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THE IMPACT OF DUAL ROLE FINANCIAL ADVISORS ON M&A ABNORMAL RETURNS

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Abstract

The global deal value of mergers and acquisitions is growing every year and the financing becomes more important when deals get bigger. This paper examines the impact of dual role financial advisors on the cumulative abnormal returns for both target and acquirer. The sample consists of data from 496 deals that were announced between the period of January 2000 and December 2019. Besides the effect of dual role financial advisors, this paper also studies the impact of the duality among the advisors on the abnormal returns. Overall, this paper provides evidence that the target's dual role of financial advisors negatively impacts the cumulative abnormal returns for both target and acquirer. No clear statement can be made on the impact of the acquirer's dual role financial advisors on the CARs. The duality among the acquirer's dual role advisors shows that higher duality corresponds with higher CARs for the acquiring companies. In addition, this paper has found that regressions using different prediction models to calculate the abnormal returns render significantly different results.

Keywords: Mergers and Acquisitions, Abnormal Returns, Financial Advisors, Dual Role Advisors, Transaction Financing, Deal Performance, Investment Banking, Advisor Lending

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1. Introduction

The global market value for M&A in 2019 consisted of more than 3.33 trillion US dollars (MergerMarket, 2019). Despite a small drop in M&A activity in the second half year, the United States accounted for 47.2% of the global M&A activity in 2019, which is the highest share since 2001. Moreover, a global decrease of 6.9% of the M&A market made the US market grow by 1.5% compared to 2018 (MergerMarket, 2019). The M&A market value is becoming significantly large, especially in the United States. The past decades show that M&A-activity is cyclical and occurs in waves. Growing economies, the appearance of technology and regulatory changes are examples of drivers that influenced the US M&A transaction volumes in the past century from the highest to the lowest points in history (Dieudonne, Cretin, & Bouacha, 2015). Recent merger waves can be identified as the internet bubble, which lasted from approximately 1993 to end abruptly in 2000. Thereafter, from 2002 up to 2007 there was another wave that ended when the real estate market collapsed. Then again, in 2014 the number of M&As started rising, with again another small drop in 2015 up to where we are now. Mergers that happened inside these waves created higher shareholder value compared to deals that occurred outside these waves (Xu, 2017). These increasing amounts of M&As and the corresponding amount of money that is involved in the takeovers increased the questions and attention raise with regard to the subject. In the 1980's, the M&A waves were predominantly driven by financial considerations (Weber & Dholakia, 2000). This resulted mostly in hostile takeovers and leveraged buyouts[1] (LBO). More recent takeovers are, in contrary, friendly, and motivations behind the M&As are related to strategic profit goals (Weber et al., 2000).

To maximize the value that is generated from synergies in M&A, it is important for the bidder company to pay the lowest price with the most synergetic value opportunities and possibly disclose synergy forecasts (Dutordoir, Roosenboom, & Vasconcelos, 2014). On the other side, target companies try to maximize the price paid, increasing the shareholder value on their side of the deal. To determine the price to be paid, financial advisors are usually brought in to conduct these calculations. Existing studies draw divergent conclusions on the impact of financial advisors on the performance of M&A deals. Some find that higher tier financial advisors result in higher cumulative abnormal returns for acquirers (Bao & Edmans,

[1] In a leveraged buyout, the target company is acquired by a specialized investment firm. This firm uses a proportionately small share of equity and a proportionately large share of outside debt financing (Kaplan & Stromberg, 2009). Nowadays, these firms are referred to as private equity firms. Typically, the private equity firm acquires majority control of existing or mature firms.

2011; Golubov, Petzemas & Travlos, 2012). In contrary, evidence has also been found that there is no significant effect or there is existence of negative effects (Rau, 2000; Hunter & Jagtiani, 2003). Several studies look into other factors that affect the financial advisors and their impact on the M&A performance such as prior relationships, reputation and the difference between boutiques and investment banks (Ismail, 2010; Song, Wei & Zhou, 2013; Francis, Hasan & Sun, 2014; Lyu & Wang, 2020). These studies agree on the fact that financial advisors have significant impact and the impact differs among several qualities. One quality that is less researched in recent literature is the fact that financial advisors, mostly the bulge-bracket investment banks, are able to support and participate in the financing of transactions. Siming (2011) studied the potential of conflicts of interests that can occur and Ertugrul & Krishnan (2014) focus on transactions where acquiring advisors also act as securities underwriters. However, existing literature does not eloborate on the effect of these dual role financial advisors on the performance of deals for both target and acquirer's advisors and shareholders.

Deals become bigger and the current economy is now in the longest equity bull market (MergerMarket, 2019), interest rates are historically low and firms have ample cash reserves to do acquisitions. There are highly attractive debt financing options are at the disposal of these firms. This also increases the valuations, which make it difficult to complete deals with internal accumulation of funds only (Chen, Zhao, Niu, Fan, & Taylor, 2020). As the deal value is increasing, together with the strong effects that financial advisors bring to the performance of M&As and the difficulty of financing deals with internal funds only, the impact of dual role advisors on the performance is interesting to study. Hence, this paper's research question is:

What is the effect of dual role financial advisors on the cumulative abnormal returns of mergers and acquisitions?

This paper is of relevance for, i.a., investment bankers, M&A boutiques and bankers and will contribute to the current literature in a number of respects. It will extend on the results of Ertugrul et al., (2014) by expanding the financing possibilities further than securties underwriting only. Further, this paper focuses more on the performance of M&As compared to the advisor-led syndicated loan spreads (Chen & Wu, 2019). Besides that, this paper contributes to the literature on financial advisors and it extends on the paper of Povel & Singh, (2010) who studied the properties of stapled financing. Finally, this paper compares two different prediction models to test whether there exist significant differences (Toshihisa, 1974). These two models are the Market Model or CAPM model and the Fama French & Carhart four-factor model (Bello, 2008). The results of this study show that there exists a negative relationship between the target companies' dual role advisors and the performance of both

target and acquirer, contradicting the findings of Allen, Jagtiani, Peristiani & Saunders, (2004) and Povel et al., (2010). Evidence on the acquirer's advisors is not found as the results are insignificant, meaning that the dual role advisors did not impact the performance of the transactions significantly in this sample. This is remarkable due to the relatively small share of target side dual role advisors in the sample. There is evidence found however, on the duality of the acquirer's advisors. The higher the duality among the acquirer's advisors results in higher cumulative abnormal returns for the acquirer's shareholders. Finally, evidence is found on the difference of results among different prediction models used to calculate the abnormal returns.

The remainder of this paper is structured along the following lines. Section 2 elaborates critically on the existing literature and develops the hypotheses of this thesis. Next, section 3, discusses the data collection, explains the variables and reports the descriptive statistics. Thereafter, section 4 shows the methodology of this paper and section 5 presents the regressions results. In section 6, the implications, limitations and future research are discussed. Finally, section 7 presents the conclusion of this research.

2. Literature Review

This section contains the current state of the literature regarding the topics discussed in the papers, as well as additional background information. It is structured in the following way: first the M&As are introduced with additional background information (section 2.1). After this first part, the performance of M&As in this research (section 2.2). The section afterwards explains more about the Financial Advisors, the different degrees of these advisors and the possibility of providing financing (section 2.3). Providing debt as source to finance transactions can be done through several different sorts of debt of which the most important will be discussed (section 2.4). The impact of the possibility to provide the financing on the abnormal returns are explored (section 2.5). Lastly, all relevant theory on the Financial Advisors, Performance and M&As are linked to form this research' hypotheses (section 2.6).

2.1 Mergers & Acquisitions

M&As can be described as a consolidation of two or more companies into one, or a totally newly created company (Sherman, 2018). The way in which this consolidation can be done has many different possibilities, classified as a merger or an acquisition. Reed, Lajoux, & Nesvold (2007) describe the word merger where is has a strictly legal meaning. A merger occurs when two companies are combined together and one corporation disappears into the other corporation (Reed et al., 2007). A special legal form of merger is a corporate consolidation. Two corporations cease to exist after the consolidation and a new legal corporation is created, which is called the successor. According to Reed et al. (2007), in case of an acquisition, stocks or assets of a corporation are bought. When a company buys more than 50% of another company, a majority stake, it usually gains control over the company. A minority stake, which needs to be less than 50%, does not necessarily give the buyer control over the company. In an acquisition there is clearly an acquirer and a target firm, which can operate as separate companies after the transaction.

M&As can have a large impact on the daily operations of businesses and contribute to a large extend to the (inorganic) growth of companies, making M&As important events for businesses. M&As can vary a lot by means of key characteristics. Transactions can be domestic or cross-border (Betrand & Zitouna, 2008), friendly or hostile (Schnitzer, 1996), vertical or horizontal (Motis, 2007) and have other characteristics like the payment method (Karampatsas, Petmezas, & Travlos, 2014) and whether a majority or minority stake is acquired.

2.1.1 Motives for M&A

Different reasons exist for management and shareholders of a company to do M&As. Motives of deals are empire building and establishing monopoly (Trautwein, 1990), horizontal and vertical integration as well as conglomerate building (Matsusaka, 1993) or many other motives. This section will focus on these reasons and motives behind M&As. Mukherjee, Kiymaz and Baker (2004) find that the main incentive for M&As, achieving operating synergies, is different compared to the top reason for divestitures, which is to increase focus. The question in the survey asked why companies performed M&As and was asked to the CFOs.

Table 1: Underlying motives for M&As (Mukherjee et al., 2004)

Motives	**n**	**%**
Take advantage of synergy	28	37.3
Diversify	22	29.3
Achieve a specific organizational form as part of an ongoing restructuring program	8	10.7
Acquire a company below its replacement cost	6	8.0
Use excess free cash	4	5.3
Reduce tax on the combined company due to tax losses of the acquired company	2	2.7
Other	5	6.7
Total	75	100.0

In this table, the most premier motives that are given by the responding companies are shown, regarding their M&As in the period 1990 – 2001. It was possible to indicate more than one motive, but the table reported only the top-ranked reasons (Mukherjee et al., 2004).

Table 1 shows that taking advantage of synergies is for 37.3% of the CFOs questioned the most commonly used motive. The control question, where it was asked whether these CFOs were involved directly or indirectly in synergy-related mergers, was confirmed by 92% (Mukherjee et al., 2004). Diversification is the second most used motive with 29.3% of the CFOs mentioning this as most important motive and 77.3% of all respondents believe that it is a valid motive for transactions. In this case, diversification is where companies branch into other industries (Calipha, Tarba, & Brock, 2010). Realizing a specific organizational degree in the course of a continuing restructuring program is for 10.7% of the respondents the most premier reason (Mukherjee et al., 2004), but is indirectly contradicting the diversification motive. It is more of a valuation motive instead of value creation, since a firm can split into components which can be valued higher seperately and assets may be more valuable as part of a conglomerate (Eckbo & Thorburn, 2008). The remaining motives in table 1 represent only 15% of the underlying motives and cannot be seen as inherently strategic. Excess free cash is, for example, not a good reason to acquire a company, but it can be a good source to finance the transaction.

2.1.2 M&A Characteristics

Motis (2007) defines three different sorts of M&As. Horizontal, vertical and conglormate mergers, but a single case may also involve all aspects in the transaction. Horizontal M&As exist of two companies that share similar product lines and market, thus they are in direct competition (Motis, 2007). Buono et al. (2003) add to this that the companies should be in the same geographical market. Motives are possible growth of market share by eliminating key competitors or integrate their business (Maneesh & Thistle, 1996). Vertical M&As occur when one of the companies is a customer of the other, i.e., when there exists a upstream-downstream relation (Buono et al, 2003). The most premier motive for a vertical merger is to gain more control over the supplychain and limit uncertainties (Chen, 2001). Two main sides of vertical mergers are forward integration and backward integration. Forward integration is in the direction of the output or product sales and backward integration is along production investments or raw material supplies side (Yuanyuan & Wenxia, 2016). A conglomerate merger arises between firms that do not have similar business lines or operate in different markets that do not directly compete each other (Buono et al., 2003). Motta (2004) outlines that vertical and horizontal mergers possess concerns about antitrust, whereas conglomerates mergers to a lesser extent. In short, conglomerate mergers are focused on the diversification of the business risk and decrease the exposure at one single market (Amihud & Lev, 1981).

