), deals advised by a top-tier advisor are significantly larger than deals advised by a non-top-tier advisor, for which the mean (median) *DealValue* amounts to €457.75 million (€80.10 million). Deals advised by any advisor appear to be significantly larger than inhouse deals with mean (median) *DealValue* of €819.70 million (€148.05 million) and €79.89 million (€20.00 million) respectively. The subsample of cross-border deals shows a mean (median) *DealValue* of €488.30 million (€61.06 million) and thus appears to include bigger deals compared to the subsample of domestic deals. In this case the mean (median) *DealValue* amounts to €323.38 million (€31.60 million). However, the difference in means is not significant for cross-border compared to domestic deals.

The value of the mean (median) *RelativeSize* of deals in our overall sample is 3.12 (0.06). The differences between the means among the three pairs of subsamples in Table III are not statistically significant. However, the differences in medians are statistically significant. The median *RelativeSize* of deals advised by a top-tier advisor amounts to 0.17, while it amounts to 0.09 for deals advised by an advisor different from the top-tier advisors. The median *RelativeSize* of deals advised by an advisor is with a value of 0.11 significantly higher than the median *RelativeSize* of inhouse-deals. Lastly the value of the median *RelativeSize* of cross-border deals is significantly smaller than the median *RelativeSize* of domestic deals.

In the overall sample, 10.11% of the 1583 deals are *Public* deals, 39.29% are *Private* deals and over half (50.60%) of the deals are *Subsidiary* deals. Of the deals advised by top-tier advisors 31.40% are *Public* deals. This share is significantly higher than the share of *Public* deals among the deals advised by non-top tier advisors. In contrast to this, the share of private deals is higher among the subsample of deals advised by non-top-tier advisors compared to the share of *Private* deals advised by top-tier advisors. Among the top-tier deals, only 11.05% of the bidders bid for *Private* targets, while 30.97% of the bidders in the non-top-tier subsample bid for *Private* targets. The difference in the shares of *Subsidiary* deals have within the two subsamples is not significant.

Looking at deals advised by any advisor, we see that 20.67% of these are *Public* deals, 25.48% are *Private* deals and 53.85% are *Subsidiary* deals. In contrast to this, only 3.23% of in-house deals are *Public* deals, while *Private* and subsidiary deals both amount for almost the same percentage of in-house deals (48.28% and 48.48% respectively). The differences in shares between the subsample of deals advised by any advisor and the subsample of in-house deals are statistically significant. It seems that firms almost always employ an advisor when acquiring a *Public* target. This could be due to the above-mentioned further levels of complexity acquirers are facing when acquiring a listed target.

Only 7.58% of the deals in our cross-border subsample are *Public* deals. Further 37.88% of the cross-border deals are *Private* deals and the remaining 54.55% of cross-border deals are *Subsidiary* deals. Compared to cross-border deals, domestic deals in our sample show with 11.15% a higher percentage of *Public* deals. 39.87% of domestic deals are *Private* deals and 48.97% are *Subsidiary* deals. The differences in the shares between cross-border deals and domestic deals are statistically significant for *Public* and *Subsidiary* deals, while the difference is not statistically significant in case of *Private* deals. 52.24% of the bidders in our sample acquired a target operating in another industry than the bidder itself. Looking at the deals advised by one of the top-tier advisors in our sample, only 43.60% of these deals are diversifying, meaning that the bidder acquires a target operating in another industry. For the subsample of deals in which a non-top-tier advisor was employed by the bidder, 45.58% of these deals are diversifying. Comparing the deals advised by any advisor, meaning top-tier advisors and non-top-tier advisors, 45.03% of these deals are diversifying, while 56.93% of the in-house deals are diversifying. Within the subsample of cross-border deals, 46.10% of deals are diversifying while in the subsample of domestic deals, 54.77% of the deals are diversifying. It seems to be more likely for a domestic deal to be diversifying compared to the likelihood for a cross-border deal to be diversifying. All differences regarding the variable *DiversifyingDeal* among the three pairs of subsamples are statistically significant.

Within the underlying sample, only 0.88% of the deals are classified as *Hostile* deals. The share of *Hostile* deals in the subsample of deals advised by a top-tier advisor is with 4.07% larger compared to the share among the subsample characterized by bidders advised by advisors different from the top-tier advisors. The share of *Hostile* deals among the deals advised by a non-top-tier advisor amounts to 1.11%. Accounting for 1.92% of deals, the share of *Hostile* deals among deals advised by an investment bank in general is higher than the share of *Hostile* deals within the subsample of in-house deals. Within the latter, *Hostile* deals amount for a share of only 0.21%. These differences in the share of *Hostile* deals are statistically significant. The share of *Hostile* deals in the subsample including only cross-border deals is 0.87%, while the share of *Hostile* deals among the domestic deals in our sample correspond to 0.89%. However, this difference is not statistically significant.

Only 4.93% of all deals in our sample are classified as *TenderOffer*. Within the subsample of deals advised by top-tier banks, the share of tender offers amounts for 16.28% and thus is higher than the share of tender offers in the subsample of deals in which a non-top-tier advisor is employed by the bidder. 9.07% is the share of tender offers within this subsample. Among the deals, in which an advisor is used by the acquirer, 11.06% of these deals are tender offers. Among the in-house deals, only 0.94% can be classified as tender offers. It appears that deals advised by a professional advisor are more often tender offers compared to inhouse deals. However, it could be that the carrying out of a tender offer is actually influenced by the advisor and that the advisor is not necessarily hired because the deal is a tender offer. The difference in the share of tender offer between the cross-border subsample and the domestic subsample is not significant.

Looking at the overall sample, the payment type intended to settle the transaction is included in 43.55% of the deals. The payment option *AllCash* is used in 30.26% of all deals, while in 7.33% of the 1583 deals *AllStock* is used as means of payment. For the remaining 6.00% of all deals, a mix of cash and stock is used as means of payment. For the subsample of deals in which a top-tier investment bank is hired by the acquirer, the payment type is included in 61.05% of the 172 deals in this subsample. In 35.47% of the deals in the top-tier subsample, *AllCash* is used as method of payment and 16.86% of these deals are classified as *AllStock* deals. Within the remainder of 8.72% of the top-tier deals, the method of payment is classified as *MixedPayment*. Among the deals in which the acquirer is supported by a non-top-tier advisor, the method of payment is included in 45.23% of the deals. For 29.65% of the deals in the non-top-tier advisor subsample, the method of payment is *AllCash*, for 16.86% of the deals *AllStock* and for 8.72% a mix between cash and stock. However, the differences between the means of the payment methods among the subsamples top-tier and non-top-tier are only significant for the variables *AllStock* and *PaymentTypeIncluded*. Looking at the subsample including all deals with any advisor on the acquirer side, the payment type is included for 49.60% of the deals and *AllCash* deal amount for 31.25%, while *AllStock* and *MixedPaymentDeal* classifications amount to 10.74% and 7.69% respectively. For the subsample including in-house deals, the payment type is included for 39.62% of the deals. 29.61% of the deals are classified as *AllCash* deals, 5.11% are classified as *AllStock* deals and 4.90% as mixed deals. The differences between the just-mentioned share of the subsample characterized by any advisor on the bidder side and the subsample of inhouse deals are statistically significant, except for the difference in the shares of *AllCash* deals. Comparing cross-border and domestic deals, payment type is included in the subsample of cross-border deals for 43.38% of the deals, while it is with 43.62% only slightly more in case of domestic deals. For the cross-border deals, 35.06% of the deals are *AllCash* deals, 3.25% *AllStock* deals and 5.19% of the deals are mixed deals. Among the domestic deals, 28.28% are *AllCash* deals, 9.01% are *AllStock* deals and 6.33% are mixed deals. The differences are significant for the *AllCash* and the *AllStock* variables only.

For the general overall sample, we only have information on the *Premium* for 133 out of the 1583 deals. The mean (median) *Premium* in the overall sample amounts to 27.15% (20.15%). The differences in premiums among the three pairs of subsamples are not statistically significant.

The deals in our sample generate a mean (median) *Car11* of 1.41% (0.71%). The deals in the top-tier subsample generate a mean (median) *Car11* of 1.19% (0.78%), while the deals advised by an advisor not belonging to the top-tier advisors generate a mean (median) *Car11* of 1.77% (1.04%). Overall acquirers advised by any investment bank experience a mean (median) *Car11* of 1.61% (0.92%) and those bidders without the support of an investment bank experience a mean (median) *Car11* of 1.28% (0.54%). Bidders for foreign targets earn a mean (median) *Car11* of 1.47% (0.88%) and those engaging in domestic deals earn a mean (median) *Car11* of 1.39% (0.63%) comparably. However, the differences between the means (medians) of *Car11* among the pairs of subsamples are not statistically significant.

4.2.4.3 Bidder nationalities

The sample can be subdivided according to the nation in which the acquirer is located. Table IV contains the mean of the *Car11* and the number of deals by each *AcquirerNation*. According to the number of deals, deals with acquirers from France amount for 22.87% of all deals in our sample. The share of deals is also greater than 10.00% for deals with acquirers from Italy (17.18%), Germany (15.16%) and Spain (12.00%). The shares of deals from Finland and Belgium are with 8.91% and 7.26% still higher than 5.00%, while the share of deals each of the remaining countries contributes to the overall sample is below 5.00%. Thus, acquirers from France, Italy, Germany and Spain amount for more than 65.00% of the deals in our sample. Table IV also documents the mean CARs for each of the acquirer nations. Mean CARs are negative only for acquirers from Portugal and Austria. We observe the highest mean CARs for acquirers incorporated in Finland (2.80%), Germany (2.49%) and Greece (2.19%). The mean *Car11* for the whole sample is 1.41%.

4.2.4.4 Deal activity per year

Looking at Table V, we present the allocation of the deals based on the year in which the announcement takes place and the mean *Car11* in each of the years. We observe that the M&A activity is highest in the years 2007, 2006 and 2005 with respectively 13.77%, 11.43% and 7.96% of all deals in our sample. The share of deals in the remaining years ranges between 4.55% for the year 2012 and 7.64% for the year 2008. Looking at the mean *Car11* within the different years, we observe that the mean *Car11* is increasing from 2002 to 2006 when it reaches a level of 2.14%. The mean *Car11* declines in 2007 and 2008 with means of 1.08% and 1.11%. The mean *Car11* increases again to a level above 2.00% in the years 2009 and 2010. However, the mean *Car11* falls in 2011 and 2012, presumably due to the instabilities in Europe due to the European debt crisis. In our sample, the mean *Car11* is negative only in 2012 with a level of -0.57%. 2012 is also the year with the lowest deal activity. In the following years the mean car increases again and reaches a level of 1.47% in 2015.

5. Empirical analysis

5.1. Relationship between financial advisors and bidder CARs

We will engage in a multi-step process to answer the research question whether an advisor in general and a top-tier advisor especially generates value for the bidder in M&As among firms incorporated in the founding members of the EMU. First of all, we are interested in the effect of an advisor in general, opposed to the situation when no advisor is hired and the merger or acquisition is carried out by the management or other internal employees of the acquirer. Later on, we will investigate whether a prestigious advisor adds additional value compared to the situation in which any advisor is employed by the acquirer. For analyzing the relationship between the employment of an investment bank as financial advisor and the bidder CARs we use multivariate OLS regressions. In all our regressions, we control for the above-mentioned bidder- and deal-characteristics. Additionally, if not mentioned differently, we control for year fixed effects, for the effect of the financial crisis and the euro crisis. We

also absorb the effect of the acquirer's nation. Lastly, we use heteroskedasticity-robust standard errors. In line with the research of Masulis *et al.* (2007) and Golubov *et al.* (2012), we create interaction terms, to capture the impacts of the target public status and the means of payment considered for settling the deal. We create the following interaction terms: *Public_AllCash*, *Public_PaymentInclStock*, *Private_AllCash*, *Private_PaymentInclStock*, *Subsidiary_AllCash*. Following Masulis *et al.* (2007) we do not include an interaction term for bids for subsidiary targets with the means of payment including stock, to avoid perfect multicollinearity with the intercept. Thus, we take care of the already extensively analyzed relationship between target public status and means of payment combinations and the CARs accruing to the bidders.

