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Does it pay to hire an advisor for acquiring firms?

A study into advisors in general and boutiques in Europe.

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ABSTRACT

Since the 2000s, the popularity of boutiques has increased in M&A. Whether, and if so when, boutiques and advisors in general add value in M&A is not certain. Therefore, this thesis examines whether choosing to use an advisor in M&A adds value for European acquirers. More specifically, the effect of the choice to use an advisor on acquirer announcement returns, the determinants of the choice to use a boutique and the relationship between deal characteristics and hiring a boutique will be assessed. This study uses regression analysis to test the hypothesis. Most results suggest that there seems to be no relationship between the choice to use an advisor or boutique and acquirer announcement returns for European firms. However, there seems to be a positive relationship between choosing to use an advisor and acquirer announcement returns when European acquirers are large. Furthermore, information asymmetry could be a determinant of the choice to use boutiques, whereas other determinants are found to be insignificant. Finally, no relationships between several deal characteristics and the choice to use a boutique have been identified. Moreover, this article suggests that more research into this field must be conducted.

Keywords: Advisor, boutique, mergers and acquisition, acquirer, in-house acquisition, top-tier advisors.

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I. Introduction

Since 2014, the value of the Mergers and Acquisitions (M&A) market in Western Europe averaged around EUR 1,000.0 bln. per year and more than 13,000.0 deals have been announced yearly (imaa, 2020). The amount of announced deals has never been this high before. It can thus be concluded that the M&A market in Western Europe is thriving, although the yearly value was almost 1.5 times larger during the peak of the fifth and sixth merger waves. In 2016 boutique financial advisors captured 44.0% of all advisory fees related to M&A activity in Europe (Business Insider, 2016). This is in line with the worldwide growing popularity of boutiques since the 2000s (Song, Wei & Zhou, 2013). Consequently, this, together with the large M&A market, created many jobs in Europe. A new financial crisis may significantly lower M&A activity and thus reduce jobs in this sector. Therefore, it is relevant to know whether boutiques add value and if advisors add value in general. This article examines this with the following research question,

What are the effects of hiring an advisor on acquirer announcement returns and does hiring a boutique add value to the acquirer?

To examine these effects, this research uses 74 M&A deals from Western European acquirers between 2011 and the 31th of March 2020. First, the effects of hiring an advisor (compared to in-house deals), acquirer size and hiring at least one boutique on acquirer announcement returns are assessed. Second, this research aims to explain the determinants for choosing a boutique. Finally, the relationship between several deal characteristics and hiring a boutique will be assessed.

This research is based on the work of Servaes and Zenner (1996) and Loyeung (2019) who examine factors that influence the choice between hiring an advisor or conducting an in-house deal in the United States and the choice between hiring a boutique or a full-service advisor in Australia, respectively. In short, these articles researched whether and when hiring an advisor in general and hiring a boutique add value to acquirers. Servaes and Zenner conclude that the choice to use an advisor depend on deal complexity and that acquirer announcement returns do not depend on whether an advisor is used or not. However, Ismail (2010) and Kolb (2019) find that acquirers with an advisor experience higher announcement returns than acquirers without one, respectively in the United States and United Kingdom. The relationship between the choice to use an advisor and acquirer announcement returns in Western Europe has not been researched yet. Loyeung concludes that boutiques are preferred when the deal is complex and information

asymmetry is high. Similarly, Song et al. (2013) suggest that boutiques in the United States are chosen in more complex deals and achieve more favorable outcomes. The firm's choice to use a boutique and the impact on deal outcomes has not been researched yet in Europe. For these reasons, this research examines the value added of hiring an advisor in general and hiring a boutique in Western Europe by examining acquirer announcement returns and determinants of the choice to use boutiques.

The outcomes of this study suggest that there seems to be no relationship between the choice to use an advisor or boutique and acquirer announcement returns for European firms. However, there might be a positive relationship between acquirer announcement returns and the choice to use an advisor in case European acquirers are larger. Furthermore, information asymmetry could be a determinant of the choice to use boutiques, whereas other determinants are found to be insignificant. Finally, no relationships between several deal characteristics and the choice to use a boutique have been identified. Moreover, this article suggests that more research into this field must be conducted.

The remainder of this article is structured as follows. First, in section 2, theoretical framework, the main concepts used in this article are defined and the existing literature is reviewed. Second, in section 3, hypothesis development, the hypothesis will be developed. Third, in section 4, data and methodology, the data sources are described as well as the sample selection process, descriptive statistics, methodology used, and a detailed description of each regression will be given. Fourth, in section 5, results, the main findings of this research are outlined and described. Finally, section 6 concludes this article.

II. Theoretical framework

This section contains an overview of the relevant literature regarding this research. First, the main concepts used in this research will be defined. Second, a brief description of the existing research in M&A will be provided. Third, the relevant literature will be discussed. Finally and foremost, the hypothesis will be formulated based on the relevant literature studied.

II.1 Main definitions

Investment bankers are independent agents who advise their clients involved in acquisition activity (Bowers and Miller, 1990). The services they provide include identifying targets or bidders, valuing the possible synergies, negotiating on behalf of their clients and general advice during the acquisition activity. Investment bankers are thus financial advisors. This paper refers to investment bankers/financial advisors as advisors.

A distinction between different advisors will be made. On the one hand full-service advisors are distinguished, which operate in diversified industries and provide a range of services, such as equity and debt underwriting, project financing and commercial banking (Loyeung, 2019). On the other hand, boutique advisors, which are generally independent, often specialise in particular industries and focus primarily on providing advice in M&A (Song et al., 2013). With independency is meant that boutiques are free of conflicts of interest since they can focus solely on providing advise rather than trying to cross-sell other products, such as full-service advisors do (Loyeung, 2019). Other studies distinguish between top-tier and lower tier advisors, in which top-tier advisors have the largest market share with respect to the number of transactions completed in a year (Hunter and Jagtiani, 2003; Rau, 2000; Da Silva Rosa, Lee, Skott and Walter, 2004). This paper argues that the largest advisors are almost all full-service advisors since large advisors often provide a range of services. Therefore, it is assumed that full-service and top-tier advisors are the same. It is also assumed that lower tier and boutique advisors are the same. In the remainder, both concepts will be used.

Since, this research' focus lies on M&A, a final definition regarding those will be outlined. An acquisition in which the acquirer does not use the advisory services of an investment bank is classified as an in-house acquisition/deal (Servaes and Zenner, 1996).

II.2 Research in M&A

The literature on M&A is extensive. In the past decades, many researches have been conducted in this field. This is mainly because M&A are one of the most important corporate activities which significantly influence a wide variety of different stakeholders (R. Yaghoubi,

M. Yaghoubi, Locke and Gibb, 2016a). In this section some main aspects of M&A research will be outlined. For a detailed discussion of the vast M&A literature please see Yaghoubi et al. (2016a, 2016b).

M&A research has roughly focussed on three areas. The first area concerns the fact that M&A activity has a wavy pattern throughout the years. With this is meant that the average M&A activity differs widely between specific periods, within countries and within industries. A wave is characterised as a period in which there is high M&A activity. The second area concerns causes and consequences of acquisitions. This research has suggested various explanatory factors for M&A(-waves), being industry- and economic-level shocks, mis-valuation and managerial herding. Furthermore, many researches have been conducted with respect to analysing announcement returns. On average, it is found that acquirers experience slightly negative and targets significantly positive announcement returns and that the combined abnormal return is significantly positive. The third area concerns determinants of acquisition performance. Several factors have been identified in the field. These have been categorised and analysed in five different groups; acquirer characteristics, target characteristics, bid characteristics, industry characteristics and macro-environment characteristics.

Furthermore, since the 1990's the role of advisors on M&A has been researched as well, although not many articles have been written since. The relevant literature regarding this topic follows below.

II.3 Advisors

Benston and Smith (1976) examine the *raison d'être* for financial intermediaries in the market for commodities. They conclude that financial intermediaries are specialised, have economies of scale regarding information acquisition and reduce search costs. Similar results are found for advisors in M&A (Servaes and Zenner, 1996). Therefore, it is likely that advisors add value to acquirers.

Rau (2000) investigates financial advisors in the United States between 1980 and 1994. He concludes that top-tier advisors focus primarily on deal completion rather than on preventing poor deals. This implies that their focus is not per se on providing value to the acquirers. Moreover, he argues that boutique advisors do not have such a deal completion focus. However, Shore (2013) argues that especially boutique advisors may not always act in the best interest of their clients since they are more reliant on deal fees compared to top-tier advisors. He, thus, argues that mainly boutique advisors have a deal completion focus. Both findings imply there might be limited added value from advisors for acquirers.

However, other studies argue that financial advisors do add value. Such as Da Silva Rosa et al. (2004), who examine M&A in Australia between 1989 and 1998. They find that acquirers are more likely to have an advisor when the deal value is large. Furthermore, they conclude that advisors reduce transaction costs in complex deals. Servaes and Zenner (1996) find similar results. They examine differences between M&A in which the acquirer hires an advisor and in-house acquisitions in the United States between 1981 and 1992. In their sample, in-house deals were roughly twice as small as deals with advisors. They conclude that acquirers are more likely to hire an advisor when transaction costs, contracting costs and information asymmetries are high. Therefore, in their perspective, advisors do add value in these circumstances. They also find that the announcement returns earned by the acquirer do not depend on whether an advisor is used or not. However, Ismail (2010), who examines M&A in the United States between 1985 and 2004, finds that in-house deals lead to large negative announcement returns for the acquirer. Similarly, Kolb (2019), who examines M&A in the United Kingdom between 2001 and 2015, concludes that acquirers with an advisor experience higher announcement returns than acquirers without one.

Moeller, Schlingemann and Stulz (2004), who examine M&A in the United States between 1980 and 2001, also researched acquirer announcement returns. They report that large acquirers tend to experience lower announcement returns in strong governance countries than small acquirers, which they name the acquirer size effect. Humphery-Jenner and Powell (2014), who examine M&A between 1996 and 2008 in 45 countries, report that the acquirer size effect exists internationally, although it is smaller in weak governance countries. Similarly, Zhao, Ma and Hao (2019), who examine M&A in China between 2003 and 2014, conclude that the acquirer size effect also exists in China.

II.4 Boutique advisors

Whether advisor reputation influences clients' returns from a merger or acquisition has been an ongoing debate in the corporate finance literature. Research into this topic has led to two main conflicting hypotheses, being the superior deal hypothesis and deal completion hypothesis (Rau, 2000). The superior deal hypothesis argues that prestigious investment banks (top-tier) have the ability to identify better merger partners and ways to create larger operational and financial synergies, compared to 'normal' investment banks (Ismail, 2010). Following this reasoning, it is expected that top-tier advisors add more value compared to lower tier advisors. However, the deal completion hypothesis argues that lower tier advisors add more value. That is, the hypothesis argues that top-tier advisors primarily care about deal completion rather than

on maximising their client's wealth (Rau, 2000). Therefore, it is expected that boutique advisors complete more value-enhancing deals than full-service advisors (Loyeung, 2019). The deal completion hypothesis thus suggests that boutique advisors add more value compared to full-service advisors. Therefore, the following sections examine the role of boutique advisors.