Another way to distinguish mergers and acquisitions can be by the difference whether the deal is friendly or hostile. Gutknecht & Keys (1993) found a good way to identify four broad categories: raids, contested situations, collaborations and organizational rescues. In a corporate raid the bidder makes a tender offer directly to the shareholders of the target, without informing the management and the shareholders can accept or deny this tender offer individually (Schnitzer, 1996). A raid creates winners and losers, but it results usually in a company with a negative relationship towards its employees (Buono et al., 2003; Gutknecht et al., 1993). In a contested combination there is still opposition from the selling party towards the bidder (Gutknecht et al., 1993). It is characterized by aggressive negotiations where usually one company has strong interests in completing the deal, they have very different conditions (Buono et al., 2003). Next comes the collaboration where the acquirer wants to buy and the target is willing to sell (Gutknecht et al., 1993). This is the most common form where both shareholders and management approve the deal (Schnitzer, 1996). Thereafter is the organizational rescue, which occurs when the bidder comes to aid to the target firm. A friendly rescue bidder that comes to aid of a target that is resisting a hostile takeover is called a white

knight (Chen & Ullah, 2018). In this case the white knight is the less evil option. In most situations the hostile takeovers are more costly than friendly takeovers (Schnitzer, 1996).

There is also a difference between domestic and cross-border, the label is determined on the geography of the headquarters of both target and bidder company. Shimizu, Hitt, Vaidyanath & Pisano (2004) touch upon three broad motives for engaging in cross-border M&As. There are improvements in efficiency, creating access to new markets in other countries and lastly the possibility to acquire foreign knowledge and resources. Doukas and Travlos (1988) found that firms in the US that announced an acquisition of a firm in a country where they already operate has a significant positive effect on the abnormal returns of the firm's shareholders. Chakrabarti, Gupta-Mukherjee, & Jayaraman (2009) found that cross-border acquisitions with companies from countries that are culturally more disparate perform better in the long run. They also found evidence that there are more synergies when the acquirer, compared to the target, comes from a stronger economy. Complementary, Zaheer, Castañer, & Souder (2013) found that it depends on the source of synergy, which can come from either complementary, similarity or both. Often, synergies from similarity come from cost cutting activities most of time due to the overlapping activities of both companies (Zaheer et al., 2013). In contrary, synergies from complementary resources and capabilities contribute significantly to the performance of M&As (Bauer & Matzler, 2014; Björkman, Stahl, & Vaara, 2007).

2.2 M&A Performance

There are different approaches on the measuring of M&A performance among academics. There are two major approaches: event studies and outcome studies (Das & Kapil, 2012). In finance literature, the event studies are commonly used as measurement. Zollo and Meier (2008) found that the largest group used short-term window event studies and second most used is long-term accounting measures. The latter is mostly found in strategic management and organization studies. Another method, mostly used in finance studies, is the long-term window event studies (Loughran & Vijh, 1997). One commonly used measurement of the short-term event window studies is the abnormal returns.

First, there is the merger premium that can be used as measurement. A merger premium is considered an overpayment. The overpayment consumes the expected synergies over the performance needed in order to sustain the target's market value (Sirower, 1997). Higher paid merger premiums do not always cause negative abnormal returns (Laamanen, 2007). Hence, it is debatable whether premiums are an accurate measure of the performance. Acquirers try to

minimize premiums by hiring more reputable advisors whereas targets inevitably make efforts to get the highest possible premium (Laamanen, 2007). According to McLaughlin (1992), there is no significant effect of the quality of investment banks on the merger premiums. There is also no evidence found that acquisition premiums differ across quality of acquirer advisors (Rau, 2000). However, bidders that employed low-tier investment banks did offer substantially lower premiums (McLaughlin, 1992). This is confirmed by Rau (2000) who shows that bidders with low-quality investment banks pay lower premiums compared to higher tier advisors. Chahine and Ismail (2009) looked into the relationship between the advisors reputation and the effects on the merger premium and found that there is no significant effect.

The abnormal returns are described easiest by means of the difference between the returns that are accurate minus the returns that would be earned in case there was no M&A event (Jacobsen, 1988). Either appreciation or depreciation of the value of the stock determines the abnormal returns. Evidence should be drawn on short-term event studies to determine the most reliable evidence on whether there is value created for the shareholders with M&A (e.g., Andrade, Mitchell, & Stafford, 2001; Hackbarth & Morellec, 2008). Most of these event studies consider the window around the announcement dates of the M&A. This can be an indicator whether there is value created or value destroyed (Ma, Pagan, & Chu, 2009). They also state that effects for bidders are different than for targets according to short-term research. The survey of Jensen and Ruback (1983) shows that around the announcement date the targets' shareholder earn an abnormal return of 20-30%, constistent with evidence of Jarrell and Poulsen (1989). Mulherin and Boone (2000) report that the bidders' shareholders experience a slightly negative change (-0.37%) in the mean of the abnormal returns. So, it can be said that bidders' shareholders almost break even upon the announcements as these findings are consistent with the research of Tichy (2001). The abnormal returns of the bidder and target (in percent returns), also known as the abnormal return synergy gain, are slightly positive (Moeller, Schlingemann, & Stulz, 2005). This is consistent with the syngergistic theory and studies also find positive combined ARs (e.g. Servaes, 1991; Mulherin and Boone, 2000).

2.3 Financial Advisors

The role of financial advisors in the corporate control market has been researched extensively in the literature. Michel, Shaked and Lee (1991) found that deals of less prestigious advisors outperform, in terms of CARs, the deals of bulge bracket investment banks. In contrary, Bowers and Miller (1990) document in their research that top-tier advisors can

identify higher synergy deals. However, they are unable to achieve a bargaining advantage to realize a greater part of the synergies. It is more likely that acquirers employ financial advisors in case the deal becomes complex and when acquirers do not have prior deal experience (Servaes & Zenner, 1996). They also examine the role of investment banks in the US and found that both using advisors generally and using top-tier advisors do not affect the announcement returns in their sample. Servaes and Zenner (1996) recognize that their sample existed of only the largest transactions and might therefore not be representative.

Tier-one top investment banks do not make better deals in terms of bidder CARs and higher contigent fee proportions in the contract result in worse postacquisition perfomance for the acquirer as well (Rau, 2000). Research lateron from Hunter and Jagtiani (2003) and Ismail (2010) did not found positive relationships among the financial advisor prestige of the acquirer and the corresponding CARs either. Allen, Jagtiani, Peristiani and Saunders (2004) looked into the role of commercial banks that act as financial advisors and found that it is indiferrent of the acquirer CARs whether it uses its own commercial bank as an advisors. Song, Wei and Zhou (2013) examined other classifications of financial advisors, the 'boutique' advisors in comparison with the 'full-service' investment banks.

2.3.1 Types of Financial Advisors

There are several different types of financial advisors, but there are usually two parties that involve the advisors in an M&A. The main reason that these advisors are involved with both parties is to assist the client to help negotiate satisfying deal prices and deal terms, which wouldn't be reached without the advisor's involvement (Agrawal, Coooper, Lian, & Wang, 2013). Buy-side and sell-side advisors have different tasks and usually different compensations for their services. Within these buy-side and sell-side advisors, there distinction is made among two main various sorts of financial advisors. There are the investment banks, which are the bulge bracket and full-service advisors, and the boutique investment banks (Song et al., 2013). These bulge bracket and full-service advisors are large multinational corporations that service very influential global corporations, governments and a large bracket of other firms. Besides the usual M&A advisory that the advisors provide, these investment banks have a wide range of departments in sales, market making, credit research, equities, derivatives and commodities. Commonly known examples of these firms are Bank of America Merrill Lynch, Citigroup, Credit Suisse, Deutsche Bank, JP Morgan, Goldman Sachs, Macquarie Group and Morgan Stanley.

Those large firms, that operate in multiple geographies and industries, also request for all-round experienced financial advisors in different countries and industries. Usually, the bulge bracket investment banks are the financial advisors for the larger M&A transactions, since they are well prepared to assist in all aspects of the M&A process. A potential downside of these advisors is that they experience possible conflicts of interests (Song et al., 2013). A study of Ismail (2010) found that the tier 1 investment banks, which are defined as the top ten advisors with the largest market share, actually destroyed over $40 billion in acquirers' shareholder value, compared to a gain of $13.5 billion generated by tier 2 advisors for the acquirers' shareholders. These results are not affected by the deal size, but and additional finding was that larger premiums are paid in larger deals, which could indicate that the investment banks can have different incentives for different deal sizes (Ismail, 2010). On the other hand, there are the boutique advisors, often specialized by industry and possess in-dept knowledge in those industries and geographies. Boutiques consist of more independent and smaller firms than the bulge bracket investment banks (Song et al., 2013). Commonly known examples of these firms are Evercore, Lazard, Greenhill, Lincoln International, but most boutiques are smaller and specialized in the geography that they are situated. Song et al. (2013) found that boutique advisors get picked more frequently in complex deals, potentially achieving a more advantageous outcome of the deal. Furthermore, they found that deal premiums were lower when acquirers hire boutique advisors and overall, the popularity of boutique advisors is increasing.

2.3.2 Characteristics

Prior relationships with banks, advisors and the industry expertise of financial advisors appear to positively affect the choice of advisors for transactions (Chang, Shekhar, Tam, & Yao, 2016). Francis, Hasan and Sun (2014) suggest that banking relationships have a significant but limited influence on the choice for financial advisors by companies. They also found that firms that did not have any recent M&A experience are more likely to choose the companies underwriter to advise in stock-paid deals. In contrary, companies that did have some recent M&A experience, are more likely to change their financial advisor in case of inadequate results in the previous transaction (Francis et al., 2014). Another bank-level study identifies significant fixed-effects at this level and shows that top quintile performing acquirers' advisors continue providing better advisory services compared to the advisors from the lower quintile (Bao & Edmans, 2011). Lyu and Wang (2020) found that higher reputation of individual

advisors at stake is associated with lower premiums for the targets, but it is more likely that the deal is completed. Reputation concerns play an important role for the choice and performance of individual advisors (Lyu & Wang, 2020). Characteristics of financial advisors that play an important role on the M&A outcomes have long been examined in the literature (Ismail, 2010; Bao & Edmans, 2011; Golubov, Petmezas, & Travlos, 2012; Song et al., 2013; Agrawal et al,. 2013; Graham, Walter, Yawson, & Zhang, 2017; Lyu & Wang, 2020). However, studies on whether these financial advisors were able to provide debt in the transaction that they were advising on and the impact of this on the M&A outcomes has not been researched much.

2.4 Debt Financing

One commonly used incentive to finance an acquisition of a company with debt is the possibility to deduct interest expenses from the corporate tax base (Scheuering, 2014). He found in his article that "the likelihood to observe a debt-financed acquisition is found to increase in the acquirer's tax rate" (Scheuering, 2014). However, this tax advantage of debt may result in economically inefficient leverage ratios, which bring higher risk of financial distress and less resistance in times of crisis. Another incentive to finance a deal with debt, can be that it is typically cheaper to issue debt for a company compared to equity. Usually, equity carries a higher rate of return compared to debt because it is riskier and less 'senior'. Although it seems cheaper to finance M&A with more debt, Fischer (2017) found that bank-financed M&A transactions lead to significantly higher achievements for the short-run abnormal returns than the stock-financed transactions. The financing effect is 3.56% in size when companies choose to switch to a credit-financed takeover compared to full stock financed (Fischer, 2017).