5.1.1 Relationship between the presence of bidder advisors and bidder CARs

For investigating Hypothesis 1, we run the following OLS regression⁵:

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 AcquUsedAdv_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
 & + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i \\
 & + \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
 & + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
 \end{aligned} \tag{1}$$

Our main variable of interest in this first stage is the variable *AcquUsedAdv*, which takes the value of one if the bidder is supported by any investment bank as financial advisor. Correspondingly this variable takes the value of zero, if the acquirer internally managed the merger or acquisition without seeking the help of an investment bank as financial advisor. Based on Hypothesis 1, we expect that the bidder CARs in the 11-day event window are greater, when the bidder uses an advisor. A positive and significant value of β_1 would suggest that hiring an advisor is value increasing for the bidder. The results of the regression analysis are presented in specification (1) of Table VI. We see that the estimated coefficient on our main variable of interest, *AcquUsedAdv*, is positive and statistically significant at the 5% level. Thus, we do not reject our Hypothesis 1 for the full sample, since using an acquirer creates value for the bidder. We are aware of the fact, that the value of the Adjusted-R² for our regression is, with a value of 3.57%, comparably low. However, low R² values are common for studies on M&A returns as explained by Bao and Edmans (2011). Looking at the other coefficients, we see that especially *BidderLnSize* and *CFtoEquity* are highly significant and negatively influencing the bidder CARs. This is in line with our expectation on the relatedness of these control variables.

As explained above, we expect advisors, as well as top-tier advisors, to differ in the influence on bidder CARs regarding the public status of the target they bid for. Therefore, we subdivide our sample and run the regression of bidder CARs on *AcquUsedAdv* and the already mentioned control variables separately for the three different types of targets, namely *Public*, *Private* and *Subsidiary* targets.

⁵ As already mentioned, we additionally control for year fixed effects, the years of the financial crisis, the years of the European sovereign debt crisis and we absorb the effects of different acquirer nations. However, the estimated coefficients are suppressed. We proceed in the same manner in all of the following equations, without separately indicating it.

Next, we run the following OLS regression for the subsamples including only (1) public targets, (2) private targets and (3) subsidiary targets, respectively.

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 AcquUsedAdv_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 PaymentInclStock_i \\
 & + \beta_5 RelativeSize_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Premium_i \\
 & + \beta_{10} Leverage_i + \beta_{11} CFtoEquity_i + \varepsilon_i
 \end{aligned} \tag{2}$$

We expect that the estimated coefficient on our main variable of interest, the variable *AcquUsedAdv*, to be positive and statistically significant especially in case of the regression only including public targets. We also expect a positive coefficient on our main variable of interest within the other two models, but that the coefficient is higher, in case the target is *Public*. The opposite, meaning that we do not find a significant positive effect of *AcquUsedAdv* on bidder CARs in public deals would imply that perhaps public deals are carried out by companies with more experience and better expertise regarding M&As, and thus with less need for outside advisors. Specifications (2) to (4) of Table VI present the results for the regressions of bidder CARs on *AcquUsedAdv* separately for each group regarding the public status of target. Looking at specification (2) of Table VI, the regression only including bids for public targets, the result shows that the coefficient on *AcquUsedAdv*, our main variable of interest, is statistically significant at the 10% level, but indicates a negative effect of the usage of an advisor on the bidder's abnormal announcement returns. The employment of advisors by bidders for public targets decreases their CARs by 3.98% compared to a bid in which the bidder manages the M&A internally. Interestingly, the estimated coefficient on our control variable *BookToMarket* is significant, however negatively related to bidder CARs, and thus showing the opposite sign than expected. Looking at specification (3), the regression only including private targets, we do not find a significant effect of the usage of any advisor by the bidder on the announcement returns to bidders of private targets. Additionally, the Adjusted-R² of the regression results displayed in specification (3) is negative, thus meaning that the model does not explain the announcement returns to the bidder. We examined whether the model is overfitted but did not reach a positive R² with any of the modifications. The modifications are not reported due to the lack of explanatory power⁶. Surprisingly, our main variable of interest, *AcquUsedAdv*, is highly significant in case of specification (4), the regression for the sample only including deals with subsidiary targets. The estimated coefficient on *AcquUsedAdv* in this case is positive and significant at any conventional level. The magnitude of the estimated coefficient leads to the conclusion that employing any advisor on the bidder side in case of bidding for a subsidiary target, leads to an 2.09% increase in the CARs to the bidder.

As already stated, we do not reject Hypothesis 1, since hiring an advisor creates value in terms of bidder CARs within the overall sample. However, we also tested Hypothesis 3 in combination with Hypothesis 1, by looking at the effect of the employment of any advisor by the bidder on the *Car11* of the bidder separately for bidders of public, private and subsidiary targets. In this case, we do reject Hypothesis 3. We expected that the bidder CARs would be higher and especially significant in case of the employment

⁶ Anticipating the results of the upcoming regressions, we will never experience a positive adjusted-R² for regressions of bidder CARs on *AcquUsedAdv* or *AcquTOP5* for the subset of private deals. We will not further state this observation when discussing following results.

of an advisor by a bidder in the process of acquiring a public target. We also expected a smaller effect on the bidder announcement returns if a bidder is supported by any advisor in the acquisition of a private or a subsidiary target. Surprisingly we found a significant, however negative effect of advisors on bidder CARs in public deals and a highly significant and positive relationship between the usage of an advisor and the bidder CARs for bidders of subsidiary targets.

5.1.2 Relationship between bidder advisor reputation and bidder CARs

So far, we just looked at the effect of the usage of advisor on the bidder CARs. We will now focus on the effects top-tier advisors have on the announcement returns to the bidder in general, and we will also split up our sample in line with the prior analysis, and run separate regression for public, private and subsidiary deals only. For testing Hypothesis 2 we run the following regression:

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
 & + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i \\
 & + \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
 & + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
 \end{aligned} \tag{3}$$

In line with Hypothesis 2, we expect the estimated coefficient on our main variable of interest, in this case *AcquTOP5*, to be positive and statistically significant, which would lead to the conclusion that top-tier advisors create value compared to non-top-tier advisors and compared to internally managed deals. The results for the OLS regression including deals from the overall sample are presented in specification (1) of Table VII. The estimated coefficient on our main variable of interest, *AcquTOP5*, is positive, but statistically insignificant at conventional levels. As our Hypothesis 2 states, that we expect top-tier advisors to generate additional value for bidders compared to any advisor, we also run a model specification including both, *AcquTOP5* and *AcquUsedAdv*, to investigate if the top-tier advisor indicator is associated with additional effects compared to the employment of a non-top-tier advisor. The estimated coefficient on *AcquTOP5* is insignificant also in this case and the results of the regression including both indicators, *AcquTOP5* and *AcquUsedAdv* do not change our results, that hiring an advisor increases the announcement returns to the bidder, but that top-advisors are not creating value more value than any advisor. We clearly reject Hypothesis 2 for the overall sample. Since the results of the regression including both indicators do not change our understanding, we do not report them in detail. Nevertheless, we also analyze Hypothesis 2 in combination with Hypothesis 3 to investigate, whether top-tier advisors are increasing the value creation in bids for public targets. We run the following model for the public, private and subsidiary subsamples, separately.

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 PaymentInclStock_i \\
 & + \beta_5 RelativeSize_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Premium_i \\
 & + \beta_{10} Leverage_i + \beta_{11} CFtoEquity_i + \varepsilon_i
 \end{aligned} \tag{4}$$

Specification (2), (3) and (4) of table VII show the results of the regressions. As for the full sample, we do not find significant effects of top-tier advisors on bidder CARs for any of the subsamples. We also run the regressions including not only *AcquTOP5*, but also *AcquUsedAdv* to measure the additional

effects of top-tier advisors compared to any advisor on bidder CARs. As in the case of the full sample, these regressions do not change the results obtained so far on the influences of any advisor or top-tier advisors on the bidder CARs and do not give us further insights and are consequently not reported in detail. There is no additional effect of top-tier advisors on the bidder CARs for bidders of either public, private or subsidiary targets. Following this analysis, we also reject Hypothesis 3. Neither in the analysis of the effect of employing any advisor on the value creation of the bidder, nor in the analysis of the effect of highly reputational advisors on the bidder announcement returns did we find evidence in support of Hypothesis 3. Advisors are not especially associated with value creation for acquirers of public targets.

5.1.3 Effect of target advisors on bidder CARs

So far, we only looked at the effect of using an advisor or a top-tier advisor by the bidder on the bidder CARs. However, as stated in Hypotheses 4 and 5, we expect that an advisor, and especially a top-tier advisor, on the target side also effects the CARs attributed to the bidder. In the following we examine the effect of the variables *TargetUsedAdv* and *TargetTOP5* on the bidder CARs. Similar to the corresponding variables on the bidder side, the variable *TargetUsedAdv* takes the value of one, if the target firm uses an advisor for the merger or acquisition, and the value of zero, if the target firm takes care of the M&A process without external support. The variable *TargetTOP5* takes the value of one, if the advisor employed by the target firm belongs to the five top-tier investment banks and zero otherwise. We firstly run the following regression, to evaluate if target advisors in general influence the abnormal announcement returns to the bidder:

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 TargetUsedAdv_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
 & + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i \\
 & + \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
 & + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
 \end{aligned} \tag{5}$$

In line with Hypothesis 4, we expect a negative and significant coefficient on our indicator *TargetUsedAdv*. We expect that it is harder for the bidder to accredit himself the gains in terms of synergies and other surpluses, if the target is supported by a professional financial advisor, who also acts in the best interest of the target firm and wants to ensure that gains are attributed to the own client. If the opposite is true and the usage of any advisor by the target firm increases the returns to the bidder, it could be that the usage of a professional financial advisor on the target side leads to a better merger structuring and thus also higher returns for the bidder.

The result of the regression is presented in specification (1) of Table VIII. It shows that the estimated coefficient on our variable *TargetUsedAdv* is statistically significant at the 5% level, however the estimated coefficient is positive and not negative, as we expected. A possible reason for explaining this positive relationship between bidder CARs and the presence of an advisor on the target side could be the already above-mentioned possibility that any advisor on the target side is of advantage for the bidder because the bidder deals with an experienced counterpart. The advisor on the target side could be of advantage for the bidder since it might have acquired skills throughout prior M&As that are valuable to

the process and for the returns created throughout the M&A. Due to the results, we reject Hypothesis 4. Advisors used by the target influence bidder CARs. However, they are influencing bidder CARs not in the way as we expected, as using an advisor on the target side is associated with a 1.11% of CAR increase for the bidder.