Announcement returns

Research regarding information asymmetry in M&A finds that acquirers announcement returns are higher when information asymmetry is high (Li and Tong, 2018; Luypaert and Van Caneghem, 2017). Assuming that hypothesis 6 is true, which argues that higher information asymmetry and hiring a boutique advisor are positively associated, this suggests that acquirers experience higher announcement returns when a boutique advisor is hired. Furthermore, Da Silva Rosa et al. (2004) conclude that lower tier advisors work on deals that have greater announcement returns. This is in line with the proposition that boutique financial advisors do add more value to acquirers than top-tier advisors, by completing more value enhancing deals since they care less about deal completion than top-tier advisors do (Loyeung, 2019). These findings are consistent with the findings of Song et al. (2013), which argue that boutique advisors provide better quality advise compared to full-service advisors. However, Loyeung only finds a small insignificant announcement return for acquirers with boutique advisors.

To the contrary, Golubov, Petmezas and Travlos (2012), who examine M&A in the United States between 1996 and 2009, conclude that top-tier advisors have higher acquirer returns compared to lower tier advisors. Bowers and Miller (1990) find similar results. However, other studies did find the same effect as the above-mentioned studies. Namely, Hunter and Jagtiani (2003) conclude that top-tier advisors lead to lower bidder cumulative announcement returns (CARs). Similarly, Rau (2000) concludes that top-tier advisors have lower acquirer announcement returns in mergers. McLaughlin (1992) examines tender offers in the United States between 1978 and 1986. He concludes that lower tier advisors have higher acquirer announcement returns compared to top-tier advisors. Ismail (2010) also concludes that acquirers advised by lower tier advisors experience higher announcement returns.

Deal size, complexity and information asymmetries

Song et al. (2013) examine M&A in the United States with announcements dates between 1995 and 2006. They find that the chance that a boutique advisor will be chosen by an acquirer decreases with deal size. This finding is consistent with the scale hypothesis, which argues that deal size determines the choice between boutique and full-service advisors. Loyeungs (2019)

findings are inconsistent with this hypothesis. However, the Australian merger and acquisition scene is different from that in the United States. Namely, Australian boutiques advised on some of the largest completed deals in Australia, whereas in the United States boutiques primarily advise in small deals. Furthermore, Australian boutiques have approximately 25.0% market share, whereas that is only 10.0% in the United States (Loyeung, 2019).

Song et al. (2013) also find that boutique advisors spend more time on completing deals than full-service advisors do, suggesting that these deals require more due diligence and/or negotiation and therefore are more complex. Next to that, they find that acquirers are more likely to hire boutique advisors in cross-industry deals and deals with multiple bids. Furthermore, they conclude that acquirers with boutique advisors pay lower deal premiums. These findings are consistent with the skill hypothesis, which argues that boutique advisors are more likely to be hired in complex deals due to their skills and expertise in the deal-specific industry. Thus, boutique advisors could potentially add value to acquirers. In line with this reasoning, Servaes and Zenner (1996) conclude that the benefits of advisors' specialisation in search costs and information acquisition are higher when the deal is complex. They argue that a deal is more complex if it is a hostile takeover, the larger the percentage paid in securities is and the higher the deal value. Similarly, Kadan, Madureira, Wang and Zach (2012) suggest that boutique advisors, in guiding M&A, obtain skills and expertise as well as deep knowledge of the industry in which their clients operate. Thereby, they are able to specialise and add value in complex deals. In line with these findings, Da Silva Rosa et al. (2004) conclude that boutique advisors are more likely to specialise. Furthermore, Loyeung (2019) concludes that acquirers prefer boutique advisors when the deal is complex. She also argues that a deal is more complex the higher the deal value and when the relative size of the target is bigger – thereby increasing the targets bargaining power.

Servaes and Zenner (1996) also conclude that the benefits of advisors' specialisation in search costs and information acquisition are higher when information asymmetries are higher. They argue that information asymmetry is higher when a target operates in more different industries and lower when the target and the acquirer operate in the same industry. In line with these findings, Loyeung (2019) finds that acquirers prefer boutique advisors when they do not yet or only have a small minority interest in the target and when they do not have a shared director with the target. She also argues that information asymmetry will be lower when the target and acquirer operate in the same industry. Based on these findings, she suggests that boutique advisors are preferred when information asymmetry is high.

Deal completion and premium

Hunter and Jagtiani (2003) examine M&A in the United States between 1995 and 2000. They find that top-tier advisors are more likely to complete deals and in less time. These findings are inconsistent with Loyeung (2019). She finds that deal completion is positively related with hiring a boutique advisor. However, she thereby means that more value enhancing deals are completed, not per se that it is more likely that a deal will be completed by a boutique advisor.

As mentioned before, Rau (2000) concludes that top-tier advisors focus primarily on deal completion rather than on preventing poor deals – called the deal completion hypothesis. This implies that their focus is not per se on providing value to the acquirers. Inconsistent with these findings, Da Silva Rosa et al. (2004) find that top-tier advisors do not focus more on deal completion than lower tier advisors do. However, they do find that top-tier advisors are more likely to complete poor deals, from the perspective of the acquirer, than lower tier advisors are. Similarly, Song et al. (2013) conclude that there is no significant difference in deal success rate between boutique and full-service advisors on the acquirer side. Moreover, Ismail (2010) does report results consistent with the deal completion hypothesis.

Finally, McLaughlin (1992) finds that acquirers advised by lower tier advisors pay lower acquisition premiums. These results are consistent with results obtained by Rau (2000), who concludes that the median premium paid by acquirers advised by top-tier advisors is higher than when advised by lower tier advisors. Consistent with these findings, Song et al. (2013) find that the premiums paid to targets are, on average, 8.0-10.0% lower when acquirers hire a boutique advisor, compared to when a full-service advisor is hired. However, Loyeung (2019) concludes that having a boutique advisor as acquirer does not lead to lower deal premiums.

III. Hypothesis development

In this section, the hypothesis of this research will be formulated. The hypothesis will be introduced based on the literature mentioned in the previous section.

III.1 Announcement returns

Da Silva Rosa et al. (2004) conclude that financial advisors reduce transaction costs in complex deals and thereby add value. Similarly, Servaes and Zenner (1996) also conclude that advisors add value compared to in-house acquisitions, although they did not find a link between announcement returns and the use of an advisor. To the contrary, Ismail (2010) and Kolb (2019) do find a positive relationship between announcement returns and the use of an advisor. Therefore, it is expected that the following hypothesis holds,

Hypothesis 1: acquirer announcement returns are higher when an advisor is hired, compared to an in-house acquisition.

Moeller, Schlingemann and Stulz (2004) conclude that large acquirers tend to experience lower announcement returns in strong governance countries than small acquirers: the acquirer size effect. Humphery-Jenner and Powell (2014) and Zhao et al. (2019) prove the existence of this effect in strong governance countries and China respectively. Perhaps it is acquirer size and not whether an advisor is hired that is the main determinant for acquirer announcement returns. Therefore, this research will examine whether the acquirer size effect also exists in Europe. Furthermore, since Ismail and Kolb find that acquirers with advisors experience positive announcement returns, it is expected that large acquirers with an advisor experience even higher announcement returns, and thus that an interaction effect exists between these variables. Therefore, it is expected that the following hypothesis holds,

Hypothesis 2: large acquirers experience lower announcement returns than small acquirers, but large acquirers with an advisor experience higher announcement returns.

Bowers and Miller (1990) and Golubov et al. (2012) find that top-tier advisors generally have higher acquirer announcement returns compared to lower tier advisors. However, Loyeung (2019) argues that boutique advisors add more value than top-tier advisors, but she did not find higher acquirer announcement returns for boutiques. To the contrary, McLaughlin (1992), Rau (2000), Hunter and Jagtiani (2003), Da Silva Rosa et al. and Ismail (2010) find that boutiques

generally have higher acquire announcement returns compared to top-tier advisors. Therefore, it is expected that the following hypothesis holds,

Hypothesis 3: announcement returns are positively related to having a boutique advisor.

III.2 Boutiques

Song et al. (2013) find that the change that a boutique advisor will be hired decreases with deal size, which is consistent with the scale hypothesis. However, Loyeung (2019) finds the opposite effect, that the change that a boutique will be hired increases with deal size. But she obtains these results in a study of the Australian M&A market, whereas Song et al. studied the American M&A market. As described in the previous section these markets differ widely. It is argued that the European M&A market is similar to that in the United States. Therefore, it is expected that the scale hypothesis will hold,

Hypothesis 4: deal size is negatively related to whether a boutique advisor is chosen by an acquirer.

Song et al. (2013) also find evidence that boutiques are more likely to be hired in complex deals, which they characterise, amongst other criteria, as cross-industry deals and deals with multiple bids. Similarly, Kadan et al. (2012) conclude that boutiques are able to add value in complex deals. Furthermore, Loyeung (2019) also concludes that boutiques are preferred when the deal is complex. She argues that deal complexity increases with deal value and with the relative size of the target. Servaes and Zenner (1996) conclude that a deal is more complex if it is a hostile takeover, the larger the percentage paid in securities and the higher the deal value. Since it is expected that the scale hypothesis (partly) holds in Europe, this research does not expect that deal size is a good proxy for deal complexity, and thus the skill hypothesis. However, the other proxies are expected to hold. Therefore, it is expected that the following hypothesis holds,

Hypothesis 5: the more complex a deal is, the more likely it is that a boutique will be hired by the acquirer.

Servaes and Zenner (1996) also conclude that the benefits of advisors' specialisation increase when information asymmetries are higher. Similarly, Loyeung (2019) suggests that boutique advisors are preferred when information asymmetry is high. Therefore, it is expected that the following hypothesis holds,

Hypothesis 6: the higher the information asymmetry, the more likely it is that a boutique will be chosen.

III.3 Deal specific characteristics

Hunter and Jagtiani (2003) find that top-tier advisors are more likely to complete deals. Similarly, Rau (2000) and Ismail (2010) find that top-tier advisors focus primarily on deal completion rather than on preventing poor deals. This is consistent with the findings of Da Silva Rosa et al. (2004) and Loyeung (2019) that boutiques complete fewer poor deals from the acquirer perspective and thus add more value. These findings imply that boutiques would advise their clients to opt out a deal which they perceive as poor more often than top-tier advisors would. That means that boutiques will complete less deals overall. Therefore, it is expected that the following hypothesis holds,

Hypothesis 7: deal completion is negatively related to employing a boutique advisor by the acquirer.

McLaughlin (1992), Rau (2000) and Song et al. (2013) conclude that acquirers pay lower deal premia when they are hire a boutique. However, Loyeung (2019) concludes that having a boutique advisor as acquirer does not lead to lower deal premiums. But, taking the above-mentioned findings together, it is expected that the following hypothesis holds,

Hypothesis 8: deal premium is negatively related to having a boutique advisor.

IV. Data and methodology

This section discusses which data will be used in this research, how this data is obtained, which adjustments have been made to the data and how the data is distributed. Furthermore, it specifies the methods with which the hypotheses will be tested. First, the data sources, data selection and sample characteristics will be discussed. Then, the methodology used will be discussed in general and the regression analysis per hypothesis more specific.

IV.1 Data

For this research, data of deals in Europe between 2011 and the 31th of March of 2020 have been used. This data was acquired from Zephyr (2020). The sample includes countries in (North-)Western-Europe since these are developed countries. Therefore, the final sample consisted of deals in which the acquirer was based in Austria, Belgium, Denmark, Finland, France, Germany, Luxembourg, the Netherlands, Norway, Sweden, Switzerland or the United Kingdom. Furthermore, only deals in which both the acquirer and the target consist of listed parties have been used. Finally, deals which are rumored have been excluded. All in all, this amounted to a total of 5,464 deals.