Bharadwaj & Shivdasani (2003) examine the impact of the financing source around the announcement of takeovers on the abnormal returns. They demonstrate that the CARs were higher for the acquiring company when the takeover was financed with bank debt compared to deals which were entirely financed with internal funds (Bharadwaj et al., 2003). Later research from Martynova & Renneboog (2009) confirms the findings of Bharadwaj et al. (2003) where entirely cash-paid takeovers are financed with debt significantly outperform those that are financed entirely with internal funds. The out-performance of debt-financed acquisitions can be partly explained by the fact that it helps to limit the empire building from managers and the debt conveying results in the absence of stock overvaluation (Martynova & Renneboog, 2009).

2.4.1 Staple Finance

Stapled finance can best be explained as "a loan commitment 'stapled' onto an offering memorandum by the investment bank advising the seller in an M&A transaction." (Siming, 2011). Usually, the expected price that the acquirer is prepared to pay to the seller is increased by the stapled finance package and increases the bidding competition. It subsidizes weak bidders who can increase their bidding price and thereby also increase the price that the strong bidders, who are more likely to win the bid, eventually have to pay (Povel & Singh, 2010). They also found that it is likely that the lender does not break even and thus needs to be compensated for offering the loan. So, stapled finance loans generally show lower performance compared to buyout loans.

There are three important characteristics that are needed to make the package beneficial for the selling party (Povel et al., 2010). The first characteristic is that the offer is optional to the bidder. Any firm that wins the bidding contest in the deal process can use the stapled finance, but they are not obliged to do so. Second, the stapled finance should be a non-recourse claim. A non-recourse claim is the debt supported only by the assets and the cash flow of the target, not by other assets and operations that the winning bidder owns (Povel et al., 2010). And lastly, there might be bidding companies that plan on holding the target company as a portfolio company, so they did not intent to incorporate the target's operations into their own operations. Often a structure as this is used by Private Equity funds (Povel et al., 2010). In their paper, Povel et al. (2010) also found that the use of stapled finance is increasing and becomes more common in both the United States and in Europe. The staple finance loan is offered by the investment bank that is advising the selling party in the deal and since the bidder is not obliged to accept the loan offer, it is accepted only if the terms are good enough for the bidding company. This usually makes the terms for the lender less attractive. So, one of the options to make it possible that the lender is compensated for the expected loss can be that the bidder has to pay an up-front fee. Another way is that the bank that offers the financing will be retained by the bidder for other fee-based services (Povel et al., 2010).

2.4.2 Securities Underwriting

The corporate bond market is an enormous source of financing for M&As and companies. It therefore generates billions of dollars on underwriting fees every year (Gande, Puri, & Saunders, 1999). The investment banking industry has been protected for many years by the

1933 Glass-Steagall Act[2], which prevented the commercial banks to underwrite corporate bonds and equities for all intents and purposes. The Glass-Steagall act remains on the books, but regulators revised Section 20 of the Act. With the reinterpretation of the act, banks are now allowed to expand their underwriting activities (Gande et al., 1999). The entry of the commercial banks was associated with the decline in the debt underwriting spreads. However, Gande et al. (1999) could not find similar declines in the equity underwriting spreads.

The relationship between the reputation of investment banks and the price and quality of bond underwriting services has been studied by Fang (2005). She found that renowned banks achieve lower yields, but higher yields are charged. However, the issuers' net proceeds seem higher. Results from Fang (2005) propose that decisions for underwriting reflect the reputation matters and are therefore explanatory for the issue quality and suggest that economic rents are earned on the reputation. This keeps providing incentives for the banks that do the underwriting to preserve their reputation (Fang, 2005). In the corporate-bond underwriting market it is not only the reputation that affects the underwriter choice, but also the bank relationships. Yasuda (2005) studies this effect following the 1989 commercial-bank entry. She found that bank relationships have a positive and significant effect on the choice for underwriters by firms, even more then the effects on the fees that are being charged. The paper also found significant fee discounts in case of relationships between both parties, and it seems that serving as an arranger of past loans transactions has the strongest effect on the choice of underwriters (Yasuda, 2005).

2.5 The Impact of Dual Role Financial Advisors on the Abnormal Returns

This section debates about the impact of financial advisors and their roles within the M&A process on the abnormal returns of the target and bidder companies.

2.5.1 The impact of Financial Advisors on the Abnormal Returns

Hunter & Jagtiani (2003) found that it is probable that top-tier advisors close more deals compared to low-tier advisors and need less time to do so. In terms of completing time, tier 1 advisors were found to be more efficient to complete a deal, where prior relationships do not impact the advisors' ability to do so (Hunter et al., 2003). However, looking at the synergies, the gains declined where top-tier advisors were involved on the deal. Next to these findings, Bao et al. (2011) state that in contrary to previous research, investment banks do matter for the

[2] The Glass-Steagall Act effectively separated commercial banking from investment banking and created the Federal Deposit Insurance Corporation, among other things.

outcomes from M&As. Previous studies did not demonstrate positive links among the various measures of the quality from advisors and the returns. Golubov et al. (2012) agrees with this, since they found higher returns for the bidders in case top-tier advisors are involved. Resulting in a gain of over $65 million for the shareholders of average bidders (Golubov et al., 2012).

2.5.2 The impact of Debt Providers on the Abnormal Returns

An important issue of the dual role that advisors can have in M&A is the practice of stapled financing. Povel et al. (2010) state that stapled finance is generally provided in the beginning of the procedure with the bidders. This offers potential acquirers with an approximation of how much they are able to borrow against the seller's cash and assets. Meaning that an advisor may not have a dual role in the start of the deal, but after the announcement of the deal is made, since stapled financing is available to all bidders from the beginning of the process (Siming, 2011).

Chen & Wu (2016) looked into the effect of advisors that provide syndicated loans to the bidders throughout M&As. It appears that the syndicated loan spreads are unusually high, and the advisor-lender dual role reduces the announcement effect of the acquirer significantly. They conclude that lending by the advisor to the advised acquirer reflects conflicts of interest. Evidence also supports that investment banks act as last resorts in M&A through the advisor-lender dual role (Chen et al., 2016). Loan financing by the advisor is expensive compared to in general (Allen & Peristiani, 2007). Chen & Wu (2019) show that syndicated loans led by advisors have higher loan spreads compared to loans led by non-advisors in M&A. They also found significantly positive average CARs of 2.9% and 3.1% on the [-1, 1] and [-2, 2] window respectively (Chen et al., 2019). This is complementing to Bharadwaj et al. (2003) who found an average CAR of 4.0% for acquirers in tender offers financed entirely with bank debt.

Ertugrul & Krishnan (2014) analyze how the dual role of investment banks, as acquirer advisor and the underwriter on public securities issues used as financing of the deal, will affect the outcome of the transaction. Contrary to previous research, their "empirical results indicate that the acquirer experiences lower abnormal returns at the time of the announcement of the acquisition while the target experiences higher abnormal returns when the acquirer's advisor is also the underwriter on the security issue used to finance the acquisition" (Ertugrul et al., 2014). They found a 2 percentage points lower announcement period return for the acquirer and 17 percentage point higher announcement period return for the target firms.

The findings in the papers discussed are not all aligned, since they all have done slightly different research. This makes it hard to determine the effect of dual role advisors that provide advisory services but also financing services on the abnormal returns of M&As. Former papers and research are observed that they may not be reliable regarding the testing methods. Besides, they also do not cover the full spectrum of dual role financial advisors that provide financing. Therefore, it can be interesting to study the influence of dual role advisors on the abnormal returns. This will contribute to the current literature since there is no research that accounts for the number of advisors and the different sorts of providing debt in a deal.

2.6 Research Questions and Hypotheses

The dual role of financial advisors means that they are giving advice to one of the companies involved in the transaction and provide debt to finance the deal. Since financial advisory and securities underwriting remained the core businesses of investment banks in the past years (Tuch, 2005), it can also happen that these kinds of services cross each other. Chen et al. (2019) state that financing by bidder advisors plays a significant role in winning megadeals. They find that there are higher dual-role loan costs charged to the acquirers and the advisor-led loans are more expensive than those led by non-advisors. Siming (2011) found that deals with dual role advisors result in a lower average deal premium one month prior to the deal. In combination with Ertugrul et al. (2014), who found that dual role advisors are associated with lower acquirer announcement returns builts up to the hypotheses of this thesis:

H1: *Dual role (acquirer) advisors have a negative effect on acquirer CARs*

Ertugrul et al. (2014) also found that dual role advisors are associated with higher target announcement returns. In addition, Povel et al. (2010) argue that stapled finance, provided by the target financial advisor, will increase the bidding competition and leads to higher target returns. From this follows the subsequent hypothesis, H2.

H2: *Dual role (target) advisors have a positive effect on target CARs*

In support of the main question, several sub-questions are answered in this thesis as well with corresponding hypotheses. Povel et al. (2010) found that the stapled finance package, provided by the target advisor, increases the competition and the expected price of the target.

SH1: *Dual role (target) advisors have a negative effect on acquirer CARs*

The other option is that the debt is provided by the advisors that are employed by the acquiring company. Being a dual role advisor can create conflicts of interests (Siming, 2011). Dual role advisors have a postive information production effect of the loan pricing at announcement. Together with Ertugrul and Krishnan (2014), who found that acquirers with dual role advisors tend to overpay for targets, the hypothesis below is formulated.

SH2: *Dual role (acquirer) advisors have a positive effect on the target CARs*

Another interesting variable that has not been researched much recently is the difference in number of financial advisors and whether all financial advisors act in this dual role function or only as part of the advisors. Based on the previously discussed literature and insights, the following sub-hypotheses are created in support of the main hypotheses. According to Chen et al., (2019), dual role financial advisors employed by the acquiring company result in higher CARs for the acquirer, so it seems plausible that a higher percentage of dual role advisors should also result in highers CARs as can be seen in the sub-hypotheses 3 and 4, stated below.

SH3: *The number of advisors acting in a dual role, the more the expected (acquirer/target) CAR effects are amplified*

The last sub-hypothesis is more focused on the difference between a deal where all financial advisors are involved in the financing of the deal compared to deals where only a part of the advisors have this dual role and deals where there are no dual role advisors.

SH4: *Deals were all financial advisors have a dual role have a stronger positive effect on the CARs than deals were only a part of the advisors has a dual role*

In section 3 and 4, the data used in this research and the methodology of how to analyze the data retrieved is explained. Furthermore, section 3 explains how the data is retrieved, the dependent and independent variables and how everything is used. In the section thereafter the methodology of how the data is analyzed and the regressions are discussed.

3. Data

This section considers the sample selection of the research. This includes descriptions of the data in the sample and which criteria are used to determine the data is selected for the sample. Besides this, the classification of the financial advisors is determined and explained. The last section contains an overview of how the sample is created.

3.1 Data Selection

The first criterion is about the deal size of 5 million US dollars. Similar research has shown that smaller transactions may misrepresent the sample (Golubov et al., 2012; Ismail, 2010; Song et al., 2013). Smaller companies that are acquired by companies way larger are usually of a different motivation compared to a 'regular' merger or acquisition of more similar sizes. Large companies that acquire smaller companies may do this because of a certain patent that the smaller company has, but it can only be obtained by buying the entire company (Motis, 2007). To check for the robustness, as described in section 4.2, the regressions are also executed with the minimal transaction value of 50 and 100 million US dollars. Next, the period between the start of January 2000 and the end of December 2019 has been chosen since it covers a 20-year block of recent M&As (Ismail, 2010), without the influence of the COVID-19 crisis which is not rounded yet. Deals after this period can have distorting results due to the current crisis. Older deals are excluded because they may prove less relevant, and they can differ significantly on the execution process compared to the process nowadays. Both target and acquirer should be located in the United States of America. Deals may be structured and executed differently in different countries (Siming, 2011; Chen et al., 2019). All companies in the sample should be public, since the large amount of data on the companies that is needed should be available. The penultimate criterion is that the bidding company and the acquirer cannot be the same company. The corresponding M&A process in such cases differs usually from the regular M&A transactions. The last criterion makes sure that all transactions in the data set only consist of those that are financed with an external element. In this case any other transactions financed with for example internal funds and excessive cash are not biasing the outcome of the research.