For investigating the effect of the usage of top-tier advisors by the target on the abnormal announcement returns to the bidder, we run the following regression, to firstly investigate if top-tier advisors employed by the target influence the announcement return to the bidder compared to the usage of non-top tier advisors or no advisor at all by the target:

$$\begin{aligned}
Car11_i = & \alpha + \beta_1 TargetTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
& + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i \\
& + \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
& + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{6}$$

We expect the estimated coefficient on *TargetTOP5* to be significantly and negatively related to the bidder CARs. The results for this regression are presented in specification (1) of Table IX. The estimated coefficient on *TargetTOP5* is negative, however insignificant at conventional levels. Thus, compared to the situation in which an advisor different from a top-tier advisor or no advisor at all is used by the target, having a top-tier advisor used by the target firm does not significantly influence the returns to the bidder. However, as stated in Hypothesis 5, we are interested in the additional effect, compared to the employment of any advisor, target top-tier advisors have on the announcement returns to the bidder. Therefore, we secondly run the regression, including both indicators, *TargetTOP5* and *TargetUsedAdv*:

$$\begin{aligned}
Car11_i = & \alpha + \beta_1 TargetTOP5_i + \beta_2 TargetUsedAdv_i + \beta_3 BidderLnSize_i + \beta_4 BookToMarket_i \\
& + \beta_5 Public_AllCash_i + \beta_6 Public_PaymentInclStock_i + \beta_7 Private_AllCash_i \\
& + \beta_8 Private_PaymentInclStock_i + \beta_9 Subsidiary_AllCash_i + \beta_{10} RelativeSize_i \\
& + \beta_{11} DiversifyingDeal_i + \beta_{12} TenderOffer_i + \beta_{13} Hostile_i + \beta_{14} Leverage_i \\
& + \beta_{15} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{7}$$

If Hypothesis 5 is true, the estimated coefficient on *TargetTOP5* would need to be negative and significant, since we expect that the presence of a top-tier advisor on the target side decreases the value for the bidder more than the usage of a non-top-tier advisor by the target. Results for this regression are presented in specification (2) of Table IX. Both variables, *TargetUsedAdv* and *TargetTOP5* are statistically significant at the 1% and 10% level respectively. The estimated coefficient on our variable *TargetUsedAdv* is still positive. Precisely, an advisor on the target side lead to an 1.49% increase in bidder CARs, when also controlling for *TargetTOP5* in the regression. Having any advisor on the target side increases the bidder CARs. However, if the target is supported by one of the five top-tier advisors, the bidder CARs are smaller, as there is a statistically significant negative relationship between the bidder CARs and the employment of a top-tier advisor by the target firm. In contrast to the increase in bidder CARs due to the presence of any advisor on the target side, if this advisor is a top-tier advisor, the bidder CARs are statistically negatively affected by the presence of a top-tier advisor. The presence of a top-tier advisor on the target side is associated with a 1.68% deterioration in bidder CARs. This could be due to the fact, that any advisor on the target side is useful for the bidder due to the factors mentioned above. However, if the counterparty in M&As is supported by a highly reputational advisor

with high negotiation skills and the ability to negotiate a lot of benefits for the own client, in this case the target, the bidder CARs could decrease since the bidder is not able to attract as many benefits of the M&A compared to a situation in which an advisor different from a top-tier one is employed by the target. Taking these results into account, we do not reject Hypothesis 5. Top-tier advisors on the target side are associated with a higher value decrease for bidders compared to any advisor on the target side. Even though, we did not specify the expected effects of target advisors and target top-tier advisors in case of differing listing forms of the targets, we additionally run the regressions that have so far been presented in this section dealing with target advisors also for the different subsamples classified by the target public status. The results for the regressions of bidder CARs on *TargetUsedAdv* for the subsamples of public, private and subsidiary targets are presented in specifications (2), (3) and (4) of Table VIII. The estimated coefficients on *TargetUsedAdv* are statistically significant for the public and the subsidiary subsample only. The estimated coefficient is not significant for the private subsample. For the subsidiary subsample, the estimated coefficient is positive and statistically significant at the 1% level. For the subsidiary subsample, our conclusion is in line with the conclusion for the positive effect of target advisors in the full sample. Looking at the public subsample, the employment of an advisor by the target is associated with lower returns for the bidder. This relationship is in line with what we have primarily expected. It seems that deals, in which the bidder bids for public compared to subsidiary targets differ in such a way, that the impact of the target advisor is different as well. A possible explanation for the negative relationship between the usage of an advisor by the target and the bidder CARs is that when supporting a public firm, which is a target in an M&A deal, the pressure from the target firm's shareholder is even higher compared to the pressure in case an advisor is hired by a private or subsidiary target. The target advisor is thus focusing even more on the value generation for its client. In the same manner, we present the regressions of bidder CARs on *TargetTOP5* for the three subsamples classified by the public status of the target in specifications (3), (4) and (5) of Table IX. The estimated coefficient on *TargetTOP5* is not significant at any conventional level, in any of the specifications. We also run the regression including both indicators, *TargetUsedAdv* and *TargetTOP5*, to check for additional effects of top-tier advisors compared to the effects of any advisors. However, the estimated coefficients on *TargetTOP5* are also not significant for these regressions. Top-tier advisors do not seem to specifically affect the bidder CARs for deals with targets having a specific target public status.

5.1.4 Effect of advisors on the bidder and on the target side on bidder CARs

Further not stated in one of the hypotheses, is an expected effect of employment of advisors by the bidder as well as by the target on the announcement returns to the bidder. However, for getting a detailed understanding about the effects of advisors on bidder CARs, we also run the following two regressions:

$$\begin{aligned}
 Car11_i = & \alpha + \beta_1 AcquUsedAdv_i + \beta_2 TargetUsedAdv_i + \beta_3 BidderLnSize_i + \beta_4 BookToMarket_i \\
 & + \beta_5 Public_AllCash_i + \beta_6 Public_PaymentInclStock_i + \beta_7 Private_AllCash_i \\
 & + \beta_8 Private_PaymentInclStock_i + \beta_9 Subsidiary_AllCash_i + \beta_{10} RelativeSize_i
 \end{aligned}$$

$$\begin{aligned}
& + \beta_{11}DiversifyingDeal_i + \beta_{12}TenderOffer_i + \beta_{13}Hostile_i + \beta_{14}Leverage_i \\
& + \beta_{15}CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{8}$$

$$\begin{aligned}
Car11_i = & \alpha + \beta_1AcquTOP5_i + \beta_2TargetTOP5_i + \beta_3BidderLnSize_i + \beta_4BookToMarket_i \\
& + \beta_5Public_AllCash_i + \beta_6Public_PaymentInclStock_i + \beta_7Private_AllCash_i \\
& + \beta_8Private_PaymentInclStock_i + \beta_9Subsidiary_AllCash_i + \beta_{10}RelativeSize_i \\
& + \beta_{11}DiversifyingDeal_i + \beta_{12}TenderOffer_i + \beta_{13}Hostile_i + \beta_{14}Leverage_i \\
& + \beta_{15}CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{9}$$

Results for the first equation, using the full sample, are presented in specification (1) of Table X. If any advisor is employed by the bidder and by the target, only the estimated coefficient on the indicator *TargetUsedAdv* is statistically significant at the 10% level. The estimated coefficient on *AcquUsedAdv* is not significant at conventional levels. This means that in case of controlling for the employment of an advisor by the target, the advisor to the bidder is not significantly creating value in terms of bidder CARs. We additionally run the regression separately for public, private and subsidiary deals. These results are presented in specifications (2), (3) and (4) of Table X. The estimated coefficients on our two variables of interest are significant only in the regression including subsidiary deals. In line with the results from the overall sample, the hiring of acquirer advisors as well as of target advisors increases the announcement returns to the bidder in subsidiary deals.

Results for the second equation, using the full sample, and in this case with indicators for top-tier advisors on both sides, are presented in specification (1) of Table XI. Neither the estimated coefficient on *AcquTOP5* nor on *TargetTOP5* is significant. For the whole sample, we additionally run the regression including the indicators *AcquUsedAdv* and *TargetUsedAdv*. Again, with including these indicators, the estimated coefficient on *AcquTOP5* and *TargetTOP5* show us the extra influence of top-tier advisors compared to any advisor. Results are presented in specification (2) of Table XI. The estimated coefficients on *TargetTOP5* and *TargetUsedAdv* are significant and have opposing signs. Also in case of controlling for advisors and top-tier advisors hired by the bidder, the presence of a target advisor in general increases the bidder CARs, while the bidder CARs decrease in case the advisor on the target side is classified as a top-tier advisor. Neither does the usage of any advisor or a top-tier advisor by the bidder influence bidder CARs, when controlling for *TargetUsedAdv* and *Target TOP5*. The results for the regressions including *AcquTOP5* and *TargetTOP5* as indicators for acquirers in private, public and subsidiary deals are presented in specifications (3), (4) and (5) of Table XII. However, the estimated coefficients on the indicators *AcquTOP5* as well as on *TargetTOP5* are insignificant. The estimated coefficients on these two indicators are also not significant in any of the specifications when additionally controlling for *AcquUsedAdv* and *TargetUsedAdv*, thus only measuring the extra effect of top-tier advisors compared to the usage of any advisor.

5.1.5 Effect of advisors on bidder CARs for different bidder nations

Included in our sample are only deals with acquirers and targets incorporated in the 11 above-mentioned EMU countries. While we expect that these countries have more similarities compared to having US countries in the same sample, we evaluate whether there is a difference in the effect of advisors in

general and of top-tier advisors especially on the bidder CARs if we subdivide the sample by the countries the acquirers are incorporated in. We already saw that the deal activity is very different in the different countries in our sample and that the mean bidder CARs also differ widely among the different acquirer nations. This motivates us to investigate, whether the role of advisors differs in the different countries. We run all of the regressions so far presented in Section 5 for each of the countries. However, we do not further split up the subsamples by the public status of the targets since this would leave us with too small samples. The estimated coefficients on our variables of interest – *AcquUsedAdv*, *AcquTOP5*, *TargetUsedAdv* and *TargetTOP5* - are statistically insignificant for deals with acquirers incorporated in Austria, Belgium, Germany, Italy, Netherlands and Portugal. All in all, we only see significant estimated coefficients on our variables of interest for acquirers from Finland, France, Greece, Ireland and Spain. We will not further evaluate the results for the Greek and for the Irish subsamples, since these subsamples consist of only 41 and 28 deals, are comparably small and the explanatory power of these results is doubtful. The estimated coefficient on *AcquUsedAdv* is significant and positively related to bidder CARs for acquirers incorporated in Finland and in France. The estimated coefficient on *TargetUsedAdv* is positive and significant for the Spanish subsample. Regarding the top-tier indicators, we find significant positive estimated coefficient on both *AcquTOP5* and *TargetTOP5* for the Finish subsample. However, there is no additional effect of either top-tier advisors used by the bidder or by the target compared to the usage of any advisors, since the estimated coefficients on *AcquTOP5* and *TargetTOP5* are insignificant, when controlling for *AcquUsedAdv* and *TargetUsedAdv* respectively. We do not separately report the results in detail. We are also unable to find evidence that the usage of top-tier advisors is significantly generating value for the bidder or decreasing the value for the bidder, in case the top-tier advisor is employed by the target firm, for acquirers from a certain nation.

5.2 Effect of advisor reputation on bidder CARs in cross-border versus domestic deals

Deals in our sample can be classified based on whether they are domestic deals, with bidder and target incorporated in the same country, or cross-border, in case the bidder acquires a target situated in another country. Even though we did not find evidence that top-tier advisors add value overall in our sample, neither for the deals including public targets, we expect, based on the reasoning behind Hypothesis 6 that top-tier advisors hired by the bidder especially add value for the bidder in cross-border deals compared to domestic deals since cross-border deals are characterized by additional levels of complexity in contrast to domestic deals.