Next, the sample has been tightened further. First, deals with multiple acquirers have been excluded for the sake of simplicity regarding the computing of announcement returns, reducing the sample to 5,065 deals. Second, only deals in which the acquirer had a final majority stake – a known final stake bigger than or equal to 50.0% - have been included. This reduced the sample to 211 deals. Third, deals in which the acquirer had an initial majority stake have been excluded, reducing the sample to 133 deals. Finally, the deal type has been assessed and institutional buy-outs, restructurings, reverse take-overs, share offerings and share repurchases have been excluded. Moreover, three deals were mentioned twice in the list and one deal had been announced in 2002. That deal and the earliest deals from the double ones have been removed, reducing the sample to 87 deals.

The dataset that has been downloaded from Zephyr includes several variables. First, it includes variables about the companies involved. Namely, the target and acquirer, their primary and all sector code(s) from Bureau van Dijk (BvD) and the financial advisor(s) of the acquirer. Second, deal characteristics such as deal type, deal status, deal value and the deal method of payment including the respective values have been included. Third, more specific deal characteristics were downloaded, such as the announcement and completion date, the initial, acquired and final stakes and the offer price. Finally, the deal comments have also been included, primarily to assess the deals in depth if needed. More information about these

variables, such as their range and possible values, can be found in the descriptive statistics paragraph.

Hypothesis 1, 2 and 7 require the computation of announcement returns and therefore acquirer stock price data is also required. These data have been acquired from Datastream. For every acquirer daily stock price in the local currency and daily market capitalisation (MV) in millions of local currency have been downloaded between 2010 and the 31th of March 2020.

Several transformations have been conducted to be able to test al hypothesis. First, missing stock price data and the corresponding number of shares have been, if possible, manually acquired from Yahoo Finance (2020, stock prices). Second, missing announcement dates have been determined using the deal comments. Third, all required EUR/local currency exchange rates between 2010 and 31th of March 2020 have been acquired from Yahoo Finance (2020, exchange rates). Next, since all Zephyr data is in EUR, all stock price and market value data have been converted from local currency to EUR. Several variables have been created using these data. First, *Acquirer size* was created by determining the acquirers MV 50 days prior to the announcement date. Second, *Relative size* was created by dividing the target MV 50 days prior to the announcement date by the acquirer MV 50 days prior to the announcement date. Furthermore, the difference between the offer price and the target share price 50 days prior to the announcement date has been calculated. This difference as a percentage of the target share price 50 days prior to the announcement date forms the variable *Deal premium.* Values 50 days prior to the announcement date have been used to eliminate the confounding in the data due to possible run-up effects (Servaes & Zenner, 1996) Finally, the last variable created with the stock price data were the announcement returns per acquirer. These have been obtained via the Datastream Event Study Tool (2014). The estimation window was estimated starting 200 days prior to and ending 50 days before the announcement date. The evaluation period was estimated starting one day prior and ending 10 days after the announcement date (Loyeung, 2019). Finally, the variables *CAR(-1,1), CAR(-1,5)* and *CAR(-1,10)* were created as the sum of the mean market adjusted returns in the respective event windows. These could only be calculated for 74 deals. Therefore, the final sample consisted of 74 deals.

Other transformations include the formation of several dummy variables from the Zephyr data. First, the variable *Advisor* was created based on whether the acquirer had at least one advisor or not. Second, the variable *Boutique* was created for acquirers that hired at least one boutique advisor. This classification has been made based on the advisor's websites. Boutiques are classified as independent investment banks providing advisory services for capital markets, institutional markets and M&A's. Therefore, investment banks providing/having assets under

management, investing, lending, sales and trading or underwriting activities/services or that sell financial products have been excluded. Furthermore, consultancy firms not specialised in financial advisory have been excluded as well. Third, the variable *Completed* has been created based on whether the deal had a completed status. Fourth, the variable *Hostile* was created if at least one of the deal subtypes included the description 'Hostile bid'. Fifth, the variable *Scheme* was created if at least one of the deal subtypes included the description 'Scheme of arrangement', which means that a deal is performed through a court-approved agreement between a company and its shareholders (Thomson Reuters Practical Law, 2020). Finally, the variable *Same industry* has been created that checks whether the target and acquirer primary BvD sector codes are equal.

Two other transformations have been made. First, the variable *Paystock* has been created by determining the percentage of the deal value that was paid with securities based on the deal method of payment values. Second and finally, the variable *Industries target* has been created by counting the number of target BvD sector codes.

Descriptive statistics

For a detailed list of all variables and a description of their possible values please see appendix A. The descriptive statistics can be seen in table 1 and 2. Table 1 displays the descriptive statistics for the first sample, which is used to test all hypotheses except hypothesis 8. The descriptive statistics for the second sample have been portrayed separately since the difference in sample size is large and can be seen in table 2. This sample will be used to test hypothesis 8. Below, a description of these statistics follows. As can be seen in the tables, the samples are divided into four sub samples. Namely, to compare sample differences whether an advisor is chosen or not ánd if so, whether a boutique is chosen or not. First, some main characteristics of the samples will be outlined. Second, both samples will be compared with respect to the full sample. Third, a brief discussion of the differences within the advisor and boutique samples will follow.

Firstly, in all samples, the average and median final stakes are less than 100%. Furthermore, in all samples, the mean acquired stake is lower than the median acquired stake, suggesting that there are some low outliers. Thus, the acquired stake is widely dispersed. Therefore, a new variable that displays deal size as if the acquired stake was 100% in all deals, *Deal 100%*, was created by dividing *Deal size* through *Acquired stake*. This enables a more complete comparison between the respective deal sizes and might yield different results than *Deal size*. Secondly, it can be seen in both tables that the difference between the mean and median of the variables

Acquirer size, Deal size and *Deal 100%* is large in all samples, except in the boutique samples. Therefore, the regression analysis will be run with the natural logarithm of these variables, to prevent the influence of outliers.

With respect to the difference between the full samples, some figures stand out. Namely, the variables *Acquirer size*, *Advisor*, *Deal size*, *Deal 100%* and *Scheme* are all higher in the second sample compared to the first sample. The differences in all other similar variables are smaller and thus less noteworthy.

First sample

First, differences between the subsamples regarding the choice of an advisor in general will be analysed. *Deal size* is more than 15.0 times higher in the advisor sample ($p<0.01$) and positively correlated with *Advisor* ($p<0.01$, see appendix B). This could be due to the fact that the in-house sample has a lower average *Acquired stake* ($p<0.01$). However, a similar difference exists for *Deal 100%* ($p<0.01$). Therefore, it can be concluded that this difference cannot be (fully) explained by the acquired stake. This finding is inconsistent with the existing literature and could therefore be caused by errors in the sample selection (Servaes and Zenner, 1996). Namely, that some or even most deals without an advisor are not in-house deals but deals for which data regarding the advisor is missing. This is a concern for future research. Furthermore, *Acquirer size* is significantly larger in the advisor sample ($p<0.05$) and is positively correlated with *Advisor* ($p<0.01$, see appendix B). This is inconsistent with what is expected in hypothesis 2. Next, although the differences are insignificant, *CAR* is higher in the in-house sample. Also, *CAR(-1,1)* and *Advisor* are negatively correlated ($p<0.05$, see appendix B). This is inconsistent with hypothesis 1. Furthermore, *Completed* is higher in the in-house sample ($p<0.05$), which is inconsistent with the existing literature (Rau, 2000). Finally, *Hostile* ($p<0.10$) is lower in the in-house sample. *Same industry* ($p<0.01$) is also lower in the in-house sample and positively correlated whit *Advisor* ($p<0.01$, see appendix B), whereas *Toehold* ($p<0.01$) is higher in the in-house sample and negatively correlated with *Advisor* ($p<0.10$, see appendix B).

There are less significant differences between the subsamples regarding the choice of a boutique, which is supported by the fact that *Boutique* does not correlate with any of the relevant variables (see appendix B). The only significant differences between the samples is that *CAR(1,1)* is lower in the top-tier sample ($p<0.10$). This is inconsistent with the expectations of hypothesis 3. Furthermore, there are zero observations for the variables *Hostile* and *Scheme* within the boutique sample. Therefore, these variables will be excluded in regressions in which *Boutique* is the dependent variable. However, as can be seen in appendix B, *Hostile* is positively

correlated with *Acquirer size* ($p<0.10$), *Deal size* ($p<0.01$), *Deal 100%* ($p<0.01$) and *Same industry* ($p<0.10$), and *Scheme* is positively related with *Paystock* ($p<0.10$). This could lead to biased coefficients for these variables if *Hostile* and/or *Scheme* explain some variation in the dependent variable. However, since *Boutique* is the dependent variable for those regressions, this bias is likely to be small since there is no correlation between the variables. Although insignificant, the other values imply that, consistent with the expectations and hypothesis 6, *Acquirer size*, *Same industry* and *Toehold* are lower in the boutique sample. They also imply that *Paystock* is equal in both samples and *Relative size* is lower in the boutique sample. These findings are inconsistent with the expectations of hypothesis 5 and 6 respectively. Next to that, *Deal size* and *Deal 100%* are lower in the boutique sample, consistent with the expectations of hypothesis 4. Finally, *Completed* is higher in the boutique sample. This is inconsistent the expectations of hypothesis 7.

Next to the above-mentioned correlations in appendix B, some other correlations stand out. Especially, the high positive relationship between *Completed* and *CAR(-1,5)* ($p<0.01$) and *CAR(-1,10)* ($p<0.01$). Possible explanations for this effect and/or the relevance of deal completion for estimating CARs could be a potential avenue for future research. Another aspect is that there is a negative correlation between *Acquirer size* and *CAR(-1,5)* ($p<0.05$), which is consistent with the expectations of hypothesis 2. Furthermore, *Acquirer size* and *Deal size/Deal 100%* are high positively correlated ($p<0.01$). It is therefore suggested that acquirer size could also be seen as evidence for the scale hypothesis in this article (Song et al., 2013). Finally, it should be noted that both *Acquirer size* and *Deal size/Deal 100%* are significantly correlated with many of the other variables in the sample. Therefore, those variables will be added as control variables to the regressions. At least, for the hypothesis for which they are not the main independent variables.

Table 1. Descriptive statistics of the first sample, divided for the full, advisor, in-house, boutique and top-tier samples.