Overall, it is expected that all M&As with the criteria discussed above will misrepresent the results of the regressions on the normal deals. To make sure that the outcome of the research is not affected by these transactions, they are removed from the sample.

3.2 Sample Collection

With help of the criteria discussed in section 3.1, a sample from Thomson One (T1) database, provided by Thomson Reuters, has been extracted. From this data set, the deals that contain the same company as target and bidder are removed. In this case the sample meets all criteria discussed in section 3.1. Every deal needs a ticker to be able to merge the abnormal returns data with all other details on the transactions. Lastly, all duplicate and internally financed transactions are deleted from the sample. In the DataStream database from Refinitiv, the daily return data of the target and acquiring companies have been obtained. Furthermore, the market value to book ratio and daily market value for all companies is obtained. To calculate the daily excess returns with help of the Market Model and Fama French & Carhart model, data needs to be downloaded from Wharton Research Data Services (WRDS). An estimation window of 100 days is used to calculate the excess returns (Campbell, Andrew, & MacKinlay, 1997). This estimation period ends at the point of 70 days before the announcement, so the window is shown as [-170, -70] (Sehgal et al., 2012; Chen et al., 2019). The parameters are all calculated in this window for the individual companies, since they should not be affected by the event and be close enough to the M&A announcement date that the estimates are appropriate for that time period.

The expected returns are subtracted from the normal returns to calculate the abnormal returns for every company over the different time windows [-1, +1] and [-2, +2], which will be discussed more extensively in section 4.1.1. After these calculations, the data is aggregated with the other M&A data set to create the data set for the regressions. Thereafter, a flag is created for dual role financial advisors with a value of 1 if the financial advisors have this dual role. Thomson One provides the financing parties of the deal, from where the dual role advisors are selected manually. There is also a variable created that contains the number of advisors for both the target company and the acquiring company separately. Afterwards, a dummy variable is created with a value of 1 if all advisors have dual roles in the transaction and a value of 0 if otherwise.

3.3 Variables

All variables that are used in this research are discussed in this section. First the dependent variables and afterwards the explanatory, or independent, variables are shown and lastly the control variables.

3.3.1 Dependent Variables

The dependent variables that are used to explain multiple different OLS regressions differ slightly for the regressions because both the acquiring company and the target company have abnormal returns regarding the M&As. Another distinction that should be made is the difference in models to calculate the cumulative abnormal returns for both companies, since these models yield different results. Besides these two elements, the use of different event windows also gives other cumulative abnormal returns. The main regressions are executed with the Market Model and [-1, +1] event window, whereas the Fama French & Carhart four-factor model and extended event windows are used to test for robustness.

3.3.2 Explanatory Variables

There is a wide variety of variables that are used to explain the cumulative abnormal returns that are related to the process of M&As and variables that can have an impact on the outcome the M&A process. Variables that are shown in table 2 are used to test the hypotheses and rest of the variables, shown in table 5 are used as control for other potential influences towards the dependent variables. A list of explanatory variables can be found below in table 4. As can be seen from table 4, several dummy variables have been created to test the effect of dual role advisors on the CARs of M&As. The first two dummy variables have a value of 1 if at least one of the advisors is involved in the financing part of the deal. The last two dummy variables are created to see differences between deals where all advisors are involved in the financing and where not all financial advisors have a dual role in the transaction.

Table 2: Main test variables: Dual Role Advisors

	Description
DualAcqDummy	Variable that has a value of 1 if the acquirer advisors have a dual role and a value of 0 if otherwise
DualTarDummy	Variable that has a value of 1 if the target advisors have a dual role and a value of 0 if otherwise
NoAcqAdvisors	Number of acquirer advisors
NoTarAdvisors	Number of target advisors
NoAcqDualAdvisors	Number of dual role acquirer advisors
NoTarDualAdvisors	Number of dual role target advisors
AcqAllDualDummy	Variable that has a value of 1 if all acquirer advisors have a dual role and a value of 0 if otherwise
AcqPartDualDummy	Variable that has a value of 1 if not all acquirer advisors have a dual role and a value of 0 if otherwise
TarParDualDummy	Variable that has a value of 1 if not all target advisors have a dual role and a value of 0 if otherwise

This table described all explanatory variables that are used in this study. Table 3 shows the descriptive statistics of the variables described in this table. Data from Thomson ONE and WRDS.

3.3.3 Control Variables

Several control variables to improve the reliability of the outcomes of the regressions are included. Many previous papers have studied various aspects of the financial advisors and their

impact on the cumulative abnormal returns. They all identified several relevant control variables that are used in. The control variables are listed in Appendix 1. In this table, all dummy variables described have a value of 1 if the condition is fulfilled and a value of 0 otherwise. The descriptive statistics can be found in table 4 and all control variables are included in the correlation matrix shown in table 5.

3.4 Descriptive Statistics

The descriptive statistics of the key variables from this paper are displayed in table 2. The dependent variables, the CARs of both target and bidder companies, are distributed respectively from -0.210 to 1.261 and -0.418 to 0.299 with a mean of 0.210 and -0.008. The number of dual role advisors per deal is distributed from 0 to 8 for the acquirers and 0 to 1 for the targets. The respective means of the amount of dual role acquirer advisors and those from the target side are 0.481 and 0.014. This shows that the presence dual role financial advisors on the target side is small and they represent approximately 1.5% of the sample.

Table 3: Descriptive statistics of dependent and explanatory variables

	N	Mean	s.d.	Min	Max
Dependent Variables					
Acquirer CAR	478	-0.008	0.090	-0.418	0.299
Target CAR	482	0.210	0.177	-0.210	1.261
Explanatory Variables					
DualAcqDummy	495	0.309	0.463	0	1
DualTarDummy	495	0.014	0.118	0	1
NumberAcqAdvisors	495	1.739	1.159	1	11
NumberTarAdvisors	495	1.448	0.701	1	5
NumberAcqDualAdvisors	495	0.481	0.895	0	8
NumberTarDualAdvisors	495	0.014	0.134	0	1
AcqAllDualDummy	495	0.158	0.365	0	1
AcqPartDualDummy	495	0.147	0.355	0	1
TarParDualDummy	495	0.012	0.110	0	1

This table displays an overview of all dependent and explanatory variables that are included in this research. Column 1 projects the names of the variables, categorized in two different sets. Column 2 records the total observations for the variables. Column 3 and 4 report respectively the mean and the standard deviation of the variables. In column 5 and 6, the range of the variables is shown. Table 2 shows the explanations of the explanatory variables. Data from Thomson ONE and WRDS.

From this table it can also be derived that the sample exists of 495 deals, with mostly financial advisors on the acquiring side of the deal. In almost one third of the deals there is a dual role financial advisor involved. In order to get a good view of which deals are included in the sample, table 3 is incorporated with the descriptive statistics of the control variables. These show the average deal size, the financing method and other relevant characteristics.

Table 4: Descriptive statistics of control variables

	N	Mean	s.d.	Min	Max
DummyBorrowing	495	0.552	0.498	0	1
DummyBridgeLoan	495	0.236	0.425	0	1
DummyComStockIss	495	0.081	0.273	0	1
DummyDebtIssue	495	0.160	0.367	0	1
DummyForeignFunds	495	0.061	0.239	0	1
DummyCorpFunds	495	0.515	0.500	0	1
DummyLineOfCredit	495	0.364	0.482	0	1
DummyMezzFinance	495	0.004	0.063	0	1
DummyPrefStockIss	495	0.012	0.110	0	1
DummyRightsIss	495	0.004	0.063	0	1
DummyLBO	495	0.022	0.148	0	1
DummyMergerEquals	495	0.008	0.090	0	1
DummyAcqWhiteKnight	495	0.008	0.090	0	1
DummyTenderOffer	495	0.253	0.435	0	1
LogDealValue	495	7.255	1.637	2.724	11.282
TargetSize	485	7.014	1.794	(1.966)	11.119
AcquirerSize	484	8.310	1.702	2.977	13.065
MktValBookValue	495	1.205	41.184	(789.260)	195.610
DummySameSIC	495	0.469	0.500	0	1
DummyAllShares	495	0.937	0.243	0	1

This table displays an overview of all control variables that are included in this research. Column 1 projects the names of the variables, categorized in two different sets. Column 2 records the total observations for the variables. Column 3 and 4 report respectively the mean and the standard deviation of the variables. In column 5 and 6, the range of the variables is shown. Appendix 1 shows the explanations of the control variables. Data from Thomson ONE and WRDS.

To verify that most variables in this paper are not highly correlated, the correlation matrix is shown in table 5. There are a few variables that are highly correlated, which can be explained due to the fact that they are related to each other. These variables are not used in the same regressions and are therefore not subject to multicollinearity. Multicollinearity occurs when two or more independent variables have a high correlation. Among the control variables, only the deal size, target size and acquirer size have a high correlation, which makes sense since those company sizes are related to the deal size.