We split up our sample in cross-border and domestic deals respectively and run the following OLS regression for the cross-border subsample and for the domestic subsample separately:

$$\begin{aligned}
Car11_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
& + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i + \\
& \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
& + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{10}$$

We additionally run the following OLS regression, for being able to measure the actual value creation of the top-tier advisor compared to a potential value improvement driven by the employment of an advisor in general:

$$\begin{aligned}
Car11_i = & \alpha + \beta_1 AcqTOP5_i + \beta_2 AcqUsedAdv_i + \beta_3 BidderLnSize_i + \beta_4 BookToMarket_i \\
& + \beta_5 Public_AllCash_i + \beta_6 Public_PaymentInclStock_i + \beta_7 Private_AllCash_i \\
& + \beta_8 Private_PaymentInclStock_i + \beta_9 Subsidiary_AllCash_i + \beta_{10} RelativeSize_i \\
& + \beta_{11} DiversifyingDeal_i + \beta_{12} TenderOffer_i + \beta_{13} Hostile_i + \beta_{14} Leverage_i \\
& + \beta_{15} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{11}$$

We expect the estimated coefficient to be positive and significant in both regressions using the cross-border deals only. The results are presented in Table XII. Surprisingly, specifications (1) and (2) of Table indicate that neither the estimated coefficients on our main variable of interest, *AcqTOP5*, are significant, nor is the estimated coefficient on *AcqUsedAdv* significant at any conventional level. Thus, hiring top-tier advisors does not create value for bidders in cross-border deals. Not even advisors in general are associated with value creation for the bidder in cross-border deals. Results for the regressions only including domestic deals are displayed in specifications (3) and (4) of Table XII. Also in case of domestic bids, hiring a top-tier advisor is not associated with value creation for the bidder. Taking these results into account we need to reject Hypothesis 6 since top-tier advisors are not associated with value generation for the bidder in cross-border deals. Looking at specification (4) of table XIII we can only note that advisors in general are significantly creating value for the bidder in domestic deals. This finding is verified by running the regression only controlling for *AcqUsedAdv* and not for *AcqTOP5* additionally, since the estimated coefficient on *AcqUsedAdv* is in this case still positive and significant at the 5% level. Even if not necessary, for verifying the reasoning of Hypothesis 6, we also investigate the effects of target advisors and target top-tier advisors in cross-border and domestic deals. In cross-border deals, the estimated coefficients on the different advisor classifications, either for advisors on the bidder or on the target side, are insignificant in all of the cases. In case of domestic deals, the estimated coefficient on *TargetUsedAdv* is positive and significant, and thus shows the same result as in our analysis for the full sample.

Different from what we expected in general, the reputation of advisors does not seem to be related to the bidder CARs around the announcement day of a merger or an acquisition. In the last part of our empirical analysis we investigate whether the reputation affects other deal outcomes such as the synergies accruing to the bidder and the synergies in total, the probability of deal completion and lastly the time from announcement to either completion or withdrawal.

5.3 Effect of advisor reputation on other deal outcomes

5.3.1 Relationship between advisor reputation and synergies

Congruent with our expectation, that top-tier advisors do create higher value for the bidder than the usage of any advisor, we also expected that top-tier advisors are able to negotiate a higher share of synergies for their bidder clients and create higher synergies overall. After the analysis of the relationship between advisor reputation and bidder announcement returns, we already rejected

Hypothesis 2 and argued that advisors reputation is not creating value in terms of bidder CARs. That is why we are now conservative, prior to the analysis of the relationship between advisor reputation and the synergy gains that can be negotiated for the bidder, if our expectations will be verified.

We first of all run the following regression for investigating the relationship between the reputation of the advisor and the total synergies created within the deal:

$$\begin{aligned} Synergies_i = & \alpha + \beta_1 AcqUTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 RelativeSize_i \\ & + \beta_5 PaymentInclStock_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Leverage_i \\ & + \beta_{10} CFtoEquity_i + \varepsilon_i \end{aligned} \quad (12)$$

We also run the following regression of the bidder's share of synergies (BSOS) on the reputation of the advisor:

$$\begin{aligned} BSOS_i = & \alpha + \beta_1 AcqUTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 RelativeSize_i + \\ & \beta_5 PaymentInclStock_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Leverage_i \\ & + \beta_{10} CFtoEquity_i + \varepsilon_i \end{aligned} \quad (13)$$

Specifications (1) and (2) of Table XIII show the results for the OLS regression of synergy gains and bidder's share of synergies on advisor reputation. We do not find evidence for a statistically significant influence of advisor reputation on the total synergies created by the deal. Thus, we reject Hypothesis 7. Neither is the estimated positive coefficient on AcqUTOP5 significant in the regression of bidder's share of synergies on advisor reputation. This result is in line with Golubov *et al.* (2012). Thus, we run a third regression including, in line with Golubov *et al.* (2012), an interaction term of *AcqUTOP5* and *TargetTOP5*. Especially in terms of the allocation of synergies, a top-tier advisor on the target side can prevent the allocation of gains from synergies to the bidder as the top-tier advisor on the target side also acts in best interest of its client. If the estimated coefficient on the interaction term is negative, the top-tier advisor on the target side would actually inhibit the allocation of synergies to the bidder. Results are presented in specification (3) of Table XIII. None of the variables of interest is statistically significant. We therefore also reject our Hypothesis 8 since top-tier advisors employed by the bidder are not associated with negotiating a higher share of synergies for their client.

Based on our prior analysis, we found that advisors in general create value for the bidder. Therefore, we run the three just-mentioned regressions with the indicator *AcquUsedAdv* and the interaction term *AcquUsedAdv_TargetUsedAdv* instead of the indicator *AcqUTOP5* and instead of the transaction term *AcqUTOP5_TargetTOP5*. However, the estimated coefficients on this indicator and on the interaction term are also insignificant. Thus, also advisors in general are neither associated with higher total synergies created throughout the deal, nor with negotiating a higher share of synergies for their client.

5.3.2 Effect of advisor reputation on the likelihood of deal completion

Another widely discussed issue in the field of research dealing with top-tier advisors is their questionable incentivization to complete deals due to the already mentioned fee structure. We analyze the relation between deal completion and the usage of a top-tier advisor by the bidder. Therefore, we run the following probit regression:

$$\begin{aligned}
CompletedBids_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 Public_AllCash_i \\
& + \beta_5 Public_PaymentInclStock_i + \beta_6 Private_AllCash_i + \beta_7 Private_PaymentInclStock_i \\
& + \beta_8 Subsidiary_AllCash_i + \beta_9 RelativeSize_i + \beta_{10} DiversifyingDeal_i + \beta_{11} TenderOffer_i \\
& + \beta_{12} Hostile_i + \beta_{13} Leverage_i + \beta_{14} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{14}$$

We expect that the estimated coefficient on *AcquTOP5*, is either insignificant or significant and negative, as we do not believe that the likelihood of completion is higher in case the bidder hires a top-tier advisor. The results for the whole sample are presented in specification (1) of Table XIV. As expected, the estimated coefficient on *AcquTOP5* is negative and significant at the 5% level. Thus, we do not reject Hypothesis 9 since the usage of top-tier advisors does not increase the likelihood of deal completion. Similar to Golubov *et al.* (2012), the most significant predictor for deal-completion is hostility, in our case with a z-statistic of -4.02. In case a deal is classified as hostile, the likelihood of completion decreases.

We also look at the relationship between top-tier advisors and deal completion separately for the three subsamples regarding the public status of the target firm and run the following regression for the public, private and subsidiary samples, separately:

$$\begin{aligned}
CompletedBids_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 PaymentInclStock_i \\
& + \beta_5 RelativeSize_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Leverage_i \\
& + \beta_{10} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{15}$$

We expect the estimated coefficient on *AcquTOP5* to be either insignificant or significant and negative. The results are presented in specifications (2), (3) and (4) of Table XIV. The estimated coefficients on *AcquTOP5* are insignificant for the public as well as for the subsidiary subsample, while it is significant and negative for the private subsample. These results confirm the decision to not reject Hypothesis 9. Top-tier advisors are not associated with higher completion rates in our sample. Indeed, the employment of a top-tier advisor is associated with lower deal completion rates. This analysis is especially useful in evaluating whether top-tier advisors are falsely incentivized to complete deals in order to earn the fee income, which is subject to deal completion. Going one step further, we want to investigate additionally if top-tier advisors are more likely to withdraw from value-destroying deals and thus act in the best interest of their client as proposed by Kale *et al.* (2003). However, we only have a total of 38 withdrawn bids in our sample, making this analysis unable to be carried out.

5.3.3 Effect of advisor reputation on time to resolution

Like Golubov *et al.* (2012), we run the regressions of time to resolution on the reputation of the bidder advisor just for the public subsample. The reasoning behind this is, according to Officer *et al.* (2008), that deals targeting unlisted targets are often announcement on the same day on which the deal is completed. Thus, including deals with unlisted targets in our analysis would falsely influence our results. We run the following regression:

$$\begin{aligned}
TimeToResolution_i = & \alpha + \beta_1 AcquTOP5_i + \beta_2 BidderLnSize_i + \beta_3 BookToMarket_i + \beta_4 PaymentInclStock_i \\
& + \beta_5 RelativeSize_i + \beta_6 DiversifyingDeal_i + \beta_7 TenderOffer_i + \beta_8 Hostile_i + \beta_9 Premium_i \\
& + \beta_{10} Leverage_i + \beta_{11} CFtoEquity_i + \varepsilon_i
\end{aligned} \tag{16}$$

Our dependent variable in this case is *TimeToResolution*, which measures the days between the announcement of the deal and the day the deal is completed, or the day the bidder withdraws from the deal. Our main variable of interest is *AcquTOP5*. As hypothesized, we expect that the time to resolution is significantly smaller in case a top-tier advisor is employed by the bidder. If the regression shows a positive relationship between the usage of a top-tier advisor and the time to resolution, we would need to reject our hypothesis in favor of the diligent advisor hypothesis. This would mean that, due to the higher reputational capital exposed throughout the transaction, top-tier advisors take more time in evaluating the target to avoid the risk of decrease in reputational capital.

We first of all run the regression for all deals including public targets. The results are presented in specification (1) of Table XV. The estimated coefficient on the *AcquTOP5* indicator is positive and statistically significant at the 5% level. This means that top-tier advisors are associated with longer bid durations. Running the regression only for completed bids, the estimated coefficient on our main variable of interest is still positive and statistically significant at any conventional level, as shown in specification (2) of Table XV. We do not report results for a regression only including withdrawn public deals, since the underlying number of withdrawn public deals just amounts to 14 deals, which does not lead to any regression results. Taking the results presented in Table XV into account, we reject our Hypothesis 10. Top-tier advisors are not associated with shorter time to resolution. However, they are indeed associated with longer time between the date of announcement and the date of completion or withdrawal. A possible explanation for this is the above mentioned diligent advisor hypothesis. Highly reputable advisors might be associated with longer times to resolution, since they have reputational capital at risk.

6. Further discussion and robustness tests

One question, that ultimately comes up, when looking at the results from our empirical models regarding the effect of advisors and top-tier advisors on the abnormal announcement returns to the bidder, is whether the usage of league tables can be justified in the European M&A environment. For the overall sample, we find that employing an advisor generates value for the bidder, while using a top-five top-tier advisor in our sample is not associated with value creation for the bidder. Thus, it appears that it is not valuable for a bidding firm, to employ a highly reputable advisor and pay the higher fee. A possible explanation for our results, compared to the results of Golubov *et al.* (2012), is some structural difference regarding the samples. The focus of the usage of top-tier financial advisors in our sample clearly lies in bids for subsidiary target, while in the sample of Golubov *et al.* (2012) top-tier advisors are mostly employed in public deals. This is also due to a structural difference between US deals and European deals, since the share of unlisted firms and thus unlisted targets is higher in Europe compared to the US (Moschieri and Campa, 2014). Nevertheless, we have to mention, that Golubov *et al.* (2012) are the first ones to report this significant positive effect of advisor reputation on bidder returns in public deals. Other researchers have clearly indicated that, in the same manner as we do, the usability of league tables for the indication of superior services by highly ranked banks is questionable (e.g. Rau, 2000). Our

results are clearly adding up to the aforementioned studies (Bowers and Miller, 1990; Michel *et al.*, 1991; McLaughlin, 1992; Servaes and Zenner, 1996; Rau, 2000; Hunter and Jagtiani, 2003; Kale *et al.*, 2003; Ismail, 2010; Golubov *et al.*, 2012) investigating the relationship between advisor reputation and bidder CARs. We conclude, that for the European deal environment, the usage of leagues tables by bidders is not the right approach for achieving higher returns.