	Full sample			Advisor							Boutique						
				Deal with advisor			In-house deal			t-test	Deal with boutique			Deal with top-tier			t-test
	Mean	Median	(N)	Mean	Median	(N)	Mean	Median	(N)	p-value	Mean	Median	(N)	Mean	Median	(N)	p-value
Acquirer size††	11,576.0	1,138.7	74	17,517.7	3,513.9	41	4,193.8	178.4	33	0.024**	1,379.2	1,138.7	6	20,284.3	5,465.1	35	0.188
Advisor†	55.41	-	74	-	-	41	-	-	33	-	-	-	6	-	-	35	-
Acquired stake†	73.33	81.67	74	82.10	92.70	41	62.42	60.00	33	0.002***	85.70	88.63	6	81.49	94.40	35	0.694
Boutique†	8.11	-	74	14.64	-	41	-	-	33	0.022**	-	-	6	-	-	35	-
CAR(-1 ,1)†	1.52	0.23	74	-0.36	0.40	41	3.86	0.06	33	0.122	-3.32	-2.00	6	0.14	0.51	35	0.098*
CAR(-1 ,5)†	1.55	0.56	74	-0.14	0.47	41	3.65	0.58	33	0.221	-0.43	1.12	6	-0.09	0.10	35	0.892
CAR(-1 ,10)†	0.97	0.07	74	0.49	1.28	41	1.57	-0.51	33	0.779	1.55	0.34	6	0.30	1.28	35	0.739
Completed†	55.41	-	74	43.90	-	41	69.70	-	33	0.027**	66.67	-	6	40.00	-	35	0.234
Deal size††	1,857.7	98.58	71	3,146.6	506.3	40	194.5	30.55	31	0.008***	1,355.7	159,6	5	3,402.4	939.6	35	0.479
Deal 100%††	2,279.8	160,9	71	3,809.0	1,059.5	40	306.7	49.2	31	0.003***	1,385.5	184.9	5	4,155.2	1,340.3	35	0.369
Final stake†	81.98	89.98	74	88.01	100.00	41	74.50	71.60	33	0.002***	87.99	95.48	6	88.01	100.00	35	0.997
Hostile†	5.41	-	74	9.76	-	41	0.00	-	33	0.067*	0.00	-	6	11.43	-	35	0.396
Industries target	1.49	1.00	74	1.44	1.00	41	1.55	1.00	33	0.436	1.50	1.50	6	1.43	1.00	35	0.773
Paystock†	34.94	0.00	44	33.47	0.00	30	38.08	0.00	14	0.750	32.05	14.71	5	33.75	0.00	25	0.938
Relative size†	40.16	22.16	59	34.28	26.48	31	46.66	15.96	28	0.348	18.34	19.44	4	36.65	28.38	27	0.330
Same industry†	52.70	-	74	78.05	-	41	21.21	-	33	0.000***	66.67	-	6	80.00	-	35	0.479
Scheme†	2.70	-	74	4.88	-	41	0.00	-	33	0.204	0.00	-	6	5.71	-	35	0.560
Toehold†	8.66	0.00	74	5.91	0.00	41	12.07	0.00	33	0.079*	2.28	0.00	6	6.53	0.00	35	0.452

† The variable is displayed in percentages.
†† The variable is displayed in EUR mln..
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Table 2. Descriptive statistics of the second sample, divided for the full, advisor, in-house, boutique and top-tier samples.

	Full sample			Advisor							Boutique						
				Deal with advisor			In-house deal			t-test	Deal with boutique			Deal with top-tier			t-test
	Mean	Median	(N)	Mean	Median	(N)	Mean	Median	(N)	p-value	Mean	Median	(N)	Mean	Median	(N)	p-value
Acquirer size††	14,786.7	1,625.4	31	18,998.7	3,487.0	24	345.6	178.4	7	0.205	864.2	947.1	3	21,589.4	4,759.6	21	0.384
Advisor†	78.13	-	32	-	-	25	-	-	7	-	-	-	3	-	-	22	-
Acquired stake†	80.28	92.32	32	83.94	94.40	25	67.22	71.60	7	0.155	83.44	86.30	3	84.01	100.00	22	0.972
Boutique†	9.38	-	32	12.00	-	25	-	-	7	0.352	-	-	3	-	-	22	-
Completed†	46.88	-	32	44.00	-	25	57.14	-	7	0.553	66.67	-	3	40.91	-	22	0.420
Deal size††	3,875.8	447.8	32	4,912.6	954.2	25	173.0	49.2	7	0.152	220.4	159.6	3	5,552.4	1,803.1	22	0.314
Deal 100%††	4,608.3	521.7	32	5,840.4	1,495.6	25	208.3	56.0	7	0.1003	254.4	184.9	3	6,602.1	1,803.1	22	0.243
Final stake†	88.54	100.00	32	91.26	100.00	25	78.82	81.25	7	0.077*	88.01	90.95	3	91.70	100.00	22	0.690
Premium†	14.37	16.20	32	11.30	15.28	25	25.37	23.02	7	0.416	7.66	10.89	3	11.79	18.81	22	0.868
Relative size†	46.13	34.38	31	43.19	32.41	24	56.19	44.93	7	0.394	22.86	26.48	3	46.10	38.08	21	0.255
Same industry†	59.38	-	32	72.00	-	25	14.29	-	7	0.005***	33.33	-	3	77.27	-	22	0.121
Scheme†	6.25	-	32	8.00	-	25	0.00	-	7	0.456	0.00	-	3	9.09	-	22	0.604
Toehold†	8.26	0.00	32	7.32	0.00	25	11.60	0.00	7	0.483	4.57	0.00	3	7.70	0.00	22	0.723

† The variable is displayed in percentages.
†† The variable is displayed in EUR mln..
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Second sample

In general, the above outlined differences between the advisor samples and the boutique samples also hold for the second sample. It should however be noted that the differences between the samples with respect to *Acquirer size, Deal size* and *Deal 100%* are bigger in this sample. Therefore, the potential sample selection bias could be bigger in this sample ánd it is possible that the effects of these variables in the regression analysis will be bigger. Furthermore, *Same industry* is significantly higher in the advisor sample compared to the in-house sample ($p<0.01$) and positively correlated with *Advisor* ($p<0.01$, see appendix C). This is not in line with the existing literature, which argues that information asymmetries are lower for companies in the same industry and that acquirers are therefore less likely to hire an advisor (Servaes & Zenner, 1996; Loyeung, 2019). Moreover, the average premium paid seems to be lower in the boutique sample compared to the full sample. This is consistent with the expectations of hypothesis 8. Finally, also consistent with hypothesis 8, *Premium* is negatively correlated to *Scheme* ($p<0.05$, see appendix C).

IV.2 Methodology

Hypotheses 1, 2, 3, and 8 will be tested using an ordinary least squares (OLS) regression. Hypotheses 4 to 7 will be tested using a logistic regression. The hypothesis can be divided into three main categories: hypothesis relating to CARs, to boutique advisors and to deal outcomes when boutique advisors are used. The specific regression analysis and the expected relationships between the variables will be outlined under regression analysis. First, the used methods, OLS and logistic regression, will be outlined.

As mentioned before, hypotheses 1, 2, 7 and 8 will be tested using an ordinary least squares (OLS) regression. The hypotheses will be tested by running the full regression equation. Furthermore, a check for heteroskedasticity in the residuals will be conducted for every regression by conducting a White test. In case the white test can be rejected, there is heteroskedasticity in the residuals and the default standard errors are wrong (White, 1980). Therefore, the heteroskedasticity must be removed. There are two possible solutions to this. First, the regression analysis can be changed to a generalised least squares (GLS) regression (Kaufman, 2013). Second, the standard errors can be changed to robust standard errors. It is common practice to use robust standard errors in regression analysis (Imbens & Kolesar, 2012). Therefore, it is expected that a regression analysis with robust standard errors will provide the best fit and thus that most hypotheses will be run with such errors. However, the best fit will be determined based on the highest R-squared.

The other hypothesis can be tested with a probit or a logistic regression model. Both models yield similar results and the difference between them is small. However, it is argued that a logistic regression model provides a better fit when the binary dependent variable is unbalanced and has a leptokurtic distribution, which means that the kurtosis is higher than 3.0 (Chen & Tsurumi, 2010). A probit model has a better fit when the binary dependent variable is unbalanced and has a platykurtic distribution, which means that the kurtosis is smaller than 3.0. The respective dependent variables for the hypothesis are *Boutique* and *Complete.* From analysing the sample in table 1, it can be noted that *Boutique* is unbalanced whereas *Complete* is balanced. Furthermore, not displayed in table 1, *Boutique* has a kurtosis of 12.74. Therefore, *Boutique* has a leptokurtic distribution and is unbalanced. Thus, the corresponding hypotheses will be estimated using a logistic regression model. For *Complete* nor a probit or a logit regression model is preferred since this variable is balanced. A logistic regression model will also be used to test that hypothesis for the sake of simplicity. The logistic regression models will be run with robust standard errors (Imbens & Kolesar, 2012). A logistic regression model estimates the change P that the dependent variable occurs based on the distribution of the independent variables. Therefore, the coefficients, the β's, must be interpreted with caution. Namely, they do not imply that a one-unit increase in the independent variable *i* leads to an increase of P with β_i percent but that a one-unit increase leads to an increase of the log-odds of the dependent variable with β_i (Osborne, 2015). Therefore, the estimated coefficients will only be discussed with respect to the sign and significance of the relationship.

Finally, the best possible models to estimate the effect on the CARs and the choice for a boutique advisor will be determined using all moderator and control variables. The best final models will be estimated similarly as before. Thus, checking for potential heteroskedasticity in the residuals for OLS and running the logit regressions with robust standard errors.

Announcement returns

Hypothesis 1, that the acquirers announcement returns are higher when an advisor is hired, will be tested using the following regression equation,

$$CAR_{it} = \beta_0 + \beta_1 * Advisor + \varepsilon.$$

It is expected that the coefficient of *Advisor* will have a positive sign. That is, it is expected that announcement returns will be higher when an advisor is hired compared to when it is an in-house deal (Ismail, 2010; Kolb, 2019).

Hypothesis 2, that the announcement returns will be lower when acquirer size increases, will be tested using the following regression equation,

$$CAR_{it} = \beta_0 + \beta_1 * Acquirer\ size + \beta_2 * Advisor + \beta_3 * (Acq.size * Advisor) + \varepsilon.$$

It is expected that the coefficient of *Acquirer size* will be negative (Moeller, Schlingemann & Stulz, 2004; Humphery-Jenner & Powell, 2014; Zhao, Ma & Hao, 2019). Again, it is expected that *Advisor* has a positive coefficient. Furthermore, it is expected that, although large acquirers tend to experience lower announcement returns, large acquirers with an advisor do experience positive announcement returns. Therefore, the coefficient of the interaction effect between these variables is expected to be positive.

Hypothesis 3, that announcement returns are positively related to having a boutique advisor, will be tested using the following regression equation,

$$CAR_{it} = \beta_0 + \beta_1 * Boutique + \beta_2 * Deal\ size + \beta_3 * Paystock + \beta_4 * Same\ industry + \beta_5 * Toehold + \beta_6 * Acquirer\ size + \varepsilon.$$

The expectation is that having a boutique advisor is value enhancing and therefore that the coefficient of *Boutique* will be positive. The other variables are again included as control variables. Large *Deal size* often lead to lower CAR (Moeller et al., 2004). Therefore, it is expected that this variable has a negative coefficient. Often, deals which are fully paid with securities have lower CAR (Dhaliwal et al., 2015). Thus, the expectation is that *Paystock* has a negative coefficient. Acquisitions in the *Same industry* and when the acquirer has a *Toehold* beforehand are considered value enhancing. Both coefficients are thus expected to be positive (Loyeung, 2019; Servaes & Zenner, 1996). Finally, *Acquirer size* is expected to have a negative coefficient and will also be included in every other regression equation as control variable.

Boutiques

Hypothesis 4, that deal size is negatively related to hiring a boutique advisor, will be tested using the following regression equation,

$$Boutique = \beta_0 + \beta_1 * Deal\ size + \beta_2 * Acquirer\ size + \varepsilon.$$

The expectation is that the coefficient of *Deal size* will be negative (Song et al., 2013).