Table 5.1: Correlation Matrix

Variables		*(1)*	*(2)*	*(3)*	*(4)*	*(5)*	*(6)*	*(7)*	*(8)*	*(9)*	*(10)*	*(11)*
Target CAR	*(1)*	1.000										
Acquirer CAR	*(2)*	0.061	1.000									
DualTarDummy	*(3)*	-0.048	-0.065	1.000								
DualAcqDummy	*(4)*	-0.127***	-0.028	0.067	1.000							
NumberTarAdvisors	*(5)*	-0.214***	-0.061	0.036	0.112**	1.000						
NumberAcqAdvisors	*(6)*	-0.114**	-0.045	0.010	0.256***	0.210***	1.000					
NumberTarDualAdvisors	*(7)*	-0.048	-0.065	1.000***	0.067	0.036	0.010	1.000				
NumberAcqDualAdvisors	*(8)*	-0.146***	-0.028	0.026	0.804***	0.191***	0.531***	0.026	1.000			
TarPartDualDummy	*(9)*	-0.048	-0.065	1.000***	0.067	0.036	0.010	1.000***	0.026	1.000		
AcqAllDualDummy	*(10)*	-0.097**	0.094**	-0.019	0.647***	0.018	-0.109**	-0.019	0.468***	-0.019	1.000	
AcqPartDualDummy	*(11)*	-0.061	-0.134***	0.108**	0.622***	0.135***	0.453***	0.108*	0.547***	0.108**	-0.180***	1.000
DummyBorrowing	*(12)*	-0.048	-0.074	0.041	0.032	0.085*	0.004	0.041	0.044	0.041	0.044	-0.014
DummyBridgeLoan	*(13)*	-0.045	-0.038	-0.025	0.266***	0.075*	0.253***	-0.025	0.243***	-0.025	0.138***	0.211***
DummyComStockIss	*(14)*	-0.112**	-0.096**	-0.013	-0.022	0.055	-0.023	-0.013	-0.019	-0.013	-0.006	-0.019
DummyDebtIssue	*(15)*	0.063	-0.031	-0.020	-0.041	-0.040	0.008	-0.020	-0.043	-0.020	-0.082*	0.021
DummyForeignFunds	*(16)*	-0.018	0.090**	-0.011	0.197***	0.044	0.035	-0.011	0.129***	-0.011	0.146***	0.109*
DummyCorpFunds	*(17)*	0.071	-0.066	0.044	-0.165***	-0.106*	-0.040	0.044	-0.147***	0.044	-0.157***	-0.053
DummyLineOfCredit	*(18)*	0.036	0.056	-0.034	-0.051	0.060	-0.044	-0.034	-0.031	-0.034	-0.073	0.017
DummyMezzFinance	*(19)*	0.045	0.097**	-0.003	0.026	0.005	0.097*	-0.003	0.108*	-0.003	0.060	-0.026
DummyPrefStockIss	*(20)*	-0.008	0.032	-0.005	0.006	0.035	0.057	-0.005	0.106*	-0.005	0.003	0.006
DummyRightsIss	*(21)*	-0.013	-0.021	-0.003	-0.043	0.005	0.014	-0.003	-0.034	-0.003	-0.028	-0.026
DummyLBO	*(22)*	0.016	0.032	-0.007	0.107*	0.002	0.283*	-0.007	0.272***	-0.007	0.048	0.092*
DummyMergerEquals	*(23)*	-0.108**	-0.071	-0.004	0.037	0.007	0.059	-0.004	0.027	-0.004	-0.039	0.090**
DummyAcqWhiteKnight	*(24)*	-0.054	-0.043	-0.004	0.037	0.104*	-0.038	-0.004	0.002	-0.004	0.085*	-0.038
DummyTenderOffer	*(25)*	0.204***	0.038	-0.026	-0.127***	-0.130***	-0.130***	-0.026	-0.115**	-0.026	-0.085*	-0.084*
LogDealValue	*(26)*	-0.292***	-0.147***	0.043	0.261***	0.318***	0.323***	0.043	0.267***	0.043	0.149***	0.184***
TargetSize	*(27)*	-0.305***	-0.148***	0.042	0.251***	0.284***	0.334***	0.042	0.261***	0.042	0.130***	0.191***
AcquirerSize	*(28)*	-0.101*	-0.046	-0.004	0.052	0.173***	0.186***	-0.004	0.082*	-0.004	0.012	0.058
MktValBookTar	*(29)*	0.009	-0.009	0.003	0.016	0.037	0.020	0.003	0.008	0.003	0.009	0.011
DummySameSIC	*(30)*	-0.103**	0.035	-0.042	0.064	0.092**	0.026	-0.042	0.043	-0.042	0.083*	-0.014
DummyAllShares	*(31)*	0.056	0.013	0.012	0.137***	0.045	0.093**	0.012	0.120***	0.012	0.089**	0.084*

This table shows correlation statistics between all variables that are used in this study, including the dependent variables, explanatory variables and control variables. The full variable specifications can be found in table 2 for the explanatory variables and in Appendix 1 for the control variables. *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Table 5.2: Correlation Matrix (Continued)

Variables		*(12)*	*(13)*	*(14)*	*(15)*	*(16)*	*(17)*	*(18)*	*(19)*	*(20)*	*(21)*
Target CAR	*(1)*										
Acquirer CAR	*(2)*										
DualTarDummy	*(3)*										
DualAcqDummy	*(4)*										
NumberTarAdvisors	*(5)*										
NumberAcqAdvisors	*(6)*										
NumberTarDualAdvisors	*(7)*										
NumberAcqDualAdvisors	*(8)*										
TarPartDualDummy	*(9)*										
AcqAllDualDummy	*(10)*										
AcqPartDualDummy	*(11)*										
DummyBorrowing	*(12)*	1.000									
DummyBridgeLoan	*(13)*	-0.244***	1.000								
DummyComStockIss	*(14)*	0.059	0.010	1.000							
DummyDebtIssue	*(15)*	-0.273***	-0.035	0.093*	1.000						
DummyForeignFunds	*(16)*	-0.128***	-0.101*	-0.044	0.005	1.000					
DummyCorpFunds	*(17)*	0.068	-0.060	0.006	-0.019	-0.126***	1.000				
DummyLineOfCredit	*(18)*	-0.171***	-0.193***	-0.024	-0.020	0.037	-0.031	1.000			
DummyMezzFinance	*(19)*	-0.007	-0.035	-0.019	0.059	-0.016	-0.002	0.018	1.000		
DummyPrefStockIss	*(20)*	-0.049	-0.062	-0.033	0.002	-0.028	-0.040	-0.007	0.284***	1.000	
DummyRightsIss	*(21)*	0.057	-0.035	-0.019	0.146***	-0.016	-0.002	-0.048	-0.004	-0.007	1.000
DummyLBO	*(22)*	-0.057	0.077*	0.056	0.047	-0.038	-0.073	-0.028	0.206****	0.109**	-0.010
DummyMergerEquals	*(23)*	-0.009	0.003	-0.027	-0.039	0.072	-0.093**	0.026	-0.006	-0.010	-0.006
DummyAcqWhiteKnight	*(24)*	0.081*	0.003	0.056	-0.039	-0.023	0.088*	-0.021	-0.006	-0.010	-0.006
DummyTenderOffer	*(25)*	0.047	-0.072	-0.053	-0.063	-0.011	0.164***	-0.053	-0.037	0.021	-0.037
LogDealValue	*(26)*	0.133***	0.243***	0.084*	0.073	-0.021	0.016	-0.042	0.061	-0.033	0.104**
TargetSize	*(27)*	0.137***	0.237***	0.059	0.041	-0.020	0.022	-0.027	0.062	-0.069	0.099**
AcquirerSize	*(28)*	0.087*	0.206***	-0.018	0.052	-0.106**	0.165***	-0.020	0.012	-0.110**	0.096**
MktValBookTar	*(29)*	-0.023	0.025	0.011	0.011	-0.009	0.059	0.028	0.003	0.001	0.011
DummySameSIC	*(30)*	-0.016	0.040	0.004	-0.033	0.050	-0.109**	0.022	0.004	0.007	0.004
DummyAllShares	*(31)*	-0.049	0.026	-0.015	0.044	0.066	-0.034	-0.013	0.016	0.029	0.016

This table shows correlation statistics between all variables that are used in this study, including the dependent variables, explanatory variables and control variables. The full variable specifications can be found in table 2 for the explanatory variables and in Appendix 1 for the control variables. *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Table 5.3: Correlation Matrix (Continued)

Variables		*(22)*	*(23)*	*(24)*	*(25)*	*(26)*	*(27)*	*(28)*	*(29)*	*(30)*	*(31)*
Acquirer CAR	*(1)*										
Target CAR	*(2)*										
DualAcqDummy	*(3)*										
DualTarDummy	*(4)*										
NumberAcqAdvisors	*(5)*										
NumberTarAdvisors	*(6)*										
NumberAcqDualAdvisors	*(7)*										
NumberTarDualAdvisors	*(8)*										
AcqAllDualDummy	*(9)*										
AcqPartDualDummy	*(10)*										
TarPartDualDummy	*(11)*										
DummyBorrowing	*(12)*										
DummyBridgeLoan	*(13)*										
DummyComStockIss	*(14)*										
DummyDebtIssue	*(15)*										
DummyForeignFunds	*(16)*										
DummyCorpFunds	*(17)*										
DummyLineOfCredit	*(18)*										
DummyMezzFinance	*(19)*										
DummyPrefStockIss	*(20)*										
DummyRightsIss	*(21)*										
DummyLBO	*(22)*	1.000									
DummyMergerEquals	*(23)*	-0.014	1.000								
DummyAcqWhiteKnight	*(24)*	-0.014	-0.008	1.000							
DummyTenderOffer	*(25)*	0.039	-0.052	-0.001	1.000						
LogDealValue	*(26)*	0.002	0.043	0.073	-0.241***	1.000					
TargetSize	*(27)*	0.020	0.045	0.070	-0.219***	0.925***	1.000				
AcquirerSize	*(28)*	-0.007	-0.020	0.045	-0.012	0.756***	0.727***	1.000			
MktValBookTar	*(29)*	-0.011	0.003	0.007	-0.066	0.055	0.033	-0.020	1.000		
DummySameSIC	*(30)*	-0.142***	0.006	0.096**	-0.061	0.117***	0.109**	0.036	0.059	1.000	
DummyAllShares	*(31)*	0.039	0.023	0.023	-0.176*	0.065	-0.039	-0.073	0.134***	0.143***	1.000

This table shows correlation statistics between all variables that are used in this study, including the dependent variables, explanatory variables and control variables. The full variable specifications can be found in table 2 for the explanatory variables and in Appendix 1 for the control variables. *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

4. Methodology

In this section, it is explained how the empirical analysis is performed and the robustness checks are discussed. The abnormal returns of the target and acquirer are described empirically to test the hypotheses, meaning that the CARs of both companies (target and acquirer) should be regressed on a wide variety of independent variables. These independent variables should describe most discrepancies in the abnormal returns in a best possible way.

4.1 Estimation Techniques

In this section, the kind of techniques used to test the hypotheses mentioned in section 2.6, the regressions that are performed and several robustness checks can be found here.

4.1.1 Cumulative Abnormal Returns

To calculate the abnormal returns, first the expected returns need to be predicted. The expected returns are the stock returns of all parties involved as if the M&A did not take place. Afterwards, the expected returns are detracted from the actuals, resulting in the abnormal returns that were earned in the transaction. Usually, the market model is used as a benchmark when the expected return needs to be predicted in papers with similar subjects that calculate the abnormal returns (Hackbarth & Morellec, 2008; Ma et al., 2009; Walter, Yawson, & Yeung, 2008). To predict the expected returns, the Capital Asset Pricing Model (CAPM) is used in the Market Model. CAPM predicts the expected returns with help of the volatility from the market compared to companies' price volatilities. However, according to Bello (2008) the market model does not hold as the only prediction model. He found that the predictive power of the CAPM has not the most accurate predictive power compared to other similar models. One of these similar models to better predict the expected returns is the Three-factor model, developed by Fama & French[3]. The view by which the model was created was that three different factors exist which all affect the stock-market. There is a general market element, elements that are associated with firms' size and book-to-market equity (Fama & French, 1993). The model with three factors attaches new betas to the existing ones in the CAPM model. The High Minus Low (HML) beta, which is the proxy for the book-to-market equity factor. Second, the Small Minus Big (SMB) beta, which is the proxy for the firm size factor (Bello, 2008). The following is

[3] Eugene Fama & Kenneth French

stated by Bello (2008) about the predictive power of the CAPM and Three-factor model: "with respect to the quality of prediction, the Fama & French Three-factor model is a remarkable improvement over the CAPM". In addition to this, Carhart created an extension which is seen by Bello (2008) as a remarkable improvement for the model, the momentum factor. The proxy for momentum is called the Winners Minus Losers (WML) variable. Below the algebra behind the formulas for the expected returns and abnormal returns are shown, starting with the Market Model and the latter being the prediction with the Fama & French factors and the Carhart extension.