To further check our results, we also run the regressions using the TOP3, the TOP8 and the TOP10 investment banks presented in Table I as top-tier banks. Motivation for this robustness check is that prior literature also partly used other classifications of top-tier advisors (e.g. Golubov *et al.*, 2012). Our results and conclusions do not change when using another classification. We similarly do not find significant effects of the advisor reputation on the bidder announcement returns when using these other classifications of top-tier advisors.

Regarding the five banks classified as top-tier in our study, we can document great consistency and stability. Goldman Sachs & Co. is, according to our approach, classified as a top-tier advisor in 13 out of the 14 years in our sample. The other four financial advisors, classified as top-tier advisors, are classified as top-tier advisors in at least six out of the 14 years in our sample. Thus, we are confident in using the banks identified as top-tier banks in Table I for the timeframe from January 1, 2002 to December 31, 2015.

We additionally use other timeframes over which we calculate the abnormal announcement returns for the bidder, and rerun our regressions with these returns. We specifically rerun the regressions with the announcement returns only including those of the announcement day itself and the announcement returns in the event windows (-1;+1) and (-10;+10). Our results and conclusions remain unchanged when using these abnormal returns around the announcement day compared to the CARs in the (-5;+5) event window.

Lastly, we analyze the endogeneity of the choice of an advisor and a top-tier advisor. In our analysis, we take for granted, that the decision of whether or not to employ an advisor, and that also the decision of whether or not to employ a top-tier advisor, is exogenous. However, various bidder characteristics or deal characteristics could drive the decision to employ an advisor in general, as well as the decision to employ a top-tier advisor. Additionally, the decision can also be based on personal perception of the management of the bidder. If a self-selection bias is present regarding the choice to employ an advisor at all, and regarding the choice to employ a top-tier advisor, the results of our regressions would not be reliable. Following Golubov *et al.* (2012) we also implement the two-stage procedure introduced by Heckman (1979) to investigate, if there is a self-selection bias and in case there is such a bias, to control for it. We run this analysis twice, firstly we check if the choice to employ a top-tier advisor is endogenous, secondly, whether the choice to employ any advisor is endogenous. Following Fang (2005) and Golubov *et al.* (2012) we create a scope variable which influences the choice of hiring a top-tier advisor. Therefore, we generate a so-called *scope_TOP* variable. We download the data on mergers, equity issues and debt issues for the five years prior to each deal from ThomsonOne Investment Banking. We then separately look whether the acquirer of a deal in our sample employed a top-tier advisor in a

merger, an equity issue or a debt issue in the five years prior to the deal in our sample. In case the acquirer employed a top-tier advisor in a merger, in an equity issue and also in a bond issue in the five years prior to the deal, the *scope_TOP* variable takes the value of three. In case the acquirer in our sample only hired a top-tier advisor in two of the three types of deals in the past five years, the *scope_TOP* variable takes the value of two. If the acquirer in our sample hired a top-tier advisor in only one type of transaction, the *scope_TOP* takes the value of one. If no top-tier advisor has been hired by the acquirer in our sample in the five years prior to the deal, the variable *scope_TOP* takes the value of zero.

The first stage of the Heckman (1979) two-stage procedure, we model the choice between a top-tier advisor and a non-top-tier advisor. In the second stage, we construct the *inverse Mills ratio*. When running the regressions, both indicators, *scope_TOP* and the *inverse Mills ratio* are insignificant for the whole sample as well as for the regressions for public, private and subsidiary deals. Thus, there is no endogeneity issue regarding the choice of top-tier advisors. We repeat the analysis to check for endogeneity in the choice of hiring an advisor versus not hiring an advisor. The *scope_Adv* indicator respectively takes the value of three if an acquirer in our sample hired, in the five years prior to the deal, an advisor for a merger, an equity issues as well as for a debt issue. The variable takes the value of two, if the acquirer hired an advisor only in two of the three types of deals. Lastly the variable *scope_Adv* takes the value of one if the acquirer hired any advisor in one of the deal types, and it takes the value of zero if no advisor was hired by the acquirer in our sample in the five years prior to the deal. We run the two regressions of the Heckman (1979) two-stage procedure and again, the estimated coefficient on the *scope_Adv* variable as well as on the *inverse Mills ratio* are insignificant, also when running the regressions separately for public, private and subsidiary deals. Therefore, we can conclude that there is no endogeneity issue in our regressions and our results presented in Section 5 are reliable.

7. Conclusion

Our study is a first attempt to understand the role of the reputation of investment banks as financial advisors in M&As in the EMU. Our results indicate that the reputation of advisors, namely hiring a top-tier advisor, is not associated with value generation for the bidder. However, hiring an advisor by the acquirer is associated with higher bidder CARs. We also look at the effects of target advisors on bidder CARs. Interestingly, bidder CARs are higher in case an advisor is present on the target side, however they are decreasing if this advisor on the target side is a top-tier advisor. Looking at the effects of advisors separately for public, private and subsidiary deals, we do not find significant effects of top-tier advisors on either the bidder or target side in any of the specified deal types on bidder CARs. Interestingly, hiring an advisor by the bidder is positively related to bidder CARs in subsidiary deals, however it is negatively related to bidder CARs in case of public deals. We additionally find that, while bidder advisors increase the value for the bidder in domestic deals, hiring an advisor by the bidder does not significantly influence the bidder CARs in cross-border deals.

Lastly, we look at the effects of top-tier advisors on other deal outcomes. Not surprisingly, based on our prior results, top-tier advisors are neither associated with higher synergy generation, nor with the ability to negotiate a higher part of synergies for their client. Interestingly, top-tier advisors are not associated with a higher likelihood of deal completion. Top-tier advisors are also associated with a longer duration from deal announcement to deal completion or withdrawal compared to non-top-tier advisors and compared to internally managed deals.

Summing this up, we cannot support the usage of league tables by bidders in deciding which advisor to hire in M&As between firms incorporated in an EMU member country. However, we cannot argue that investment banks are falsely incentivized by the fee structure, since we do not find evidence that top-tier advisors are associated with a higher likelihood of completion.

Table I - Top-25 Financial Advisors ranked by Deal Value

Table I shows the Top-25 financial advisors for M&As carried out by firms incorporated in the 12 member states that introduced the euro as notes and coins on January 1, 2002 (Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, Netherlands, Portugal and Spain), acquiring target firms in the same subset of nations in the period from January 1, 2002 to December 31, 2015. The data is drawn from ThomsonONE.com Investment Banking database. Banks are ranked according to the deal value in € million they advised on during that period. Market share, based on deal value, as well as the number of deals advised by each bank is presented additionally. Full credit in terms of deal value is allocated to each eligible advisor in case of multiple advisors, as well as to advisors hired by the bidder or by the target firm. Excluded in the composition of the ranking are exchange offers, equity carve-outs and open market repurchases. The date considered for the ranking is the rank date of each deal.

Rank	Financial Advisor	Deal Value (€ million)	Market Share (%)	Number of Deals
1	Goldman Sachs & Co	1,253,921.68	35.1	598
2	Morgan Stanley	1,096,855.86	30.7	668
3	Bank of America Merrill Lynch	986,196.43	27.6	433
4	JP Morgan	976,745.93	27.3	651
5	BNP Paribas SA	898,658.53	25.1	958
6	Rothschild & Co	892,305.25	25.0	1,372
7	Citi	873,651.20	24.4	451
8	Deutsche Bank	784,781.34	21.9	778
9	Lazard	774,261.86	21.7	1,052
10	UBS	731,234.78	20.4	472
11	Nomura	525,497.22	14.7	370
12	Credit Suisse	512,805.53	14.3	403
13	Societe Generale	406,510.94	11.4	515
14	Credit Agricole CIB	403,366.11	11.3	513
15	HSBC Holdings PLC	382,366.27	10.7	263
16	Mediobanca	381,222.47	10.7	540
17	RBS	279,980.54	7.8	394
18	Santander	231,125.62	6.5	228
19	KPMG	187,729.29	5.2	1,729
20	Barclays	184,483.27	5.2	155
21	UniCredit	175,154.44	4.9	363
22	Leonardo & Co	169,512.42	4.7	345
23	Commerzbank AG	161,927.05	4.5	206
24	Banca IMI (Intesa Sanpaolo)	130,216.46	3.6	352
25	Greenhill & Co, LLC	99,486.40	2.8	33

Table II – Summary on CARs

Table II presents the summary statistics of the different CARs calculated for our overall sample. We present the number of observation, the mean, the standard deviation as well as minimum and maximum of each variable. The information on the stock returns is taken from Compustat – Securities daily. The CARs are calculated using the International Event Study (Global Insight) from Wharton Research Data Services. Variables are defined in the Appendix.

	Observations	Mean	Std. Dev.	Min	Max
Car0	1.583	0.0077	0.0379	-0.1595	0.5350
Car3	1.583	0.0128	0.0499	-0.2086	0.5806
Car11	1.583	0.0141	0.0775	-0.8109	0.7234
Car21	1.583	0.0146	0.1003	-1.1770	0.7299

Table III – Descriptive Statistics – Bidder and Deal Characteristics

The table presents the descriptive statistics for our sample. Panels A and B describe the number of observations, mean and median for the bidder and deal specific characteristics, for the whole sample (1), for the subsample only including deals advised by top-tier advisors (2) and for the subsample of deals advised by non-top-tier advisors (3). Panels C and D present the bidder and deal characteristics for deals advised by any advisor (4) and deals not advised by an advisor (5). Lastly, panels E and F present the descriptive statistics for cross-border (6) and domestic deals (7). We additionally present the statistical tests for differences in means and medians. Variables and the according sources are defined in Appendix A.

	Panel A: Bidder Characteristics						Panel B: Deal Characteristics					
	Total Sample (1)			Top-Tier (2)			Non-Top-Tier (3)			Difference (2)-(3)		
	N	Mean	Median	N	Mean	Median	N	Mean	Median	Mean p-value	Median p-value	
BidderSize	1290	5560.2210	751.1108	153	11585.5300	4224.6980	371	6779.0220	875.0389	0.0016	0.0000	
BookToMarket	1254	68.9796	0.5846	149	3.0153	0.6355	362	9.1212	0.5524	0.4280	0.1220	
Leverage	1523	0.2749	0.2610	166	0.3080	0.2786	437	0.2404	0.2274	0.0000	0.0002	
CFtoEquity	1254	5.7809	0.0648	149	0.3521	0.0776	362	18.6086	0.0732	0.4881	0.2189	
DealValue	1583	371.5110	39.7090	172	1770.8450	534.2500	452	457.7531	80.1000	0.0000	0.0000	
RelativeSize	1244	3.1237	0.0641	147	0.4517	0.1695	362	0.9070	0.0864	0.5078	0.0026	
Public	1583	0.1011	-	172	0.3140	-	452	0.1659	-	0.0000	-	
Private	1583	0.3929	-	172	0.1105	-	452	0.3097	-	0.0000	-	
Subsidiary	1583	0.5060	-	172	0.5756	-	452	0.5243	-	0.2519	-	
DiversifyingDeal	1583	0.5224	-	172	0.4360	-	452	0.4558	-	0.6590	-	
Hostile	1583	0.0088	-	172	0.0407	-	452	0.0111	-	0.0160	-	
TenderOffer	1583	0.0493	-	172	0.1628	-	452	0.0907	-	0.0103	-	
AllCash	1583	0.3026	-	172	0.3547	-	452	0.2965	-	0.1616	-	
AllStock	1583	0.0733	-	172	0.1686	-	452	0.0841	-	0.0023	-	
MixedPayment	1583	0.0600	-	172	0.0872	-	452	0.0730	-	0.5527	-	
PaymentTypeIncl	1582	0.4355	-	172	0.6105	-	451	0.4523	-	0.0004	-	
Premium	133	0.2715	0.2075	48	0.3125	0.1857	63	0.2390	0.2161	0.4810	0.4182	
car11	1583	0.0141	0.0071	172	0.0119	0.0078	452	0.0177	0.0104	0.4502	0.3865	