Hypothesis 5, that it is more likely that a boutique will be hired when the deal complexity increases, would initially have been tested using the following regression equation,

$$Boutique = \beta_0 + \beta_1 * Hostile + \beta_2 * Paystock + \beta_3 * Scheme + \beta_4 * Relative\ size + \beta_5 * Acquirer\ size + \beta_6 * Deal\ size + \varepsilon.$$

However, as mentioned in the descriptive statistics, *Hostile* and *Scheme* must be removed from the regression equation due to a lack of observations. Therefore, they will be excluded from this regression analysis. The expectation is that the coefficient of all moderator variables will be/would have been positive. That is, that the deal becomes more complex when the acquisition is *Hostile*, the percentage paid with securities increases (*Paystock*), there is a *Scheme* of arrangement and if the relative size of the target compared to the acquirer increases (*Relative size*) (Loyeung, 2019; Servaes & Zenner, 1996). Furthermore, *Acquirer size* and *Deal size* will be added as control variables and are both expected to have a negative coefficient.

Hypothesis 6, that it is more likely that a boutique will be hired when the information assymetry increases, will be tested using the following regression equation,

$$Boutique = \beta_0 + \beta_1 * Industries\ target + \beta_2 * Same\ industry + \beta_3 * Toehold + \beta_4 * Acquirer\ size + \beta_5 * Deal\ size + \varepsilon.$$

It is expected that the information asymmetry regarding the deal is higher when the target operates in more industries. Therefore, the coefficient of *Industries target* is expected to be positive (Servaes & Zenner, 1996). Information asymmetry is expected to decrease when the target and acquirer operate in the same industry and the larger the minority stake of the acquirer before the acquisition. Therefore, it is expected that the coefficient of *Same industry* will be positive and of *Toehold* negative (Loyeung, 2019; Servaes & Zenner, 1996).

Deal specific characteristics

Hypothesis 7, that deal completion is negatively related to employing a boutique advisor, will be tested using the following regression equation,

$$Completed = \beta_0 + \beta_1 * Boutique + \beta_2 * Deal\ size + \beta_3 * Relative\ size + \beta_4 * Same\ industry + \beta_5 * Toehold + \beta_6 * Acquirer\ size + \varepsilon.$$

It is expected that boutiques create value for their clients and therefore more often advise to opt out of a deal if that is in their client's interest instead of pursuing it for the sake of their own fees (Loyeung, 2019). Therefore, it is expected that the coefficient of *Boutique* will be negative. The other variables are added as control variables. The coefficient of *Deal size* will likely be negative, since larger deals are by definition complex and therefore harder to complete. The higher the relative size, the higher is the bargaining power of the target (Dhaliwal et al., 2015). Often it is in the interest of the target that a deal succeeds. Thus, the coefficient of *Relative size* is expected to be positive. Hypothesis 6 argues that information asymmetry decreases if the acquirer and target are in the same industry and when the acquirer has a minority interest beforehand. When information asymmetry is lower, more deals will be completed (Stulz, 1988; Cybo-Ottone & Murgia, 2000). Furthermore, Stulz also argues that acquirers have more bargaining power when toehold is higher. Therefore, the expectation is that the coefficients of *Same industry* and *Toehold* will be positive.

Hypothesis 8, that deal premium is negatively related to having a boutique advisor, will be tested using the following regression equation,

$$Deal\ premium = \beta_0 + \beta_1 * Boutique + \beta_2 * Deal\ size + \beta_3 * Relative\ size + \beta_4 * Same\ industry + \beta_5 * Scheme + \beta_6 * Toehold + \beta_7 * Acquirer\ size + \varepsilon.$$

It is expected that boutique advisors provide value to acquirers and therefore that the coefficient of *Boutique* will be negative. Again, the other variables are added as control variables. Song et al. (2013) argue that higher deal sizes often have lower deal premia. Thus, the coefficient of *Deal size* is expected to be negative. *Relative size* is expected to have a positive coefficient since the target bargaining power will be higher. Since deals in the *Same industry* are considered value enhancing, the coefficient will likely have a positive sign. Deals that are performed through a scheme of arrangement are friendly and therefore likely to have lower premia (Bugeja et al., 2016). Therefore, it is expected that the coefficient of *Scheme* will be negative. Similarly as in hypothesis 7, *Toehold* is considered to be value enhancing and is therefore expected to have a negative sign.

V. Results

The main findings of this research are represented in the following sections. Herein, the results will be discussed per hypothesis.

V.1 Announcement returns

An advisor is positively related to the acquirers CAR

The results of the OLS regression analysis for the first hypothesis are displayed in table 3, model 1. All three models suggest that there is no significant relationship between the CAR and employing an advisor and the coefficients imply that if such a relationship would exist, it would be a negative rather than positive relationship. These findings are inconsistent with the findings of Ismail (2010) and Kolb (2019). However, Servaes and Zenner (1996) did find similar results. All in all, the first hypothesis which states that employing an advisor has a positive effect on the acquirers CAR can be rejected.

Acquirer size is negatively related to their CAR, but large acquirers with advisor do experience positive CAR

The results of the GLS/OLS regression analysis for the second hypothesis are displayed in table 3, model 2. Model 2A suggests that acquirer size and hiring an advisor are negatively related to CAR ($p<0.01$ and $p<0.01$). Furthermore, this model suggests large acquirers do earn positive announcement returns ($p<0.05$). However, the other models suggest that neither acquirer size, neither employing an advisor nor the interaction effect between acquirer size and employing an advisor have a significant influence on the acquirer CAR. Thus, *Advisor*, *lnAcq. size* and the interaction effect only influence CAR for a short period, namely *CAR(-1,1)*. Consistent with the findings of Moeller et al. (2004), Humphery-Jenner and Powell (2014) and Zhao et al. (2019), the coefficients of acquirer size do imply that there is a negative association with the CAR. However, this is not the case for model 2B. The coefficient of the interaction effect has the hypothesised sign in all models. Again, the coefficients of *Advisor* imply a negative relationship with the acquirer CARs. In sum, there is evidence that large acquirers experience higher announcement returns when an advisor is hired for short announcement periods and therefore the second hypothesis cannot be rejected.

Table 3. Regression analysis of model 1, 2, 3 and 4.

Model	1			2			3			4		
	A	B	C	A	B	C	A	B	C	A	B	C
Type	OLS	OLS	OLS	GLS	GLS	OLS	OLS	OLS	OLS	OLS	OLS	OLS
Variables	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*
Advisor	-0.042	-0.038	-0.011	-0.217***	-0.066	-0.072				-0.189	-0.260	-0.213
	(0.030)	(0.034)	(0.042)	(0.079)	(0.083)	(0.148)				(0.243)	(0.250)	(0.332)
*Advisor * lnAcq size*				0.039**	0.000	0.014				0.030	0.038	0.040
				(0.015)	(0.012)	(0.020)				(0.034)	(0.034)	(0.046)
Boutique							-0.069	-0.045	-0.051	-0.060*	-0.030	-0.051
							(0.042)	(0.051)	(0.064)	(0.031)	(0.037)	(0.043)
lnAcq. Size				-0.039***	0.001	-0.020	-0.035	-0.028	-0.032	-0.050	-0.047	-0.051
				(0.015)	(0.010)	(0.019)	(0.029)	(0.031)	(0.039)	(0.042)	(0.043)	(0.058)
lnDeal size							0.019	0.013	0.012	0.012	0.0049	0.000
							(0.017)	(0.018)	(0.023)	(0.013)	(0.013)	(0.0161)
Paystock							-0.122	-0.115	-0.125	-0.112*	-0.102*	-0.113
							(0.076)	(0.079)	(0.100)	(0.062)	(0.058)	(0.077)
Same industry							-0.068	-0.069	-0.059	-0.055**	-0.047	-0.059*
							(0.045)	(0.047)	(0.061)	(0.023)	(0.029)	(0.035)
Toehold							-0.222	-0.161	-0.202	-0.280	-0.238	-0.276
							(0.144)	(0.149)	(0.197)	(0.200)	(0.197)	(0.268)
Constant	0.039	0.037	0.016	0.215***	0.054	0.128	0.266	0.240	0.273	0.372	0.381	0.404
	(0.029)	(0.032)	(0.040)	(0.073)	(0.073)	(0.143)	(0.196)	(0.206)	(0.263)	(0.294)	(0.299)	(0.405)
Observations	74	74	74	65	67	74	44	44	44	44	44	44
Adjusted R^2	0.020	0.007	-0.013	0.084	0.050	0.015	0.088	0.031	0.002	0.119	0.108	0.036
Prob > F	0.158	0.263	0.7964	0.039**	0.102	0.286	0.296	0.227	0.387	0.356	0.554	0.403

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Employing a boutique is positively related to acquirers CAR

The results of the OLS regression analysis for the third hypothesis are displayed in table 3, model 3. All three models suggest that there is no significant relationship between any of the variables and the CARs. This is the case for the main variable of interest as for all control variables. Besides, inconsistent with Loyeung (2019), Moeller et al. (2004) and Servaes and Zenner (1996) respectively, hiring a boutique, higher deal size, being in the same industry and a minority interest beforehand do not have the hypothesised signs. However, higher acquirer size and a larger deal share paid with securities do have the hypothesised signs, consistent with Dhaliwal et al. (2015). These results did not change when the analysis was run with the implied deal values if the deal was a 100% takeover (see appendix D, model 11). All in all, the third hypothesis can be rejected.

Full model

The results of the OLS regression analysis for the full model are displayed in table 3, model 4. Again, most of the variables are insignificant. However, in model 4A employing a boutique has a slightly negative influence on the CAR ($p<0.10$). This finding is inconsistent with the findings of Loyeung (2019). Furthermore, consistent with Dhaliwal et al. (2015), a higher deal share paid in securities influences CAR negative in model 4A and 4B ($p<0.10$). According to model 4A and 4C, the same industry has a negative influence on the acquirers CAR ($p<0.05$ and $p<0.10$ respectively). This is inconsistent with Servaes and Zenner (1996). Furthermore, although insignificant, the coefficients of *Advisor* and *lnAcq. size* are again negative in all models. However, the coefficients of the interaction effect are positive in this model. These findings did not change in case the implied deal values have been used in the regression analysis (see appendix D, model 12). All in all, there seems to be no relationship between the acquirers CAR and employing an advisor, acquirer size or the interaction effect between those variables. Perhaps, there is a small, but negative, influence of employing a boutique and acquirer CARs.

V.2 Boutiques

Deal size is negatively related to employing a boutique

The results of the logistic regression analysis for the fourth hypothesis are displayed in table 4, model 5. The model suggests that there is no significant relationship between the probability of hiring a boutique and deal size or acquirer size. The coefficient of *Deal size* suggests that the probability that a boutique is chosen increases with deal size. This is consistent with Loyeungs (2019) findings but inconsistent with the scale hypothesis (Song et al., 2013) and expectations

of this article. Also consistent with the scale hypothesis, the coefficient of *lnAcq. size* does imply that the probability of hiring a boutique decreases with acquirer size. All in all, no conclusion regarding one of these hypotheses can be drawn based on this model. Furthermore, these findings did not change when the implied deal values were used in the regression analysis (see appendix D, model 13). Therefore, the fourth hypothesis can be rejected.