Market Model Expected Returns:

$$1)\quad R_{it}^{MM} = \alpha_i + \beta_i^m * R_t^m + \epsilon_{it}$$

Market Model Abnormal Returns:

$$2)\quad AR_{it}^{MM} = R_{it} - R_{it}^{MM}$$

Fama French & Carhart Model Expected Returns:

$$3)\quad R_{it}^{MM} = \alpha_i + \beta_i^m * R_t^m + \beta_i^{HML} * R_t^{HML} + \beta_i^{SMB} * R_t^{SMB} + \beta_i^{WML} * R_t^{WML} + \epsilon_{it}$$

Fama French & Carhart Model Abnormal Returns:

$$4)\quad AR_{it}^{FFC} = R_{it} - R_{it}^{FFC}$$

In these formulas, R_{it}^{MM} are the expected returns which are predicted by the Market Model and AR_{it}^{MM} the abnormal returns. To calculate the abnormal returns for both models, R_{it} is used as the actual returns that were earned in the window used for the specific period that the expected returns were predicted over. In a similar way, R_{it}^{FFC} and AR_{it}^{FFC} are respectively the expected returns predicted by Fama French & Carhart with matching abnormal returns. To predict the expected returns, an estimation period has to be determined to make sure that the data used is cannot be influenced by the M&A event. The estimation period should be around 150 days for example, taken from 70 days before the event happened (Campbell et al., 1997). In this case the chance that any factors related to the M&A event will influence the expected returns is minimized. So, to remove any bias that could occur due to changing characteristics of the firms around the event, the procedure outlined in Ruback (1982) is applied. The estimation period that is used in this research is explained in section 3.2. As explained in Capron & Pistre (2002), the abnormal returns are representing daily excess returns. To perform the analysis, it is necessary to use the cumulative abnormal returns (CAR) for each stock i, which is formed by summing the individual abnormal returns over time as the following.

Cumulative Abnormal Returns:

$$5)\quad CAR_{it} = \sum_{t=1}^{T} AR_{it}$$

Where CAR_i is the cumulative abnormal returns for the time frame $t = [-1, +1]$. This short time frame is used since it shows the most immediate effects around the announcement (Ma et al., 2009; Kolari & Pynnönen, 2010; Chen et al., 2019). The event window of 1 day before and after the announcement, the M&A event, also shows the short-term effects on the abnormal returns. The parameters are all calculated in the window for the individual companies, since they should not be affected by the event. However, this should be close enough to the M&A announcement date that the estimates are appropriate for that time period.

The abnormal returns are then calculated for every company by deducting expected from actual returns over the different time windows [-1, +1] and [-2, +2]. After these calculations, the data is aggregated with the other M&A data set to create the data set for the regressions. The CARs that are calculated according to the previously mentioned formulas are used in this thesis methodology as the dependent variables to perform regressions with and are explained in section 3.3.1. The purpose of these regressions is the possibility to explain the effects of different independent variables on these CARs. A selection of possible independent variables that may explain CARs are discussed in the paper of Huang & Walkling (1987). This paper identifies three main dimensions of M&A announcements which are the type of offer, the form of payment and the degree of resistance from the target firm's management. All of these dimensions and their corresponding variable values can significantly impact the abnormal returns of the transactions.

Nevertheless, there are many more variables that will have either significant or less significant impact on the abnormal returns. One of these other dimensions are the Financial Advisors that are involved with the deal. They are key in the valuation of the target company and how much they advise to bid as final price in the negotiations of the deal. More specific, within this dimension the Financial advisors might be able to finance the debt element in the payment method if needed. This may have an enormous influence on the abnormal returns of the transaction and is outlined in the upcoming sections.

4.1.2 OLS Regression

Various linear regressions are performed to test for the aforementioned hypotheses. These linear regressions are based on the ordinary least squared (OLS) methodology as shown in the first part of section 4. This part explains how the variables from section 3.3 are used to test the hypotheses. First, the main hypotheses need to be tested. Several different CARs need to be regressed to test these hypotheses on the independent variables. The focus lays upon the

explanatory variables, since these test for the hypotheses. The OLS regression models for acquirers are written down below in mathematical formula. The formulas are formed in a similar fashion for the targets.

$$6)\quad ACQCAR_i = \alpha + \beta_1 DualAcqDummy_i + \beta_2 ControlVariables_i + \epsilon_i$$

In these formulas, i denotes any deal in the sample, the constant is shown by α, the coefficients of the respective variables denoted by the betas and the error term ϵ_i. All control variables that are discussed in section 3.3.3 are bundled in the term $ControlVariables_i$. It is also expected that dual role financial advisors impact the opposing side of the transaction. This means that target's dual role advisors also impact the CARs that are earned for the acquiring company and vice versa. To test these sub-hypotheses, two models are needed that include the effects of the dual role advisor and the opposing parties' CARs.

$$7)\quad ACQCAR_i = \alpha + \beta_1 DualAcqDummy_i + \beta_2 DualTarDummy_i + \beta_3 ControlVariables_i + \epsilon_i$$

In this case, a significantly negative β_1 denotes that there is a positive correlation between the dual role financial advisors on the same side that is being tested. On the other hand, there is β_2, which indicates a negative correlation between the CARs and the opposing side dual role financial advisors in case it is significantly negative

Next is the sub-hypothesis 3, which is related to the number of advisors that are involved in the deal. Since it is not known whether the number of advisors has any impact on the cumulative abnormal returns, regressions without the dual role variable will be run first to see its impact on the CARs. Afterwards the number of dual role financial advisor variable is added to the regression. To test these sub-hypothesis, two models are needed first without the explanatory variable of the dual role advisors and afterwards, the dual role variable is added.

$$8)\quad ACQCAR_i = \alpha + \beta_1 AmountAcqAdv_i + \beta_2 AmountTarAdv + \beta_3 ControlVariables_i + \epsilon_i$$

In formula 9, a significantly positive β_1 supports the sub-hypothesis 3 for the acquirer. In contrary, a significantly negative β_1 would support sup-hypothesis 3 for the target. However, if the amount of advisors and the fact that they have a dual role or not impact each other, and the cumulative abnormal returns of both parties involved should also be tested. Therefore, to test this, all variables should be included in the models that are shown below.

$$9)\quad ACQCAR_i = \alpha + \beta_1 AmountAcqAdv_i + \beta_2 AmountTarAdv + \beta_3 AmountAcqDual_i + \beta_4 AmountTarDual + \beta_5 ControlVariables_i + \epsilon_i$$

Finally, to test the last hypothesis about the impact of the duality among financial advisors, the models stated below are used. In these regressions the dummy variable is created where no dual role advisors are used as the base line. Since no dual role advisors is the base, it can be tested whether part of the advisors or all advisors that have dual roles in the transaction generate significantly lower or higher CARs. Noticeable is that in the last two regressions the number of advisors' variable is included in the control variables.

$$10)\ ACQCAR_i = \alpha + \beta_1 AcqPartDualDummy_i + \beta_2 AcqAllDualDummy_i + \beta_3 TarPartDualDummy_i + \beta_4 TarAllDualDummy_i + \beta_5 ControlVariables_i + \epsilon_i$$

4.2 Robustness Checks

For the calculation of the abnormal returns most papers use the Market Model rather than the more accurate Fama French & Carhart model (Ma et al, 2009; Siming, 2011; (Sehgal, Banerjee, & Deisting, 2012; Chen & Wu, 2019). The latter uses more factors to determine the expected returns. Some of the papers used these factors as control variables, but not to predict the expected returns and thus the abnormal returns that are key in the regressions. The results in the papers might be biased given that the CAPM should not be considered as the only possible model with the best predictive power regarding expected returns (Bello, 2008). There are a few remarks that need to be made regarding the regressions. Instead of normal standard errors, the Huber-White[4] standard errors are used (Froot, 1989; Long & Ervin, 2000). Since there is a possibility of heteroscedasticity, the outcome of the regressions can show smaller standard errors than expected. In some cases, these standard errors can also show larger values than expected. This can result in some coefficients being significant while they should not and vice versa (Long et al., 2000). The robust standard errors include the possibility that the calculations contain heteroscedasticity, so it omits the issue of it. Even if no heteroscedasticity is present, the robust standard errors are still appropriate since the difference between the robust and normal standard errors should be minimal.

Furthermore, on all models there are F-tests performed. The F-test is used for joint significance. It can be tested if the slope from each explanatory variable is zero or not. In this way, it can be proved that the model is useful or not. The null-hypothesis can be rejected with appropriate certainty if the F-tests on all the independent variables of the model are equal to

[4] Also knows as the 'sandwich' standard errors, which refers to the estimates' mathematical form. It is designed by Huber (1967) and White (1980).

zero. This translates into a useful model. Next to the F-test, a Chow-test will also be used. The Chow-test "aims to test equality of sets of coefficients in two regressions" (Toshihisa, 1974). This means that the Chow-test controls for significant differences between those sets of coefficients in two regressions. This means that this test shows if there are different results from the model in case there are different prediction models used to estimate the expected returns. It is expected that both models will represent statistically different results. So, the null hypothesis can be rejected in case the outcome of the Chow-test is significant. Therefore, in case this occurs one can say that as a minimum one of the coefficients differs statical significantly. It indicates that the prognostication of differently calculated coefficients is correct.

5. Results

The regression results used to test the hypotheses of this thesis are shown and described in this section. Different regressions analyses are presented in the tables with a [-1, +1] event window for the Market Model. In all situations the results describe the outcomes of the models for both the target company as the acquiring company. The results of all models for the event window [-2, +2] are shown in Appendix B as robustness checks. The different cut-off points used to test for robustness can be found in Appendix C. The regressions that are run with the CARs calculated with the four-factor model will also be presented in Appendix D to check whether the results differ compared to the original regressions.

5.1 Dual Role Advisors Present on the Deal

First, the results of model 6 and 7 are shown in table 6. This table presents the regressions that are conducted on the CARs with the simple models where the explanatory variable is a dummy. It is a dummy with a value of 1 if there are dual role advisors involved and a value of 0 if no dual role advisors are involved. Furthermore, the CARs are explained with help of the control variables that are discussed.

According to the hypotheses, the explanatory variable "DualDummyTar" should be significantly positive and "DualDummyAcq" should be significantly negative. However, taking a look at the results from table 6, the contrary is observed. Dual role financial advisors for the target firms negatively impacts its CARs and the results are significant at the 1% level. The results are contrary to the findings of Povel et al., (2010). An explanation could be the fact that all observations that include target dual role advisors have the same specific property that the target value is higher than the acquirer value (Gupta & Misra, 2007). Therefore, hypothesis 2 is rejected based on this model with 99% certainty. For the acquirer on the other hand, there is no clear statement to be made on hypothesis 1 as the results are not significant. In the third and fourth column, both explanatory variables are added together to test for sub hypotheses 1 and 2. The table shows that, adding the dual advisors of the opposite side to the model, it slightly changes the results. However, they do not change the significance of the explanatory variables and control variables. The target dual role advisors have a small negative significant effect at the 1% level on the acquirer, which could be explained by Povel et al., (2010). They state that stapled financing by the target advisors can increase the bidding competition. For the target firms' CAR there is a small negative effect when the acquirer dual role advisors are added to the model.