(continued)

Table III – Continued

	Panel C: Bidder Characteristics				Panel D: Deal Characteristics			
	Advisor (4)		In-House (5)		Difference (4)-(5)			
	N	Mean	Median	N	Mean	Median	Mean p-value	Median p-value
BidderSize	524	8182.4480	1482.8570	766	3766.4260	488.7509	0.0000	0.0000
BookToMarket	511	7.3408	0.5750	743	111.3719	0.5999	0.3117	0.8168
Leverage	603	0.2590	0.2445	920	0.2853	0.2818	0.0132	0.0123
CFtoEquity	511	13.2853	0.0749	743	0.6197	0.0583	0.2789	0.0000
DealValue	624	819.6951	148.0500	959	79.8876	20.0000	0.0000	0.0000
RelativeSize	509	0.7755	0.1062	735	4.7498	0.0447	0.3705	0.0000
Public	624	0.2067	-	959	0.0323	-	0.0000	-
Private	624	0.2548	-	959	0.4828	-	0.0000	-
Subsidiary	624	0.5385	-	959	0.4849	-	0.0372	-
DiversifyingDeal	624	0.4503	-	959	0.5693	-	0.0000	-
Hostile	624	0.0192	-	959	0.0021	-	0.0004	-
TenderOffer	624	0.1106	-	959	0.0094	-	0.0000	-
AllCash	624	0.3125	-	959	0.2961	-	0.4890	-
AllStock	624	0.1074	-	959	0.0511	-	0.0000	-
MixedPayment	624	0.0769	-	959	0.0490	-	0.0223	-
PaymentTypeIncl	623	0.4960	-	959	0.3962	-	0.0001	-
Premium	111	0.2708	0.1986	22	0.2752	0.2598	0.9704	0.5053
Car11	624	0.0161	0.0092	959	0.0128	0.0054	0.4138	0.2688

(continued)

Table III – Continued

Panel E: Bidder Characteristics

	N	Cross-Border (6)			Domestic (7)			Difference (6)-(7)	
		Mean	Median	N	Mean	Median	Mean p-value	Median p-value	
BidderSize	383	8287.4360	1332.2850	907	4408.5970	589.1957	0.0000	0.0000	
BookToMarket	369	19.0765	0.5617	885	89.7867	0.6052	0.5237	0.5492	
Leverage	441	0.2504	0.2389	1082	0.2849	0.2688	0.0026	0.0112	
CFtoEquity	369	2.5644	0.0700	885	7.1220	0.0627	0.7179	0.0216	

Panel F: Deal Characteristics

DealValue	462	488.3010	61.0555	1121	323.3781	31.6000	0.1421	0.0000
RelativeSize	364	0.6097	0.0473	880	4.1635	0.0694	0.4587	0.0073
Public	462	0.0758	-	1121	0.1115	-	0.0319	-
Private	462	0.3788	-	1121	0.3988	-	0.4600	-
Subsidiary	462	0.5455	-	1121	0.4897	-	0.0439	-
DiversifyingDeal	462	0.4610	-	1121	0.5477	-	0.0017	-
Hostile	462	0.0087	-	1121	0.0089	-	0.9596	-
TenderOffer	462	0.0433	-	1121	0.0517	-	0.4804	-
AllCash	462	0.3506	-	1121	0.2828	-	0.0075	-
AllStock	462	0.0325	-	1121	0.0901	-	0.0001	-
MixedPayment	462	0.0519	-	1121	0.0633	-	0.3861	-
PaymentTypeIncl	461	0.4338	-	1121	0.4362	-	0.9310	-
Premium	29	0.3119	0.2920	104	0.2603	0.1971	0.6300	0.1457
car11	462	0.0147	0.0088	1121	0.0139	0.0063	0.8636	0.5027

Table IV – Distribution of CARs and deal count by Acquirer Nation

Table IV presents the mean CARs separated by the nations the acquirers are incorporated in. We additionally present the number of deals for each subset of acquirer nation and also present the share of total deals, each subset of acquirers, regarding the nation they are incorporated in, adds to the total deals in our sample. Stock returns are taken from Compustat – Global Security Daily, CARs are calculated using the International Event Study application of Wharton Research Data Services, information on the nationalities of the acquirers is taken from ThomsonONE.com Investment Banking.

Acquirer Nation	Mean Car11	N	Share of deals(%)
Austria	-0.0052	39	0.0246
Belgium	0.0119	115	0.0726
Finland	0.0280	141	0.0891
France	0.0155	362	0.2287
Germany	0.0249	240	0.1516
Greece	0.0219	48	0.0303
Ireland-Rep	0.0132	36	0.0227
Italy	0.0014	272	0.1718
Netherlands	0.0173	112	0.0708
Portugal	-0.0023	28	0.0177
Spain	0.0100	190	0.1200
Total	0.0141	1583	1.0000

Table V – Distribution of CARs and deal count by year

Table V presents the mean CARs separated by the year, the deal announcement takes place in. We additionally present the number of deals per year and we also present the share of total deals, each year adds to the total deals in our sample. Stock returns are taken from Compustat – Global Security Daily, CARs are calculated using the International Event Study application of Wharton Research Data Services, information on the announcement dates is taken from ThomsonONE.com Investment Banking.

Year	Mean Car11	N	Share of deals (%)
2002	0.0127	104	0.0657
2003	0.0130	83	0.0524
2004	0.0149	95	0.0600
2005	0.0187	126	0.0796
2006	0.0214	181	0.1143
2007	0.0109	218	0.1377
2008	0.0111	121	0.0764
2009	0.0202	92	0.0581
2010	0.0203	109	0.0689
2011	0.0120	107	0.0676
2012	-0.0057	72	0.0455
2013	0.0114	76	0.0480
2014	0.0133	92	0.0581
2015	0.0147	107	0.0676
Total	0.0141	1,583	1.0000

Table VI - Cross-sectional regression analysis of bidder CARs on usage of bidder advisor

Table VI presents the results of the OLS regression of bidder CARs in the 11-day event window on the usage of an advisor by the bidder and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	Public (2)	Private (3)	Subsidiary (4)
Intercept	0.1111 ^a (3.46)	0.1428 ^c (1.67)	0.0713 (1.30)	0.1402 ^a (3.67)
AcquUsedAdv	0.0102 ^b (2.07)	-0.0398 ^c (-1.92)	0.0076 (0.81)	0.0209 ^a (3.57)
BidderLnSize	-0.0046 ^a (-3.60)	-0.0016 (-0.41)	-0.0007 (-0.30)	-0.0068 ^a (-4.46)
BookToMarket	0.0000 (0.71)	-0.0385 ^a (-4.10)	0.0000 (-1.25)	-0.0001 ^c (-1.78)
Public_AllCash	-0.0107 (-0.69)			
Public_PaymentInclStock	-0.0563 ^a (-3.10)			
Private_AllCash	0.0130 (1.43)			
Private_PaymentInclStock	-0.0124 (-1.41)			
Subsidiary_AllCash	0.0074 (1.15)			
PaymentInclStock		-0.0365 ^b (-2.49)	-0.0116 (-1.22)	-0.0048 (-0.35)
RelativeSize	-0.0001 (-0.94)	-0.0048 (-0.61)	0.0008 (1.33)	0.0011 (1.36)
DiversifyingDeal	0.0015 (0.33)	0.0125 (0.85)	-0.0044 (-0.55)	-0.0004 (-0.07)
TenderOffer	0.0128 (0.98)	-0.0064 (-0.44)	-0.0108 (-0.72)	
Hostile	0.0031 (0.11)	0.0126 (0.32)		
Premium		-0.0165 (-1.09)		
Leverage	0.0020 (0.22)	0.0182 (0.41)	-0.0093 (-0.64)	-0.0016 (-0.12)
CFtoEquity	-0.0000 ^a (-4.51)	0.0481 (1.48)	0.0001 (1.62)	-0.0000 ^a (-3.58)
N	1207	114	469	603
Adjusted-R ²	0.0357	0.1877	-0.0233	0.0603

Table VII - Cross-sectional regression analysis of bidder CARs on bidder advisor reputation

Table VII presents the results of the OLS regression of bidder CARs in the 11-day event window on the reputation of the bidder advisor and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	Public (2)	Private (3)	Subsidiary (4)
Intercept	0.1119 ^a (3.58)	0.1637 ^c (1.72)	0.0722 (1.32)	0.1353 ^a (3.39)
AcquTOP5	0.0083 (1.19)	0.0049 (0.31)	0.0180 (1.55)	0.0069 (0.81)
BidderLnSize	-0.0044 ^a (-3.33)	-0.0041 (-0.99)	-0.0007 (-0.29)	-0.0059 ^a (-3.77)
BookToMarket	0.0000 (0.59)	-0.0382 ^a (-4.07)	0.0000 (-1.28)	-0.0001 ^c (-1.84)
Public_AllCash	-0.0098 (-0.63)			
Public_PaymentInclStock	-0.0554 ^a (-2.94)			
Private_AllCash	0.0130 (1.43)			
Private_PaymentInclStock	-0.0126 (-1.42)			
Subsidiary_AllCash	0.0075 (1.17)			
PaymentInclStock		-0.0374 ^b (-2.32)	-0.0111 (-1.18)	-0.0004 (-0.03)
RelativeSize	-0.0001 (-0.80)	-0.0046 (-0.62)	0.0008 (1.36)	0.0012 (1.57)
DiversifyingDeal	0.0004 (0.09)	0.0194 (1.23)	-0.0044 (-0.57)	-0.0035 (-0.58)
TenderOffer	0.0148 (1.16)	-0.0094 (-0.67)	-0.0141 (-0.94)	
Hostile	0.0021 (0.08)	0.0111 (0.26)		
Premium		-0.0177 (-1.09)		
Leverage	0.0001 (0.01)	0.0218 (0.49)	-0.0111 (-0.77)	-0.0051 (-0.37)
CFtoEquity	-0.0000 ^a (-4.25)	0.0478 (1.43)	0.0001 ^c (1.66)	-0.0000 ^a (-3.64)
N	1207	114	469	603
Adjusted-R ²	0.0332	0.1449	-0.0238	0.0412

Table VIII - Cross-sectional regression analysis of bidder CARs on usage of target advisors