Deal complexity is positively related to employing a boutique

The results of the logistic regression analysis for the fifth hypothesis are displayed in table 4, model 6. There is a negative relationship between the relative size of the target and the probability that a boutique will be hired ($p<0.10$). The bargaining power of a target increases with their size. Therefore, deal complexity increases as the relative size of the target increases. Thus, inconsistent with Loyeung (2019) and the skill hypothesis, this finding implies that the probability that a boutique will be employed decreases with deal complexity. However, the finding that deal size is positively related to the probability of hiring a boutique ($p<0.10$) is in line with the skill hypothesis according to Loyeung. This finding is however inconsistent with the finding of Song et al. (2013) and the expectations of this paper. In line with the expectations and the scale hypothesis is the finding of a significant negative relationship between acquirer size and the probability that a boutique will be hired ($p<0.01$). The findings related to the relationship between boutique and deal size and boutique and relative size become more significant if the implied deal values are used (see appendix E, model 14). All in all, since the coefficient of relative size seems negative, the fifth hypothesis can be rejected.

Information asymmetry is positively related to employing a boutique

The results of the logistic regression analysis for the sixth hypothesis are displayed in table 4, model 7. All coefficients are insignificant, which means that there is no relationship between information asymmetry and the probability that a boutique will be hired. In line with Servaes and Zenner (1996), the probability that a boutique will be hired increases with the number of industries of the target and decreases with toehold. However, inconsistent with Loyeung (2019) there seems to be a positive relationship between the probability of employing a boutique and whether the acquirer and target operate in the same industry. In the regression analysis with the implied deal size (see appendix E, model 15), consistent with Loyeung, there is a significant relationship between the probability of hiring a boutique and the acquirers' toehold before the deal. The information asymmetry increases when the minority stake before the deal is lower. Thus, this finding implies that the probability of hiring a boutique increases with information

asymmetry. All in all, there might be a relationship between information asymmetry and the probability of hiring a boutique. Thus, the sixth hypothesis cannot be rejected.

Table 4. Regression analysis of model 5, 6, 7 and 8.

Model	5	6	7	8
Type	Logit	Logit	Logit	Logit
Variables	*Boutique*	*Boutique*	*Boutique*	*Boutique*
Industries target			0.473	-0.645
			(0.590)	(0.830)
lnAcq. Size	-0.274	-2.699***	-0.264	-4.013*
	(0.228)	(1.038)	(0.224)	(2.066)
lnDeal size	0.346	2.392*	0.285	3.432*
	(0.259)	(0.949)	(0.264)	(1.891)
Paystock		1.041		2.202
		(2.684)		(3.247)
Relative Size		-20.820*		-32.120
		(10.670)		(19.790)
Same industry			0.223	-1.548
			(1.018)	(1.487)
Toehold			-4.361	-13.360
			(3.275)	(9.231)
Constant	-2.480***	8.911*	-2.832***	16.740**
	(0.692)	(4.762)	(1.086)	(8.531)
Observations	71	36	71	36
Pseudo R^2	0.040	0.336	0.074	0.408
Prob > Chi^2	0.397	0.112	0.268	0.458

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Full model

The results of the logistic regression analysis for the full model are displayed in table 4, model 8. This model implies that the probability of hiring a boutique increases with deal size ($p<0.10$) and decreases with acquirer size ($p<0.10$). The first finding is consistent with the skill hypothesis according to Loyeung (2019), but not according to the expectations of this paper. Furthermore, this finding is inconsistent with the scale hypothesis whereas the second finding is consistent with this hypothesis (Song et al., 2013). However, all other variables relating to the skill hypothesis have insignificant results. These findings do not change with respect to the regression analysis with the implied deal size, except for the negative relationship between

toehold and the probability of hiring a boutique ($p<0.10$; see appendix E, model 16). This finding is consistent with the skill hypothesis. All in all, the findings are therefore mixed and thus it cannot be determined whether the scale hypothesis or skill hypothesis holds. However, the results do suggest that the scale hypothesis holds with respect to acquirer size and that there might be some influence of boutiques skills on the choice for a boutique as well.

Table 5. Regression analysis of model 9 and 10.

Model	9	10
Type	Logit	OLS
Variables	*Completed*	*Premium*
Boutique	1.486	-0.204
	(1.203)	(0.184)
lnAcq. Size	0.620	-0.072
	(0.395)	(0.075)
lnDeal size	-0.736	0.106*
	(0.452)	(0.060)
Relative size	1.675	-0.337
	(1.851)	(0.333)
Same industry	0.615	-0.127
	(0.792)	(0.140)
Scheme		-0.712
		(0.422)
Toehold	1.707	-0.094
	(2.229)	(0.646)
Constant	-1.460	0.326
	(1.525)	(0.457)
Observations	58	31
Pseudo-/Adjusted R^2	0.161	0.017
Prob > Chi^2/F	0.275	0.188

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

V.3 Deal specific characteristics

Deal completion is negatively related to employing a boutique

The results of the logistic regression analysis for the seventh hypothesis are displayed in table 5, model 9. All coefficients are insignificant. This implies that there is no relationship between deal completion and whether a boutique is employed or any of the other variables. In fact, inconsistent with the findings of Loyeung (2019), the coefficient of *Boutique* is positive.

All other variables, except for the relative size of the target, have the hypothesised signs. When the regression analysis was run with the implied deal values, the coefficient of deal size became significant ($p<0.10$; see appendix F, model 17). This implies that deal completion is negatively related to deal size, which is consistent with the findings of Loyeung. Since some of the previous hypothesis suggested a positive relationship between deal size and the probability of hiring a boutique, deal size could be negatively related to employing a boutique. However, since the regression analysis does not show this relationship, the seventh hypothesis can be rejected.

Deal premium is negatively related to employing a boutique

The results of the OLS regression analysis for the seventh hypothesis are displayed in table 5, model 10. Deal size is positively related to deal premium ($p<0.10$). This finding is inconsistent with the findings of Song et al. (2013). All other coefficients are insignificant. This means that there seems to be no relationship between deal premium and whether the acquirer hires a boutique. However, consistent with the findings of Loyeung (2019), the coefficient of *Boutique* is negative, which implies that deal premium and hiring a boutique are negatively related. On the other hand, the suggested positive effect between deal size and the probability of hiring a boutique in some models, implies that deal premium is higher when a boutique is hired. The coefficient of *lnAcq. size* is again negative. Interestingly, although the coefficient is insignificant, it suggests that relative size is negatively related to the deal premium. This is inconsistent with the findings of Loyeung. All other variables have the hypothesised sign. These findings did not change when the implied deal values were used in the regression analysis (see appendix F, model 18). All in all, this hypothesis can be rejected.

VI. Conclusion

This study examined the value added of hiring an advisor in general and hiring a boutique in Western Europe by examining acquirer announcement returns and determinants of the choice to use boutiques. The findings indicate that there is no relationship between the choice to use an advisor and acquirer announcement returns, which is consistent with the findings of Servaes and Zenner (1996). Furthermore, inconsistent with Humphery-Jenner and Powell (2014), only small evidence for the acquirer size hypothesis is found. Moreover, employing an advisor as a large acquirer did influence acquirer announcement returns to some extent, but only for a small period around the announcement date. The results indicate that employing a boutique might influence acquirer announcement returns slightly negative. All in all, this study finds no evidence for a positive relationship between acquirer announcement returns and employing an advisor in a sample of European deals. Furthermore, this study finds no relationship between the probability of hiring a boutique and deal size or deal complexity, which is inconsistent with the findings of Servaes and Zenner and Loyeung (2019). However, consistent with these articles, information asymmetry might influence the probability of hiring a boutique. This suggests that the skill hypothesis might hold. Moreover, acquirer size is found to influence the choice to use a boutique negatively, which could be slight evidence for influence of the scale hypothesis as well. Finally, no relationship between employing a boutique and deal completion or deal premium is found.

All in all, the answer to the research question, what the effects of hiring an advisor on acquirer announcement returns are and whether hiring a boutique adds value to acquirers, is twofold. First, there seem to be no (positive) effects of hiring an advisor on acquirer announcement returns and thereby, advisors do not add value to acquirer shareholders this way. However, advisors may be able to add value in terms of higher announcement returns to large acquirers. Furthermore, boutiques seem not able to add value in complex deals to acquirer shareholders. Moreover, boutiques also do not seem to add value to acquirer shareholders by negotiating lower deal premia or preventing the completion of poor deals. However, boutiques might be able to add value to acquirer shareholders when a deal concerns high information asymmetry. Thus, advisors in general and boutiques might add little value to acquirers.

However, the findings of this article must be interpreted carefully for several reasons. First, this article based its findings on a small sample size. This could be an explanation for several insignificant results. Furthermore, it is possible that the sample is biased due to possible errors in the sample selection. Namely, that some or even most deals without an advisor are not in-house deals but deals for which data regarding the advisor is missing. This could have biased

the results. It is also possible that the proxies used in this research for measuring deal complexity and information asymmetry are not appropriate for measuring these effects. If this is the case, then this research has not been able to properly test the effects of these aspects on the likeliness of hiring a boutique. Furthermore, this research also used deals in which the acquired stake was not equal to 100.0%. Of course, this hardens any comparisons between respective deal sizes. This article tried to enable an adequate comparison by calculating the implied deal value for a 100.0% acquisition. However, it is possible that acquisition premia are lower for partial takeovers, which means that the implied deal value does not enable an appropriate comparison either. Future research should take these limitations into consideration.

Next to this, ample suggestions for future research can be determined. First, the relationship between European targets and their choice for hiring an advisor/boutique have not been researched in this article. The fact that this research suggests that advisors/boutiques add little value to acquirers does not mean that they cannot add value in M&A. Perhaps, advisors/boutiques are able to add significant value for targets in M&A and therefore able to add value to deals in general. The relationship between added value for targets and the choice for an advisor/boutique in Europe must be researched to be able to evaluate the role of advisors/boutiques in Europe. Second, this research shows several significant correlations between variables and the choice to use an advisor in general, which have not been researched in this article. Possible relationships for future research include the relationship between advisor and deal size, deal completion, hostile-ness of the deal, target and acquirer in the same industry and acquirer toehold beforehand. This way, whether advisor choice in general in Europe is influenced by deal complexity or information asymmetry could be researched. Advisor choice in general has not been researched in Europe yet and thus is it not clear whether advisors are able to add value in such deals, beyond their possible effect on announcement returns. Third, this research only used deals in which both the acquirer and target are listed parties. Generally, these deals are bigger than deals in which at least one party is not listed. It might be that boutiques are able to add significant value to acquirers and/or targets in smaller deals. Gathering such specific data was beyond the scope of this research, but it would be interesting to see whether, and if so how, the results of this research regarding boutique choice change when deals in which at least one party is not listed are used.

In sum, this research suggests that advisors and boutiques might add little value to European acquirers. However, further research must be conducted to be able to determine whether advisors add value for European acquirers and European acquisitions in general. Thus, a lot of new research can and must be conducted in this field.

VII. References

Benston, G.J. & Smith, C.W. (1975). A transactions cost approach to the theory of financial intermediation. *The journal of finance, 31*(2), 215-231.

Bowers, H.M. & Miller, R.E. (1990). Choice of investment banker and shareholders' wealth of firms involved in acquisitions. *Financial management, 19*(4), 34-44.