Table 6: Market Model, [-1, +1] event window, Dual Role Financial Advisors

	1		*2*		*3*		*4*	
Dependent Variable	TAR_CAR		ACQ_CAR		TAR_CAR		ACQ_CAR	
Explanatory Variables								
DualDummyTar	-0.106***	(0.024)			-0.102***	(0.027)	-0.085***	(0.015)
DualDummyAcq			0.002	(0.011)	-0.006	(0.018)	0.003	(0.011)
Control Variables								
DummyBorrowing	0.020	(0.018)	-0.006	(0.010)	0.020	(0.018)	-0.006	(0.010)
DummyBridgeLoan	0.030	(0.023)	-0.003	(0.011)	0.032	(0.024)	-0.004	(0.011)
DummyComStockIss	-0.051*	(0.029)	-0.019	(0.020)	-0.051*	(0.029)	-0.019	(0.020)
DummyDebtIssue	0.035	(0.026)	-0.014	(0.012)	0.035	(0.026)	-0.014	(0.012)
DummyForeignFunds	0.009	(0.032)	0.037**	(0.018)	0.012	(0.033)	0.036**	(0.018)
DummyCorpFunds	0.011	(0.017)	-0.013	(0.008)	0.011	(0.017)	-0.013	(0.009)
DummyLineOfCredit	0.019	(0.017)	0.006	(0.010)	0.019	(0.017)	0.006	(0.010)
DummyMezzFinance	0.209***	(0.049)	0.154***	(0.026)	0.209***	(0.050)	0.153***	(0.026)
DummyPrefStockIss	-0.021	(0.063)	-0.002	(0.036)	-0.021	(0.063)	-0.002	(0.036)
DummyRightsIss	0.015	(0.026)	0.003	(0.013)	0.013	(0.027)	0.003	(0.013)
DummyLBO	-0.006	(0.054)	0.018	(0.018)	-0.004	(0.054)	0.018	(0.018)
DummyMergerEquals	-0.146***	(0.023)	-0.068**	(0.028)	-0.147***	(0.024)	-0.068**	(0.028)
DummyAcqWhiteKnight	-0.048	(0.056)	-0.020	(0.070)	-0.047	(0.058)	-0.020	(0.071)
DummyTenderOffer	0.041*	(0.022)	-0.005	(0.009)	0.041*	(0.022)	-0.005	(0.009)
LogDealValue	-0.020	(0.025)	-0.012	(0.013)	-0.020	(0.025)	-0.012	(0.013)
TargetSize	-0.031	(0.024)	-0.007	(0.012)	-0.031	(0.024)	-0.007	(0.012)
AcquirerSize	0.026***	(0.007)	0.014***	(0.005)	0.026***	(0.007)	0.013***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.022	(0.015)	0.011	(0.008)	-0.022	(0.015)	0.010	(0.008)
DummyAllShares	0.071*	(0.038)	0.008	(0.021)	0.072*	(0.039)	0.008	(0.021)
_constant	0.257***	(0.061)	0.008	(0.031)	0.257***	(0.061)	0.008	(0.031)
Observations	470		468		470		468	
Adjusted R^2	0.145		0.044		0.144		0.044	
F-test	19.44***		0.04		9.89***		17.60***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target and acquirer companies on dummy variables created whether dual role financial advisors are involved and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model to predict the expected returns. The dependent variables are the CARs and the main independent variables are the dummy variables on whether dual role financial advisors are involved. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

The primary emphasis of this paper lays upon the impact of dual role advisors on the abnormal returns. However, additional independent variables functioning as control variables should be considered shortly as well. From the significant variables that are related to the financing of the deal, "DummyComStockIss" is slightly negative and significant at the 10% level. The other control variables are positive and significant. Financing by foreign funds is positive and significant at the 5% level for the acquirer CARs. Mezzanine financing is significant at the 1% level for the acquirer and target. This points towards higher CARs for the target company or the acquiring company in case these financing methods are used (except common stock issuances). Mezzanine financing enabled companies to overcome traditional obstacles in the financial markets and therefore increase the returns (Chatterjee, 2000). The control variable "DummyTenderOffer" is positively significant at the 10% level for the target

firms indicating that tender offers improve the CARs for the targets. The dummy variable "MergerEquals" is negatively significant at the 1% level for targets and 5% level for acquirers. This is in line with Wulf (2004), who found that MOEs result in greater shared control and a more equal shared merger gain. This has a negative impact on the individual CARs. Furthermore, "AcquirerSize" is positively significant at the 1% level for all models in table 6, pointing towards increasing CARs for both target companies and acquiring companies when the size of the acquirer is larger. Lastly, the dummy variable for an acquisition where all shares are acquired, is positively significant at the 10% level for the target CARs. This is in line with Kedia & Bilgili (2015), who confirm that acquisitions of 100% of the shares results in higher returns for the firm that is acquired.

Moreover, the F-test results are added to the tables for every model. The first, third and fourth model have significant F-tests at the 1% level. The significance of the F-test suggests that the model and the explanatory variables are explained in a better way than intercept-only models would do. In short, the explanatory variables explain the CARs to some extent.

5.2 The Number of Financial Advisors and Dual Role Advisors

Tables 7 and 8 are created slightly different compared to table 6. In the first model the variables on the number of financial advisors are implemented, whereas the number of dual role advisors is implemented in the second model. The third model in the last column shows the combined models with both the number of financial advisors and dual role advisors combined. The last model is created to test for the differences between the level of duality in among the advisors, where it is possible to have 100%, 0% or in between.

5.2.1 Target Company CARs

The first model in table 7 shows a significantly negative result for the "NumberTar Advisors", which indicates that more target advisors result in a decrease of the selling companies' CARs at the 5% level. The impact of acquirer financial advisors has a small positive but not significant effect on the cumulative abnormal returns from the target firm. In the second model the amount of dual role financial advisors is used as the explanatory variable. The explanatory variables are insignificantly negative for acquirer dual advisors, and, therefore, cannot be used to accept or reject the sub-hypothesis 2. However, on the target side, the results are highly significant. This means that it can be said with 99% certainty that the number of (dual role) target advisors has a negative impact on the targets' CARs regarding sub-

hypothesis 3. The insignificance of the explanatory variables in the second model are confirmed by the third model where the variables on normal advisors and dual role advisors are combined. So, there is evidence that supports SH3, but it is not possible to support the hypothesis completely according to these models. Again, there are several financing control variables in the models, both positively and negatively, significant at the 10% and highest level. "DummyTenderOffer" is positively significant at the 10% level, indicating that tender offers result in higher target returns. The reason for this can be that premiums tend to be higher when multiple bidders are involved (Walkling & Edmister, 1985; Huang & Walkling, 1987; Flanagan & O'Shaughnessy, 2003). Also, larger acquirers seem to have a positive effect on combined CAR. "TargetSize" is negative insignificant explains the target returns whereas "AcquirerSize" is positive. The negative relation between the value of the target and its CARs can be explained due to the small firm premium (Barry & Brown, 1984). George, Fuller, Terhaar and Travlos (2013) found that acquirers tend to pay less for large firms, because of the robust negative relationship between the target size and offer premia. On the other hand, there is the positive relation between the acquirer value and the target's CARs. This means that larger acquirers will result in higher CARs for the targets. A possible explanation is that larger acquirers tend to overpay sooner (Hietala, Kaplan, & Robinson, 2003; Humphery-Jenner & Powell, 2011).

Model 4 shows the models that regress the explanatory and control variables on the target companies' cumulative abnormal returns to test sub-hypothesis 4. It can be seen that the partial dummy variable is negative and significant at the 1% level. It has a negative effect when only part of the advisors on the targets side has a dual role. This means that if not all advisors are participating in the financing of the deal, but there are dual role advisors involved, the returns for the target companies tend to be lower. This is in line with sub-hypothesis 4. However, similar results are not found regarding the acquirer dual role advisors on the targets' CARs.

The F-tests are significant for all models and significant at the highest level for the second and fourth model. This indicates that the models explain the CARs for the target firms better than intercept-only models would do.

Table 7: Market Model, Targets' Cumulative Abnormal Returns, [-1, +1] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberTarAdvisors	-0.025**	(0.011)			-0.024**	(0.011)	-0.025**	-0.011
NumberAcqAdvisors	0.002	(0.007)			0.006	(0.007)	0.000	-0.007
NumberTarDualAdvisors			-0.102***	(0.024)	-0.090***	(0.025)		
NumberAcqDualAdvisors			-0.012	(0.010)	-0.013	(0.010)		
TarPartDualDummy							-0.103***	(0.031)
AcqAllDualDummy							-0.015	(0.021)
AcqPartDualDummy							0.006	(0.024)
Control Variables								
DummyBorrowing	0.022	(0.018)	0.022	(0.018)	0.024	(0.018)	0.023	(0.018)
DummyBridgeLoan	0.031	(0.022)	0.031	(0.022)	0.035	(0.023)	0.032	(0.024)
DummyComStockIss	-0.048*	(0.029)	-0.048*	(0.029)	-0.050*	(0.029)	-0.049*	(0.029)
DummyDebtIssue	0.034	(0.026)	0.034	(0.026)	0.034	(0.026)	0.032	(0.027)
DummyForeignFunds	0.012	(0.032)	0.012	(0.032)	0.018	(0.032)	0.015	(0.033)
DummyCorpFunds	0.007	(0.017)	0.007	(0.017)	0.005	(0.017)	0.006	(0.017)
DummyLineOfCredit	0.023	(0.017)	0.023	(0.017)	0.024	(0.017)	0.022	(0.017)
DummyMezzFinance	0.205***	(0.054)	0.205***	(0.054)	0.207***	(0.060)	0.211***	(0.058)
DummyPrefStockIss	-0.020	(0.064)	-0.020	(0.064)	-0.012	(0.064)	-0.021	(0.064)
DummyRightsIss	0.012	(0.024)	0.012	(0.024)	0.004	(0.025)	0.01	(0.025)
DummyLBO	-0.009	(0.058)	-0.009	(0.058)	0.001	(0.058)	-0.004	(0.059)
DummyMergerEquals	-0.151***	(0.024)	-0.151***	(0.024)	-0.155***	(0.026)	-0.157***	(0.026)
DummyAcqWhiteKnight	-0.029	(0.049)	-0.029	(0.049)	-0.028	(0.052)	-0.025	(0.052)
DummyTenderOffer	0.040*	(0.022)	0.040*	(0.022)	0.040*	(0.022)	0.040*	(0.022)
LogDealValue	-0.017	(0.025)	-0.017	(0.025)	-0.016	(0.025)	-0.016	(0.025)
TargetSize	-0.031	(0.025)	-0.031	(0.025)	-0.031	(0.025)	-0.031	(0.025)
AcquirerSize	0.026***	(0.007)	0.026***	(0.007)	0.024***	(0.007)	0.025***	(0.007)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.022	(0.015)	-0.022	(0.015)	-0.022	(0.015)	-0.021	(0.015)
DummyAllShares	0.071*	(0.039)	0.071*	(0.039)	0.073*	(0.039)	0.072*	(0.040)
_constant	0.271***	(0.060)	0.271***	(0.060)	0.264***	(0.061)	0.273***	(0.061)
Observations	470		470		470		470	
Adjusted R^2	0.151		0.146		0.151		0.147	
F-test	2.54*		10.27***		2.54*		5.26***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

5.2.2 Acquiring Company CARs

Table 8 has been created in a similar way as table 7, where the dependent variable is cumulative abnormal returns of the acquiring company instead of the target company. The table also consists of the same four models that are used to test the hypotheses. The models also contain the same control variables and explanatory variables. The first model shows the impact of the number of financial advisors on the acquirers' cumulative abnormal returns. As can be seen from the first column, there exists a small negative relation between the amount of both acquirer and target advisors and on the other side the acquirers' CARs. However, the insignificance of these variables in the model makes it impossible to draw a clear conclusion about the impact of the explanatory variables on the dependent variables. The second model shows the variables "NumberAcqDualAdvisors" and "NumberTarDual Advisors", which are both negative. The latter is significant at the 1% level, indicating that more dual role advisors on the target side correlate with lower returns for the acquirer. However, due to the insignificance of the other explanatory variables, there is no clear statement to be made on sub-hypothesis 3. Although, looking at the signs of the coefficients, it seems that the third model explains that sub-hypothesis 3 should be rejected. The third combined model shows approximately the same results as the two separated models. For this reason, it can be assumed that the amount of financial advisors and of dual role advisors do not impact each other. For the acquiring companies' regressions on the CARs, the control variables should also be discussed. The first thing that comes to mind when looking at table 8 is that there are four to five variables significant with minimalistic differences over the models. This indicates that the explanatory variables do not influence each other much. One noticeable finding is that "DummyCorpFunds" in the first model is significant at the 10% level but tends to be insignificant in the other two models. Hence, it seems that the amount of dual role advisors does impact the significance of this control variable enough to change it.