Table VIII presents the results of the OLS regression of bidder CARs in the 11-day event window on the usage of an advisor by the target and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	Public (2)	Private (3)	Subsidiary (4)
Intercept	0.1142 ^a (3.76)	0.1247 (1.43)	0.0702 (1.29)	0.1502 ^a (3.83)
TargetUsedAdv	0.0111 ^b (2.39)	-0.0331 ^c (-1.79)	0.0022 (0.27)	0.0255 ^a (4.28)
BidderLnSize	-0.0047 ^a (-3.81)	-0.0017 (-0.48)	-0.0007 (-0.27)	-0.0074 ^a (-4.67)
BookToMarket	0.0000 (0.61)	-0.0390 ^a (-4.20)	0.0000 (-1.31)	-0.0001 ^c (-1.72)
Public_AllCash	-0.0100 (-0.63)			
Public_PaymentInclStock	-0.0564 ^a (-3.10)			
Private_AllCash	0.0143 (1.54)			
Private_PaymentInclStock	-0.0117 (-1.32)			
Subsidiary_AllCash	0.0073 (1.13)			
PaymentInclStock		-0.0367 ^b (-2.44)	-0.0111 (-1.18)	-0.0015 (-0.11)
RelativeSize	-0.0001 (-0.84)	-0.0035 (-0.48)	0.0008 (1.39)	0.0011 (1.35)
DiversifyingDeal	0.0010 (0.22)	0.0138 (0.96)	-0.0048 (-0.61)	-0.0019 (-0.32)
TenderOffer	0.0136 (1.04)	-0.0082 (-0.58)	-0.0062 (-0.45)	
Hostile	0.0031 (0.11)	0.0067 (0.18)		
Premium		-0.0142 (-0.92)		
Leverage	0.0017 (0.19)	0.0317 (0.69)	-0.0100 (-0.70)	0.0006 (0.04)
CFtoEquity	0.0000 ^a (-4.52)	0.0466 (1.48)	0.0001 ^c (1.69)	0.0000 ^a (-3.69)
N	1207	114	469	603
Adjusted-R ²	0.0364	0.1809	-0.0249	0.0703

Table IX - Cross-sectional regression analysis of bidder CARs on target advisor reputation

Table IX presents the results of the OLS regression of bidder CARs in the 11-day event window on the reputation of the target advisor and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	All (2)	Public (3)	Private (4)	Subsidiary (5)
Intercept	0.1025 ^a (3.42)	0.1064 ^a (3.57)	0.1472 (1.58)	0.0686 (1.25)	0.1319 ^a (3.28)
TargetTOP5	-0.0089 (-1.09)	-0.0168 ^c (-1.94)	-0.0044 (-0.21)	-0.0147 (-1.05)	0.0013 (0.16)
TargetUsedAdv		0.0149 ^a (3.03)			
BidderLnSize	-0.0037 ^a (-3.08)	-0.0042 ^a (-3.51)	-0.0033 (-0.81)	-0.0005 (-0.21)	-0.0057 ^a (-3.65)
BookToMarket	0.0000 (0.50)	0.0000 (0.52)	-0.0379 ^a (-4.03)	0.0000 (-1.33)	-0.0001 ^c (-1.84)
Public_AllCash	-0.0077 (-0.50)	-0.0109 (-0.69)			
Public_PaymentInclStock	-0.0517 ^a (-2.94)	-0.0548 ^a (-3.08)			
Private_AllCash	0.0126 (1.38)	0.0142 (1.53)			
Private_PaymentInclStock	-0.0130 (-1.46)	-0.0119 (-1.35)			
Subsidiary_AllCash	0.0084 (1.29)	0.0076 (1.18)			
PaymentInclStock			-0.0366 ^b (-2.26)	-0.0114 (-1.20)	0.0008 (0.06)
RelativeSize	-0.0001 (-0.66)	-0.0001 (-0.70)	-0.0034 (-0.44)	0.0009 (1.40)	0.0013 (1.61)
DiversifyingDeal	-0.0003 (-0.06)	0.0005 (0.11)	0.0178 (1.12)	-0.0050 (-0.64)	-0.0036 (-0.61)
TenderOffer	0.0158 (1.21)	0.0147 (1.12)	-0.0096 (-0.66)	0.0012 (0.08)	
Hostile	0.0082 (0.29)	0.0107 (0.37)	0.0113 (0.26)		
Premium			-0.0164 (-1.02)		
Leverage	0.0006 (0.07)	0.0017 (0.18)	0.0222 (0.49)	-0.0101 (-0.70)	-0.0041 (-0.30)
CFtoEquity	-0.0000 ^a (-3.93)	-0.0000 ^a (-4.18)	0.0467 (1.42)	0.0001 ^c (1.67)	-0.0000 ^a (-3.66)
N	1,207	1,207	114	469	603
Adjusted-R ²	0.0333	0.0393	0.1445	-0.0243	0.0402

Table X - Cross-sectional regression analysis of bidder CARs on the usage of advisors by the bidder and by the target

Table X presents the results of the OLS regression of bidder CARs in the 11-day event window on the usage of a bidder advisor, as well as of a target advisor, and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	Public (2)	Private (3)	Subsidiary (4)
Intercept	0.1153 ^a (3.80)	0.1285 (1.53)	0.0712 (1.30)	0.1532 ^a (3.98)
AcquUsedAdv	0.0074 (1.42)	-0.0284 (-1.34)	0.0075 (0.75)	0.0141 ^b (2.36)
TargetUsedAdv	0.0088 ^c (1.79)	-0.0197 (-1.06)	0.0006 (0.07)	0.0209 ^a (3.42)
BidderLnSize	-0.0050 ^a (-3.94)	-0.0010 (-0.27)	-0.0007 (-0.30)	-0.0079 ^a (-4.98)
BookToMarket	0.0000 (0.71)	-0.0389 ^a (-4.15)	0.0000 (-1.25)	-0.0001 ^c (-1.70)
Public_AllCash	-0.0117 (-0.75)			
Public_PaymentInclStock	-0.0580 ^a (-3.19)			
Private_AllCash	0.0141 (1.52)			
Private_PaymentInclStock	-0.0117 (-1.33)			
Subsidiary_AllCash	0.0069 (1.09)			
PaymentInclStock		-0.0365 ^b (-2.50)	-0.0116 (-1.22)	-0.0049 (-0.37)
RelativeSize	-0.0001 (-0.95)	-0.0043 (-0.55)	0.0008 (1.33)	0.0010 (1.23)
DiversifyingDeal	0.0018 (0.40)	0.0114 (0.78)	-0.0044 (-0.55)	0.0000 (0.00)
TenderOffer	0.0123 (0.93)	-0.0064 (-0.45)	-0.0108 (-0.73)	
Hostile	0.0027 (0.09)	0.0098 (0.26)		
Premium		-0.0150 (-0.99)		
Leverage	0.0024 (0.26)	0.0252 (0.54)	-0.0092 (-0.64)	0.0015 (0.11)
CFtoEquity	-0.0000 ^a (-4.71)	0.0472 (1.49)	0.0001 (1.62)	-0.0000 ^a (-3.62)
N	1207	114	469	603
Adjusted-R ²	0.0373	0.1870	-0.0257	0.0769

Table XI - Cross-sectional regression analysis of bidder CARs on the usage of top-tier advisors by the bidder and by the target

Table XI presents the results of the OLS regression of bidder CARs in the 11-day event window on the usage of a top-tier advisor by the bidder, as well as by the target, and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	All (2)	Public (3)	Private (4)	Subsidiary (5)
Intercept	0.1065 ^a (3.49)	0.1089 ^a (3.59)	0.1560 (1.64)	0.0703 (1.28)	0.1355 ^a (3.36)
AcquTOP5	0.0107 (1.46)	0.0051 (0.62)	0.0062 (0.38)	0.0186 (1.60)	0.0069 (0.79)
AcquUsedAdv		0.0073 (1.26)			
TargetTOP5	-0.0112 (-1.31)	-0.0185 ^b (-2.07)	-0.0061 (-0.29)	-0.0156 (-1.11)	0.0003 (0.04)
TargetUsedAdv		0.0124 ^b (2.40)			
BidderLnSize	-0.0040 ^a (-3.17)	-0.0045 ^a (-3.62)	-0.0037 (-0.89)	-0.0006 (-0.25)	-0.0059 ^a (-3.71)
BookToMarket	0.0000 (0.52)	0.0000 (0.61)	-0.0380 ^a (-4.02)	0.0000 (-1.34)	-0.0001 ^c (-1.84)
Public_AllCash	-0.0104 (-0.67)	-0.0138 (-0.87)			
Public_PaymentInclStock	-0.0542 ^a (-2.95)	-0.0574 ^a (-3.11)			
Private_AllCash	0.0127 (1.39)	0.0140 (1.51)			
Private_PaymentInclStock	-0.0130 (-1.46)	-0.0120 (-1.36)			
Subsidiary_AllCash	0.0078 (1.20)	0.0070 (1.10)			
PaymentInclStock			-0.0370 ^b (-2.26)	-0.0113 (-1.20)	-0.0004 (-0.03)
RelativeSize	-0.0001 (-0.70)	-0.0001 (-0.82)	-0.0039 (-0.51)	0.0009 (1.41)	0.0012 (1.57)
DiversifyingDeal	0.0000 (0.00)	0.0013 (0.30)	0.0184 (1.14)	-0.0045 (-0.58)	-0.0034 (-0.58)
TenderOffer	0.0158 (1.22)	0.0136 (1.02)	-0.0089 (-0.62)	-0.0072 (-0.48)	
Hostile	0.0069 (0.24)	0.0100 (0.34)	0.0125 (0.28)		
Premium			-0.0170 (-1.04)		
Leverage	-0.0003 (-0.03)	0.0019 (0.20)	0.0228 (0.50)	-0.0111 (-0.77)	-0.0050 (-0.37)
CFtoEquity	-0.0000 ^a (-4.03)	-0.0000 ^a (-4.39)	0.0460 (1.38)	0.0001 ^c (1.68)	-0.0000 ^a (-3.63)
N	1,207	1,207	114	469	603
Adjusted-R ²	0.0341	0.0393	0.1351	-0.0254	0.0396

Table XII - Cross-sectional regression analysis of bidder CARs on bidder advisor reputation in cross-border and in domestic deals

Table XII presents the results of the OLS regression of bidder CARs in the 11-day event window on the usage of bidder top-tier advisors and other bidder- and deal-specific characteristics. Specifications (1) and (2) present the results for the regressions based on the cross-border subsample. Specifications (3) and (4) present the results of the regressions based on the domestic subsample. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	Cross-Border (1)	Cross-Border (2)	Domestic (3)	Domestic (4)
Intercept	0.1183 ^b (2.50)	0.1182 ^b (2.50)	0.1246 ^a (3.04)	0.1273 ^a (3.12)
AcquTOP5	0.0046 (0.40)	0.0034 (0.28)	0.0051 (0.61)	-0.0025 (-0.24)
AcquUsedAdv		0.0025 (0.29)		0.0140 ^c (1.93)
BidderLnSize	-0.0031 (-1.55)	-0.0032 (-1.58)	-0.0057 ^a (-3.27)	-0.0062 ^a (-3.54)
BookToMarket	0.0000 (0.12)	0.0000 (0.15)	0.0000 (0.63)	0.0000 (0.81)
Public_AllCash	-0.0225 (-0.98)	-0.0229 (-0.99)	-0.0047 (-0.27)	-0.0071 (-0.40)
Public_PaymentInclStock	-0.0335 ^c (-1.84)	-0.0337 ^c (-1.85)	-0.0587 ^a (-2.59)	-0.0614 ^a (-2.72)
Private_AllCash	-0.0065 (-0.57)	-0.0066 (-0.59)	0.0202 (1.60)	0.0206 (1.63)
Private_PaymentInclStock	-0.0273 (-1.18)	-0.0275 (-1.19)	-0.0075 (-0.78)	-0.0072 (-0.74)
Subsidiary_AllCash	0.0069 (0.65)	0.0069 (0.65)	0.0061 (0.72)	0.0054 (0.65)
RelativeSize	-0.0014 ^c (-1.87)	-0.0014 ^c (-1.90)	-0.0001 (-0.99)	-0.0001 (-1.21)
DiversifyingDeal	-0.0207 ^b (-2.44)	-0.0205 ^b (-2.35)	0.0098 ^c (1.75)	0.0114 ^b (2.01)
TenderOffer	0.0055 (0.40)	0.0049 (0.36)	0.0142 (0.92)	0.0112 (0.71)
Hostile	-0.0168 (-0.42)	-0.0175 (-0.44)	0.0248 (0.69)	0.0283 (0.78)
Leverage	0.0122 (0.65)	0.0127 (0.67)	0.0032 (0.29)	0.0055 (0.48)
CFtoEquity	0.0004 ^b (1.99)	0.0004 ^b (1.99)	-0.0000 ^a (-4.59)	-0.0000 ^a (-4.96)
N	350	350	857	857
Adjusted-R ²	0.0080	0.0051	0.0443	0.0484