Bugeja, M., Silva Rosa, R. da., Izan, H.Y. & Ngan, S. (2016). To scheme or bid? Choice of takeover method and impact on premium. *Australian Journal of Management, 41*(2), 212–243.

Business Insider (2016). Tiny banks are kicking Europe's financial giants while they're down. Accessed via https://www.businessinsider.com/r-europes-boutique-firms-stealing-ma-market-share-dealmakers-data-shows-2016-8?international=true&r=US&IR=T

Chen, G. & Tsurumi, H. (2010). Probit and logit model selection. *Communications in statistics – Theory and methods, 40*(1), 159-175.

Cybo-Ottone, A. & Murgia, M. (2000). Mergers and shareholder wealth in European banking. *Journal of Banking & Finance, 24*(6), 831–859.

Datastream Event Study Tool (2014). Accessed via https://www.eur.nl/sites/corporate/files/Datastream_Event_Study_Tool.pdf

Dhaliwal, D., Lamoreaux, P. & Litov, L. (2015). Shared auditors in mergers and acquisitions. *Journal of Accounting & Economics, 61*(1), 49–76.

Golubov, A., Petmezas, D. & Travlos, N.G. (2012). When it pays to pay your investment banker: new evidence on the role of financial advisors in M&As. *The journal of finance, 67*(1), 271-312.

Humphery-Jenner, M. & Powell, R. (2014). Firm size, sovereign governance, and value creation: evidence from the acquirer size effect. *Journal of corporate finance, 26*, 57-77.

Hunter, W.C. & Jagtiani, J. (2003). An analysis of advisor choice, fees, and effort in mergers and acquisitions. *Review of financial economics, 12*(1), 65-81.

Imaa (2020). Number & value of M&A Europe. Accessed via https://imaa-institute.org/mergers-and-acquisitions-statistics/

Imbens, G.W. & Kolesar, M. (2012). *Robust standard errors in small samples: some practical* advice. Cambridge: National Bureau of Economic Research

Ismail, A. (2010). Are good financial advisors really good? The performance of investment banks in the M&A market. *Review of quantitative finance and accounting, 35*(4), 411-429.

Kadan, O., Madureira, L., Wang, R. & Zach, T. (2012). Analysts' industry expertise. *Journal of accounting and economics, 54*(2-3), 95-120.

Kaufman, R.L. (2013). Quantitative applications in the social sciences: heteroskedasticity in regression: detection and correction. Thousand Oaks, CA: SAGE Publications, Inc.. DOI: 10.4135/9781452270128

Kolb, J. (2019). Do investment banks create value for their clients? Empirical evidence from European acquisitions. *European financial management, 25*(1), 80-115.

Li, L. & Tong, W.H.S. (2018). Information uncertainty and target valuation in mergers and acquisitions. *Journal of empirical finance, 45*(1), 84-107.

Loyeung, A. (2019). The role of boutique financial advisors in mergers and acquisitions. *Australian journal of management, 44*(2), 212-247.

Luypaert, M. & Caneghem, T. van. (2017). Exploring the double-sided effect of information asymmetry and uncertainty in mergers and acquisitions. *Financial management, 46*(4), 873-917.

McLaughlin, R.M. (1992). Does the form of compensation matter?: investment banker fee contracts in tender offers. *Journal of financial economics, 32*(2), 223-260.

Moeller, S.B., Schlingemann, F.P. & Stulz, R.M. (2004). Firm size and the gains from acquisitions. *Journal of financial economics, 73*(2), 201-228.

Osborne, J.W. (2015). How does logistic regression handle a binary dependent variable?, *Best practices in logistic regression* (pp. 19-44). https://dx-doi-org.eur.idm.oclc.org/10.4135/9781483399041.n2

Rau, P.R. (2000). Investment bank market share, contingent fee payments, and the performance of acquiring firms. *Journal of financial economics, 56*(2), 293-324.

Rieuf, E. (2017). How to interpret R-squared and Goodness-of-fit in regression analysis. Accessed via https://www.datasciencecentral.com/profiles/blogs/regression-analysis-how-do-i-interpret-r-squared-and-assess-the

Servaes, H. & Zenner, M. (1996). The role of investment banks in acquisitions. *Review of financial studies, 9*(3), 787-815.

Shore, S. (2013). Battle of investment banks and boutique heats up. *Australian financial review*. Accessed via http://www.afr.com/it-pro/battle-of-investment-banks-and-boutiques-heatsup-20130903-j5xdd

Silva Rosa, R. da., Lee, P., Skott, M. & Walter, T. (2004). Competition in the market for takeover advisors. *Australian journal of management, 29*(1), 61-92.

Song, W., Wei, J.D. & Zhou, L. (2013). The value of "boutique" financial advisors in mergers and acquisitions. *Journal of corporate finance, 20*, 94-114.

Stulz, R. (1988). Managerial control of voting rights: Financing policies and the market for corporate control. *Journal of Financial Economics, 20*(1), 25–54.

Thomson Reuter Practical Law (2020). Scheme of arrangement. Accessed via https://uk.practicallaw.thomsonreuters.com/0-107-7201?transitionType=Default&contextData=(sc.Default)&firstPage=true&bhcp=1

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica, 48*(4), 817-838.

Yaghoubi, R., Yaghoubi, M., Locke, S. & Gibb, J. (2016a). Mergers and acquisitions: a review: Part 1. *Studies in Economics and Finance, 33*(1), 147-188.

Yaghoubi, R., Yaghoubi, M., Locke, S. & Gibb, J. (2016b). Mergers and acquisitions: a review: Part 2. *Studies in Economics and Finance, 33*(3), 437-464.

Zephyr (2020). M&A deals – Advanced search. Accessed via https://zephyr-bvdinfo-com.eur.idm.oclc.org/version-2020423/ZephyrNeo.HomePage.serv?_CID=1&context=24QDHZPFURHX1Z0

Zhao, X., Ma, H. & Hao, T. (2019). Acquirer size, political connections and mergers and acquisitions performance. *Studies in economics and finance, 36*(2), 311-332.

VII.1 Advisors

Aqurat (2020). About us. Accessed via https://aqurat.se/

Bank of America (2020). About us. Accessed via https://www.bankofamerica.com/

Bank of Montreal (2020). About us. Accessed via https://www.bmo.com/main/personal

Berenberg (2020). About us. Accessed via https://www.berenberg.de/en/

BNP Paribas SA (2020). About us. Accessed via https://group.bnpparibas/en/

Cantor (2020). About us. Accessed via https://www.cantor.com/global/europe/

Capital Markets (2020). About us. Accessed via https://capitalmarkets.bmo.com/en/

Cardinal Partners (2020). About us. Accessed via http://cardinalpartners.com/

Carnegie (2020). About us. Accessed via https://www.carnegie.se/en/Evercore (2020). About us. Accessed via https://www.evercore.com/

Centerview Partners (2020). About us. Accessed via https://www.centerviewpartners.com/

Citigroup Inc. (2020). About us. Accessed via https://www.citigroup.com/citi/

Close Brothers Seyldler Bank AG (2020). About us. Accessed via https://www.closebrothers.com/

Credit Agricole SA (2020). About us. Accessed via https://www.credit-agricole.com/en/
Credit Suisse (2020). About us. Accessed via https://www.credit-suisse.com/nl/en.html
Deutsche Bank AG (2020). About us. Accessed via https://www.dnb.no/en/personal
DNB ASA (2020). About us. Accessed via https://www.dnb.no/en/personal
Ernst & Young (2020). About us. Accessed via https://www.ey.com/en_gl
FTI Consulting (2020). About us. Accessed via https://www.fticonsulting.com/
GMP Capital (2020). About us. Accessed via https://www.bloomberg.com/profile/company/2988341Z:LN
Goldman Sachs (2020). About us. Accessed via https://www.goldmansachs.com/
Greenhill & Company LLC (2020). About us. Accessed via https://www.greenhill.com/en
Hannam Partners (2020). About us. Accessed via https://www.hannam.partners/
Hanson Westhouse LLP (2020). Bloomberg – Company profile. Accessed via https://www.bloomberg.com/profile/company/2988341Z:LN
HSBC Bank (2020). About us. Accessed via https://www.hsbc.com/
Interfinancial (2020). About us. Accessed via https://interfinancial.com.au/
Jefferies LLC (2020). About us. Accessed via https://www.jefferies.com/
J.P. Morgan (2020). About us. Accessed via https://www.jpmorgan.com/global/jpmorgan
JZCapital (2020). About us. Accessed via http://www.jzcapital.se/
KBCS Securities (2020). About us. Accessed via https://www.kbcsecurities.com/
Kempen (2020). About us. Accessed via https://www.kempen.com/nl
Lazard (2020). About us. Accessed via https://www.lazard.com/
Macquarie Capital Ltd (2020). About us. Accessed via https://www.macquarie.com/nl/en.html
Moelis (2020). About us. Accessed via https://www.moelis.com/
Morgan Stanley (2020). About us. Accessed via https://www.morganstanley.com/
N1Singer (2020). About us. Accessed via https://www.n1singer.com/
Nordea Bank (2020). About us. Accessed via https://www.nordea.com/en/
Northland Securities Inc. (2020). About us. Accessed via https://www.northlandsecurities.com/
Numiscorp (2020). About us. Accessed via https://www.numiscorp.com/x/sales-trading-execution.html
Oddo Seydler Bank AG (2020). About us. Accessed via http://www.oddoseydler.com/en/
Pareto Securities (2020). About us. Accessed via https://www.paretosec.com/
Remium Nordic Holding AB (2020). Largest companies – Remium Nordic Holding AB. Accessed via http://www.largestcompanies.com/company/Remium-Nordic-Holding-AB-202298

Royal Bank of Scotland (2020). About us. Accessed via https://www.rbs.com/
Stifel (2020). About us. Accessed via https://www.stifel.com/institutional/StifelCanada
UBS (2020). About us. Accessed via https://www.ubs.com/global/en.html
Victoria Partners GmbH(2020). About us. Accessed via https://www.victoriapartners.de/

VII.2 Yahoo Finance

Exchange rates

Yahoo Finance (2020). Historical data: EUR/AUD. Accessed via https://finance.yahoo.com/quote/EURAUD%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/BAM. Accessed via https://finance.yahoo.com/quote/EURBAM%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/CAD. Accessed via https://finance.yahoo.com/quote/EURCAD%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/CHF. Accessed via https://finance.yahoo.com/quote/EURCHF%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/DKK. Accessed via https://finance.yahoo.com/quote/EURDKK%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/GBP. Accessed via https://finance.yahoo.com/quote/EURGBP%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/IDR. Accessed via https://finance.yahoo.com/quote/EURIDR%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/ILS. Accessed via https://finance.yahoo.com/quote/EURILS%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/INR. Accessed via https://finance.yahoo.com/quote/EURINR%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/MAD. Accessed via https://finance.yahoo.com/quote/EURMAD%3DX/history?period1=1262217600&period2=1262304000&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/NOK. Accessed via https://finance.yahoo.com/quote/EURNOK%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/NZD. Accessed via https://finance.yahoo.com/quote/EURNZD%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/PKR. Accessed via https://finance.yahoo.com/quote/EURPKR%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/PLN. Accessed via https://finance.yahoo.com/quote/EURPLN%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/RUB. Accessed via https://finance.yahoo.com/quote/EURRUB%3DX/history?period1=1262217600&period2=1262304000&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/SEK. Accessed via https://finance.yahoo.com/quote/EURSEK%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/SGD. Accessed via https://finance.yahoo.com/quote/EURSGD%3DX/history?period1=1262304000&period2=1585612800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: EUR/USD. Accessed via https://finance.yahoo.com/quote/EURUSD%3DX/history?period1=1230768000&period2=1585612800&interval=1d&filter=history&frequency=1d

Stock prices

Yahoo Finance (2020). Historical data: AON PLC. Accessed via https://finance.yahoo.com/quote/AON?p=AON&.tsrc=fin-srch

Yahoo Finance (2020). Historical data: Aptitude Software Group PLC. Accessed via https://finance.yahoo.com/quote/APTD.L/history?p=APTD.L

Yahoo Finance (2020). Historical data: Belvoir Lettings PLC. Accessed via https://finance.yahoo.com/quote/BLV.L/history?period1=1506816000&period2=1514764800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: DPA Group NV. Accessed via https://finance.yahoo.com/quote/DPA.AS/history?period1=1367366400&period2=1388534400&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: Eckoh PLC. Accessed via https://finance.yahoo.com/quote/ECK.L/history?period1=1420070400&period2=1451606400&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: IEP Invest, NV. Accessed via https://finance.yahoo.com/quote/IEP.BR/history?period1=1380585600&period2=1388534400&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: Kleppiere SA. Accessed via https://finance.yahoo.com/quote/LI.PA/history?period1=1514764800&period2=1546300800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: Mediclinic International PLC. Accessed via https://finance.yahoo.com/quote/MDC.L/history?period1=1506816000&period2=1514764800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: RockRose Energy PLC. Accessed via https://finance.yahoo.com/quote/RRE.L/history?period1=1548979200&period2=1577836800&interval=1d&filter=history&frequency=1d

Yahoo Finance (2020). Historical data: Zeal Network SE. Accessed via https://finance.yahoo.com/quote/TIMA.DE/history?p=TIMA.DE

Yahoo Finance (2020). Historical data: Zurich Insurance Group AG. Accessed via https://finance.yahoo.com/quote/ZURN.SW/history?period1=1420070400&period2=1451606400&interval=1d&filter=history&frequency=1d

VIII. Appendices

Appendix A. Variable descriptions.

Variable Name	Description
Advisor	Dummy variable measuring whether the acquirer has an advisor for the deal: 1 = Deal with advisor, 0 = In-house deal
Acquirer size	Numerical variable measuring the acquirer size in EUR mln.
Boutique	Dummy variable measuring whether the hired advisor by the acquirer is a boutique advisor: 1 = Boutique, 0 = Top-tier
CAR_{it}	Numerical variable measuring the cumulative abnormal announcement return for firm *i* in period *t* in percentages. There are three possible periods: (-1,1), (-1,5) and (-1,10)
Completed	Dummy variable measuring whether the deal has been completed: 1 = Completed, 0 = Not completed
Deal premium	Numerical variable measuring the premium as the percentage difference between the offer price and the target price 50 days prior to the announcement date
Deal size	Numerical variable measuring the deal size in EUR mln.
Deal 100%	Numerical variable measuring the implied deal size if the acquired stake would have been 100.0% in EUR mln.
Hostile	Dummy variable measuring whether the deal is a hostile takeover: 1 = Hostile takeover, 0 = No hostile takeover
Industries target	Categorical variable measuring the number of different industries in which the target is active, ranging between 1 and 3
Paystock	Numerical variable measuring the percentage of the deal size that has been paid with shares
Relative size	Numerical variable measuring the target size as a percentage of the acquirer size
Same industry	Dummy variable measuring whether the primary industry in which target and acquirer operate is the same: 1 = Same industry, 0 = Other industry
Scheme	Dummy variable measuring whether the deal was agreed based on a scheme of arrangement
Toehold	Numerical variable measuring the initial stake in the target prior to the announcement date in percentages

Appendix B. Pearson correlation table for the first sample.

	lnAcq. size	*Advisor*	*Boutique*	*CAR (-1,1)*	*CAR (-1,5)*	*CAR (-1,10)*	*Comple-ted*	*lnDeal size*	*lnDeal 100%*	*Hostile*	*Industries target*	*Paystock*	*Relative size*	*Same industry*	*Scheme*	*Toehold*
lnAcq. size	1															
Advisor	0.366***	1														
Boutique	-0.057	0.267**	1													
CAR(-1,1)	-0.048	-0.258**	0.067	1												
CAR(-1,5)	-0.241**	-0.181	-0.124	-0.087	1											
CAR(-1,10)	-0.170	-0.144	-0.045	-0.062	0.916***	1										
Completed	-0.202*	-0.033	0.011	-0.098	0.872***	0.939***	1									
lnDeal size	0.787***	0.525***	0.096	-0.307***	-0.184	-0.130	-0.155	1								
lnDeal 100%	0.796***	0.476***	0.077	-0.234**	-0.188	-0.129	-0.164	0.984***	1							
Hostile	0.219*	0.215*	-0.071	-0.267**	-0.091	-0.125	-0.092	0.337***	0.317***	1						
Industries target	0.022	-0.092	0.007	-0.139	0.087	0.120	0.080	-0.010	-0.008	0.006	1					
Paystock	-0.430***	-0.049	-0.024	-0.089	-0.025	-0.066	-0.050	-0.062	-0.117	0.123	0.150	1				
Relative size	-0.389***	-0.124	-0.119	-0.044	0.167	0.121	0.110	0.023	0.045	0.121	0.103	0.395**	1			
Same industry	0.222*	0.567***	0.083	-0.142	-0.232**	-0.172	-0.108	0.398***	0.364***	0.227*	-0.281**	-0.236	-0.117	1		
Scheme	-0.009	0.150	-0.050	-0.186	-0.036	-0.007	-0.009	0.104	0.082	-.004	0.004	0.276*	0.091	0.158	1	
Toehold	-0.103	-0.206*	-0.127	0.173	-0.031	-0.014	-0.052	-0.142	0.001	-0.019	0.065	-0.140	0.114	-0.157	-0.097	1

*, ** and *** represent that the Pearson correlation is significant at the 10.0%, 5.0% and 1.0% level respectively

Appendix C. Pearson correlation table for the second sample.

	lnAcq. size	*Advisor*	*Boutique*	*Comple-ted*	*lnDeal size*	*lnDeal 100%*	*Premium*	*Relative size*	*Same industry*	*Scheme*	*Toehold*
lnAcq. size	1										
Advisor	0.517***	1									
Boutique	-0.098	0.170	1								
Completed	-0.266	-0.109	0.128	1							
lnDeal size	0.891***	0.522***	-0.114	-0.385**	1						
lnDeal 100%	0.914***	0.493***	-0.135	-0.289	0.980***	1					
Premium	0.089	-0.149	-0.055	0.157	0.084	0.089	1				
Relative size	-0.264	-0.159	-0.222	0.035	0.105	0.091	-0.099	1			
Same industry	0.382**	0.486***	-0.171	-0.116	0.351**	0.346*	-0.120	-0.131	1		
Scheme	0.231	0.137	-0.083	-0.243	0.315*	0.290	-0.386**	0.139	0.214	1	
Toehold	-0.089	-0.129	-0.086	0.299*	-0.307*	-0.140	-0.075	-0.162	-0.014	-0.155	1

*, ** and *** represent that the Pearson correlation is significant at the 10.0%, 5.0% and 1.0% level respectively

Appendix D. Regression analysis model 11 and 12.

Model	11			12		
	A	B	C	A	B	C
Type	OLS	OLS	OLS	OLS	OLS	OLS
Variables	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*	*CAR(-1,1)*	*CAR(-1,5)*	*CAR(-1,10)*
Advisor				-0.191	-0.259	-0.211
				(0.242)	(0.249)	(0.333)
*Advisor * lnAcq. size*				0.030	0.038	0.039
				(0.034)	(0.034)	(0.046)
Boutique	-0.069	-0.045	-0.051	-0.061*	-0.031	-0.053
	(0.041)	(0.050)	(0.063)	(0.031)	(0.037)	(0.044)
lnAcq. size	-0.036	-0.029	-0.033	-0.052	-0.049	-0.053
	(0.030)	(0.031)	(0.040)	(0.044)	(0.044)	(0.060)
lnDeal 100%	0.020	0.014	0.012	0.014	0.007	0.002
	(0.018)	(0.018)	(0.024)	(0.014)	(0.014)	(0.018)
Paystock	-0.119	-0.114	-0.123	-0.114*	-0.106*	-0.118
	(0.072)	(0.076)	(0.095)	(0.061)	(0.057)	(0.077)
Same industry	-0.068	-0.070	-0.059	-0.057**	-0.049*	-0.061*
	(0.044)	(0.046)	(0.061)	(0.023)	(0.029)	(0.035)
Toehold	-0.281	-0.202	-0.238	-0.324	-0.262	-0.285
	(0.186)	(0.194)	(0.255)	(0.226)	(0.221)	(0.306)
Constant	0.265	0.240	0.272	0.378	0.388	0.410
	(0.193)	(0.202)	(0.259)	(0.295)	(0.300)	(0.408)
Observations	44	44	44	44	44	44
Adjusted R^2	0.089	0.033	0.001	0.125	0.111	0.037
Prob > F	0.271	0.234	0.417	0.321	0.505	0.413

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Appendix E. Regression analysis model 13, 14, 15 and 16.

Model	13	14	15	16
Type	Logit	Logit	Logit	Logit
Variables	*Boutique*	*Boutique*	*Boutique*	*Boutique*
Industries target			0.493	0.169
			(0.609)	(0.832)
lnAcq. Size	-0.204	-3.243***	-0.284	-9.492*
	(0.202)	(1.257)	(0.217)	(5.252)
lnDeal 100%	0.274	3.037***	0.306	8.579*
	(0.239)	(1.138)	(0.253)	(4.977)
Paystock		1.099		4.275
		(2.570)		(4.656)
Relative size		-22.140**		-68.560
		(10.230)		(45.980)
Same industry			0.231	-1.895
			(0.986)	(1.363)
Toehold			-5.227*	-34.990*
			(3.030)	(18.250)
Constant	-2.675***	8.808*	-2.884***	32.050*
	(0.682)	(4.765)	(1.105)	(17.390)
Observations	71	36	71	36
Pseudo R^2	0.024	0.330	0.074	0.512
Prob > Chi^2	0.510	0.125	0.314	0.171

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.

Appendix F. Regression analysis model 17 and 18.

Model	17	18
Type	Logit	OLS
Variables	*Completed*	*Premium*
Boutique	1.236	-0.232
	(1.200)	(0.173)
lnAcq. size	0.479*	-0.135
	(0.277)	(0.096)
lnDeal 100%	-0.579*	0.166*
	(0.314)	(0.093)
Relative size	1.147	-0.516
	(1.146)	(0.311)
Same industry	0.428	-0.124
	(0.703)	(0.138)
Scheme		-0.705
		(0.420)
Toehold	3.445	-0.453
	(2.162)	(0.547)
Constant	-0.838	0.484
	(1.151)	(0.441)
Observations	58	31
Pseudo-/Adjusted R^2	0.113	0.048
Prob > Chi^2/ F	0.351	0.140

The robust standard errors are in parentheses.
*, ** and *** represent statistical significance at the 10.0%, 5.0% and 1.0% respectively.