Table XIII - Cross-sectional regression analysis of total synergies and the bidder's share of synergies on bidder advisor reputation

Table XIII presents the results of the OLS regression of total *synergies* and the *bidder's share of synergies (BSOS)* on the usage of bidder top-tier advisors and other bidder- and deal-specific characteristics. The interaction term *AcquTOP5_TargetTOP5* interacts the indicators *AcquTOP5* and *TargetTOP5*. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *t*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	Synergies (1)	BSOS (2)	BSOS (3)
Intercept	-0.4427 (-1.06)	0.7129 (0.44)	1.1644 (0.61)
AcquTOP5	0.1557 (1.05)	0.0695 (0.21)	-0.3967 (-0.82)
AcquTOP5_TargetTOP5			0.9438 (0.83)
BidderLnSize	0.0335 ^c (1.68)	-0.0372 (-0.44)	-0.0620 (-0.61)
BookToMarket	0.2614 ^a (4.87)	-0.0012 (-0.01)	-0.0778 (-0.38)
RelativeSize	-0.0764 ^c (-1.84)	0.0791 (0.46)	0.0263 (0.15)
PaymentInclStock	-0.1694 ^b (-2.00)	0.2143 (0.61)	0.2426 (0.65)
DiversifyingDeal	0.0723 (0.91)	0.6869 (1.14)	0.7279 (1.17)
TenderOffer	0.0838 (0.97)	-0.1932 (-0.45)	-0.1763 (-0.44)
Hostile	0.8479 ^c (1.88)	-0.3576 (-0.72)	-0.5473 (-1.00)
Leverage	0.1789 (0.88)	-1.4052 (-1.24)	-1.5292 (-1.23)
CFtoEquity	-0.5678 ^a (-3.34)	-0.3853 (-0.88)	-0.2260 (-0.47)
N	117	117	117
Adjusted-R ²	0.2869	-0.0882	-0.0693

Table XIV - Cross-sectional regression analysis (probit) of the likelihood of deal completion on advisor reputation

Table XIV presents the results of the probit regression of the likelihood of deal completion on the usage of bidder top-tier advisors and other bidder- and deal-specific characteristics. The interaction term *AcquTOP5_TargetTOP5* interacts the indicators *AcquTOP5* and *TargetTOP5*. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *z*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer's nationality.

	All (1)	Public (2)	Private (3)	Subsidiary (3)
Intercept	1.6013 (1.49)	10.6354 ^a (3.07)	1.9704 (0.89)	0.9209 (0.50)
AcquTOP5	-0.5710 ^b (-2.52)	-0.5312 (-1.38)	-17.3215 ^a (-6.19)	-0.4673 (-1.15)
BidderLnSize	0.0220 (0.45)	-0.2473 (-1.55)	0.2480 ^b (2.48)	0.0373 (0.47)
BookToMarket	0.0062 (1.21)	0.1757 ^b (2.34)	-0.0012 (-0.05)	0.0390 (0.65)
Public_AllCash	-1.0467 ^b (-2.53)			
Public_PaymentInclStock	-0.3634 (-0.93)			
Private_AllCash	-0.1487 (-0.53)			
Private_PaymentInclStock	0.0000 (0.00)			
Subsidiary_AllCash	0.0094 (0.03)			
PaymentInclStock		0.8499 (1.53)	0.0000 (0.00)	-0.0215 (-0.04)
RelativeSize	-0.0318 (-1.28)	-0.8155 ^b (-2.29)	-0.4355 ^c (-1.81)	0.0745 (0.89)
DiversifyingDeal	-0.0933 (-0.56)	-0.0828 (-0.25)	0.0508 (0.13)	-0.3542 (-1.02)
TenderOffer	0.4737 (0.94)	0.6113 ^c (1.89)		
Hostile	-2.1627 ^a (-4.02)	-1.9926 ^a (-2.94)		
Leverage	-0.2187 (-0.43)	0.1638 (0.19)	-0.7274 (-1.02)	0.3396 (0.37)
CFtoEquity	0.0000 (-0.11)	-0.1119 (-1.37)	0.0346 (0.21)	-0.4039 (-0.77)
N	1053	116	186	190
Pseudo-R ²	0.2015	0.4050	0.4611	0.0487

Table XV - Cross-sectional regression analysis of the time to resolution on advisor reputation

Table XV presents the results of the OLS regression of the *time to resolution* on the usage of bidder top-tier advisors and other bidder- and deal-specific characteristics. The sample includes deals among public acquirers and public, private or subsidiary targets for the geographic region defined in Section 4.1. All variables are defined in the Appendix. We control for year fixed effects, for the years of the financial crisis and the European debt crisis, however the estimated coefficients are unreported. The letters a, b and c indicate the statistical significance of the estimated coefficients at the 1%, 5% and 10% levels, respectively. The values in parentheses indicate the *z*-statistics. *N* corresponds to the number of observations. Standard errors are adjusted for heteroskedasticity and we absorb the effects of the acquirer nationality.

	All (1)	Completed bids (2)
Intercept	-50.6362 (-0.38)	-26.9055 (-0.22)
AcquTOP5	63.8033 ^b (2.15)	86.9754 ^a (2.97)
BidderLnSize	10.8987 ^c (1.85)	8.8827 (1.60)
BookToMarket	6.4389 (0.44)	-29.1869 (-1.05)
PaymentInclStock	30.8373 (1.41)	44.9099 ^c (1.96)
RelativeSize	11.3148 (1.07)	4.6675 (0.13)
DiversifyingDeal	-45.7007 ^b (-2.04)	-46.1026 ^b (-2.16)
TenderOffer	77.1571 ^a (3.20)	47.1038 ^c (2.01)
Hostile	-20.9819 (-0.42)	-53.0285 (-1.18)
Premium	-16.7003 (-0.53)	66.6239 (1.63)
Leverage	-13.9558 (-0.24)	-25.0485 (-0.46)
CFtoEquity	-30.7335 (-0.52)	98.7986 (1.13)
N	117	104
Adjusted-R ²	0.2209	0.3007

Appendix: Variable description

Panel A: Dependent variables	
Variable	Definition
Car11	Cumulative abnormal returns of the stock of the bidding firm in the 11-day event window. The returns are calculated using the market model within the International Event Study (Global Insight) application from WRDS. The market model parameters are estimated for the period starting 240 days prior and ending 41 days prior to the day of the deal announcement. Security and index returns are taken from Global Insight.
Synergies	Sum of the Car11 and the premium paid by the bidder. Car11 is calculated as mentioned above, information on premiums is taken from ThomsonONE.com Investment Banking.
Bidder's share of synergies (BSOS)	Car11 divided by the value of synergies. Car11 and synergies are calculated as mentioned above.
CompletedDeals	Dummy variable: taking the value of one in case the transaction is completed, and taking the value of zero if the bidder withdraws from the bid.
TimeToResolution	Number of days between the date of the deal announcement and the date of completion or withdrawal. Data is taken from ThomsonONE.com Investment Banking.
Panel B: Main variables of interest	
AcquUsedAdv	Dummy variable: taking the value of one, if the bidder is advised by a financial advisor and zero in case no advisor is hired by the bidder. The latter case is defined as an in-house deal.
AcquTOP5	Dummy variable: taking the value of one if the advisor hired by the acquirer is a top-tier advisor, according to the classification presented in Table I. The five top-tier advisors in our sample are Goldman Sachs & Co, Morgan Stanley, Bank of America Merrill Lynch, JP Morgan and BNP Paribas.
TargetUsedAdv	Dummy variable: taking the value of one, if the target is advised by a financial advisor and zero in case no advisor is hired by the target.
TargetTOP5	Dummy variable: taking the value of one if the advisor hired by the target is a top-tier advisor, according to the classification presented in Table I. The five top-tier advisors in our sample are Goldman Sachs & Co, Morgan Stanley, Bank of America Merrill Lynch, JP Morgan and BNP Paribas.
Panel C: Bidder characteristics	
BidderSize	Bidder market value of equity in €million 4 weeks prior to the transaction taken from ThomsonONE.com Investment Banking.
BookToMarket	Book value of equity at the fiscal year-end prior to the announcement, taken from Compustat, divided by the market value of equity 4 weeks prior to the deal announcement, taken from ThomsonONE.com Investment Banking.
Leverage	The sum of long term debt and debt in current liabilities divided by the book value of total assets at the fiscal year-end prior to the announcement. Information is taken from Compustat.
CFtoEquity	Income before extraordinary items plus depreciation minus dividends on common and preferred stock, taken from Compustat for the fiscal year end prior to the announcement, divided by the market value of equity 4 weeks prior to the announcement, taken from ThomsonONE.com Investment Banking.
Panel D: Deal characteristics	
DealValue	Transaction value in €million, taken from ThomsonONE.com Investment Banking.
Public	Dummy variable: taking the value of one if the target is public, and zero otherwise.
Private	Dummy variable: taking the value of one if the target is private, and zero otherwise.
Subsidiary	Dummy variable: taking the value of one if the target is a subsidiary of another firm, and zero otherwise.
RelativeSize	Transaction value divided by the bidder's market value of equity 4 weeks prior to the deal announcement. Information is taken from ThomsonONE.com Investment Banking.
Hostile	Dummy variable: taking the value of one if the deal is classified as hostile or unsolicited by ThomsonONE.com Investment Banking.

DiversifyingDeal	Dummy variable: taking the value of one if bidder and target are operating in different industries, and zero otherwise. Industries are defined at the two-digit SIC level. Information is taken from ThomsonONE.com Investment Banking.
CrossBorderDeal	Dummy variable: taking the value of one if bidder and target are incorporated in different nations, and zero if bidder and target are incorporated in the same nation. Information is taken from ThomsonONE.com Investment Banking.
TenderOffer	Dummy variable: taking the value of one if the deal is classified as a tender offer, and zero otherwise.
All_Cash	Dummy variable: taking the value of one if the transaction value is entirely paid in cash, and zero otherwise.
All_Stock	Dummy variable: taking the value of one if the transaction value is entirely paid with equity, and zero otherwise.
Mixed deals	Dummy variable: taking the value of one if the transaction value is paid with a mix of cash and equity, and zero otherwise.
PaymentInclStock	Dummy variable: Taking the value of one if the transaction value is partly or entirely paid with equity, and zero otherwise.
Premium	Takeover premium computed as the difference between the offer price and the target's stock price 4 weeks prior to the deal announcement, divided by the target's stock price 4 weeks prior to the deal announcement. Information is taken from ThomsonONE.com Investment Banking.

Panel E: Other variables

Car0	Cumulative abnormal returns of the stock of the bidding firm on the announcement date of the deal. The returns are calculated using the market model within the International Event Study (Global Insight) from WRDS. The market model parameters are estimated for the period starting 240 days prior and ending 41 days prior to the day of the deal announcement. Security and index returns are taken from Global Insight.
Car3	Cumulative abnormal returns of the stock of the bidding firm in the 3-day event window. The returns are calculated using the market model within the International Event Study (Global Insight) from WRDS. The market model parameters are estimated for the period starting 240 days prior and ending 41 days prior to the day of the deal announcement. Security and index returns are taken from Global Insight.
Car21	Cumulative abnormal returns of the stock of the bidding firm in the 21-day event window. The returns are calculated using the market model within the International Event Study (Global Insight) from WRDS. The market model parameters are estimated for the period starting 240 days prior and ending 41 days prior to the day of the deal announcement. Security and index returns are taken from Global Insight.

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