In model 4, the acquirers' CARs are the dependent variables as in the other models. As expected in the sub-hypothesis 4, "AcqAllDualDummy" is positive and significant at the 10% level. This demonstrates that deals where all financial advisors have a dual role have a stronger positive effect on the CARs. The partial dummy, however, is negative and insignificant, so according to the significant variables it can be said that hypothesis 1 and sub-hypothesis 4 should not be rejected. The fourth model also shows that the dummy variables on target dual role advisors barely impact the coefficients of the acquirer dummy variables on the CARs. According to the results in table 8 column 4, it can be said with certainty at the 10% significance

Table 8: Market Model, Acquirers' Cumulative Abnormal Returns, [-1, +1] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberAcqAdvisors	-0.002	(0.004)			-0.003	(0.005)	-0.002	(0.006)
NumberTarAdvisors	-0.003	(0.006)			-0.003	(0.006)	0.003	(0.005)
NumberAcqDualAdvisors			-0.001	(0.006)	0.001	(0.006)		
NumberTarDualAdvisors			-0.083***	(0.014)	-0.082***	(0.014)		
AcqAllDualDummy							0.024*	(0.013)
AcqPartDualDummy							-0.023	(0.015)
TarPartDualDummy							-0.058***	(0.018)
Control Variables								
DummyBorrowing	-0.005	(0.010)	-0.006	(0.010)	-0.006	(0.010)	-0.006	(0.010)
DummyBridgeLoan	-0.001	(0.010)	-0.002	(0.011)	-0.002	(0.011)	-0.002	(0.011)
DummyComStockIss	-0.019	(0.020)	-0.019	(0.020)	-0.020	(0.020)	-0.018	(0.020)
DummyDebtIssue	-0.015	(0.012)	-0.014	(0.012)	-0.015	(0.012)	-0.011	(0.011)
DummyForeignFunds	0.039**	(0.018)	0.038**	(0.018)	0.038**	(0.018)	0.036*	(0.018)
DummyCorpFunds	-0.014*	(0.008)	-0.013	(0.009)	-0.013	(0.009)	-0.012	(0.009)
DummyLineOfCredit	0.007	(0.010)	0.006	(0.010)	0.006	(0.010)	0.009	(0.009)
DummyMezzFinance	0.153***	(0.027)	0.153***	(0.026)	0.153***	(0.028)	0.138***	(0.034)
DummyPrefStockIss	0.000	(0.039)	-0.002	(0.037)	-0.001	(0.038)	0.000	(0.039)
DummyRightsIss	0.002	(0.013)	0.002	(0.013)	0.002	(0.013)	0.001	(0.012)
DummyLBO	0.024	(0.021)	0.019	(0.021)	0.023	(0.022)	0.014	(0.021)
DummyMergerEquals	-0.068**	(0.026)	-0.069**	(0.028)	-0.068**	(0.027)	-0.056*	(0.030)
DummyAcqWhiteKnight	-0.019	(0.070)	-0.020	(0.071)	-0.020	(0.070)	-0.027	(0.066)
DummyTenderOffer	-0.005	(0.009)	-0.005	(0.009)	-0.005	(0.009)	-0.005	(0.009)
LogDealValue	-0.011	(0.013)	-0.011	(0.013)	-0.011	(0.013)	-0.013	(0.013)
TargetSize	-0.006	(0.012)	-0.006	(0.012)	-0.006	(0.012)	-0.006	(0.012)
AcquirerSize	0.013***	(0.004)	0.013***	(0.005)	0.013***	(0.005)	0.014***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	0.011	(0.008)	0.010	(0.008)	0.010	(0.008)	0.009	(0.008)
DummyAllShares	0.009	(0.021)	0.008	(0.021)	0.009	(0.021)	0.008	(0.021)
_constant	0.010	(0.031)	0.008	(0.031)	0.010	(0.031)	0.006	(0.031)
Observations	468		468		468		468	
Adjusted R^2	0.043		0.044		0.041		0.057	
F-test	0.32		17.63***		8.88***		12.39***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from acquirer companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

level that deals were all financial advisors have a dual role, which is approximately 15% of the sample, have a stronger positive effect on the CARs than deals were only a part of the advisors has a dual role for the acquiring firms.

5.3 Robustness Checks

This section discusses the robustness of the results from the sections above. To test this, the regressions will be slightly modified. In this way, it can be checked whether the results are still similar to the initial results. An extended event window of [-2, +2] is used to check for robustness. A second method is the chow-test (Toyoda, 1974), which compares the results of different models that are used to calculate the expected returns. In this case, the second model is the Fama French & Carhart four-factor model (Bello, 2008).

5.3.1 Event Windows

The results of the extended event window [-2, +2] for table 6 can be found in Appendix 2, table 7 can be found in Appendix 3 and table 8 can be found in Appendix 4. First, by taking a look at table 6 and Appendix 2, it is shown that various control variables became significant, where others became insignificant. The significant explanatory variables became more amplified compared to the [-1, +1] event window, and thus have a stronger effect with the extended event window. A noticeable finding on the F-test, is that in the [-2, +2] event window results the coefficients are higher in the first two models and approximately similar in the third model. This indicates that the explanatory variables are better at explaining the dependent variable in the extended event window. The market needing time to execute and implement the information of the event could be a reason for this. Another factor can be additional events influencing the impact that dual role advisors have regarding the deal.

The next table that is compared with the Appendix is related to the variables that represent the number of financial advisors, dual role financial advisors and the duality among financial advisors to the targets' CARs. The independent variables became, similar to the previous table, stronger in explaining the dependent variable. Furthermore, similar changes in significance occurred for the control variables and the F-test values increased in the extended window for table 7. Together with the increasing coefficients for the significant variables, the results are robust for the [-2, +2] window. Similar to the targets' CARs, the regressions were run regarding the acquirers' CARs as shown in table 8 and Appendix 4. The dummy variable on foreign funds becomes more significant, as do several other control variables. The noticeable finding is

however, that the variable "AcqPartDualDummy" is significant at a higher level in the extended event window. Besides, the effects are also more amplified in the extended event window. It can therefore be said that the results of the first three models are robust for the extended window, since all explanatory variables and the F-tests are not changing significantly. The fourth model, regarding the duality of the financial advisors, does change in significance and can therefore not be stated as completely robust for the [-2, +2] extended event window. The results, however, are in line with sub-hypothesis 4.

5.3.2 Deal Value Cut-Off Points

Two cut-off points for the minimum transaction size come into play to check for the robustness of the initial outcomes. Appendix 5 and Appendix 6 show the results of the minimal transaction size of 50 million whereas Appendix 7 and Appendix 8 provide the minimal transaction size of 100 million. Appendix 5 shows the target CARs outcomes and with the cut-off point at 50m for the deal value. Comparing the first column with the third in table 6, is shown that the coefficients' significance is still the same. A similar statement holds for the second column, corresponding with the third column of table 7. The last column of Appendix 5 corresponds with the fourth column of table 7. Similar to the first two columns, there are no changes in significance, meaning that the results are robust for the new cut-off point. The acquirer CARs regressions for the cut-off point of 50m can be found in Appendix 6. In contrary to the targets' models, there are 2 changes of significance in the first column compared to the fourth column of table 6. The dummy variable for foreign funds and line of credit are both significant at the 10% level, whereas they were significant at the 5% level or not at all. However, there are no changes in the explanatory variables. The second model corresponds with column 3 of table 8 and shows the same differences as the first column. The last model, compared to the fourth column of table 8, does not show any changes. It can be said, therefore, that the outcomes presented in the tables are robust for the cut-off point in transaction size from 50 million.

A similar test is done for the cut-off point of 100 million USD in deal value. Looking at the first model in Appendix 7 and third model in table 6, the presented results show that there are several changes in significance for the dummy variables. The significant coefficient of the explanatory variables became stronger. Regarding the explanatory variables that is the only change. The second model is compared with the third model in table 7 and shows approximately the same changes as the first column. There are no changes regarding the

explanatory variables. Finally, the third model compared to the fourth column of table 7 does not show any changes other than described in the first two columns. Besides small changes in the significance of the control variables, there are no differences found in the first model in Appendix 8 compared to the fourth model in table 6. The third column of table 8 is compared with the second model in Appendix 8 and shows the same changes in significance of the control variables as the first model. Finally, the last column that corresponds with the fourth column of table 8 does show a difference in significance. The "AllAcqDualDummy" increased in significance from the 10% level towards the 5% level and can therefore not be stated as completely robust for the [-2, +2] extended event window.

5.3.3 Expected Returns Prediction Models

In the regular regressions that are executed to test for the hypotheses, the Market Model is used as prediction model for the cumulative abnormal returns. However, Bello (2008) states that the Fama French & Carhart four-factor Model is more an accurate prediction model compared to the Market Model. So, to check whether the predictions model significantly differ in their results, a Chow-Test is performed. Appendix 9 to 11 show the results of the regressios with the four-factor prediction model, performed in the [-1, +1] event window.

Table 9: Chow-Test on Dual Role Models, [-1, +1] event window

		Chi2	**Prob > Chi2**
Target	[FFCTAR]DualRoleModel – [MMTAR]DualRoleModel = 0	79.46	0.000
Acquirer	[FFCACQ]DualRoleModel – [MMACQ]DualRoleModel = 0	18.68	0.665

This table displays an overview of the results from the Chow-Test that is performed with the estimates of the models from table 6. The first column shows whether the results are for the target or acquirer CARs. The second model shows the Chow-Test. The last two columns show the results. The last column provides the significance of the results with * $p < 0.10$, ** $p < 0.05$ and *** $p < 0.01$.

First, the test for the third and fourth model in table 6 is performed, showing the results in table 10. An important note is that the regressions used for the Chow-Test are performed with normal standard errors since the estimates need to be stored first. Afterwards, the regular standard errors will be transformed into the robust standard errors. These robust standard errors are then used for the performance of the final Chow-Test. The test is a check to see whether two different regression coefficients are equal or not. The estimates of the different models are used, so it can be checked if the coefficients subtracted from each other are significantly equal to 0. The chi-squared distribution shows the outcome of the test and can be found in the table as "Chi2". The table shows that the chi-squared has a signficant value of 79.46 for the target's model. Hence, with 99% certainty it can be said that the joint coefficients, which were

estimated by the Fama French & Carhart model and the market model differ significantly. This implicates that the results for the targets' CARs are not robust for different prediction models. In contrary, the acquirer's model returns a value of 18.68 which is not significant. So, it cannot be said with certainty that the coefficients of the different models regarding the acquirer CARs are significantly different. The same test has been performed for the other two models that are used to test the hypotheses. First, table 10 shows the results of the models regarding the number of financial advisors and dual role advisors on both sides of the transaction. The "Chi2" values are similar to the results in table 9. It can therefore be said that the same conclusions hold for these models as for the dual role models.

Table 10: Chow-Test on Number of Advisors Models, [-1, +1] event window

		Chi2	Prob > Chi2
Target	[FFCTAR]NoAdvisorsModel – [MMTAR]NoAdvisorsModel = 0	81.41	0.000
Acquirer	[FFCACQ]NoAdvisorsModel – [MMACQ]NoAdvisorsModel = 0	18.50	0.778

This table displays an overview of the results from the Chow-Test that is performed with the estimates of the models from table 7 and 8. The first column shows whether the results are for the target or acquirer CARs. The second model shows the Chow-Test. The last two columns show the results. The last column provides the significance of the results with * p < 0.10, ** p < 0.05 and *** p < 0.01.

Finally, the Chow-Test is performed on the final models from table 7 and 8, the number of advisors dummy models. Again, the test results are similar to the previous models. From these results the same conclusions can be drawn that there is a significant difference between the coefficients for the target models and the contrary holds for the acquirer models.

Table 11: Chow-Test on Number of Advisors Dummy Models, [-1, +1] event window

		Chi2	Prob > Chi2
Target	[FFCTAR]NoAdvDummyModel – [MMTAR]NoAdvDummyModel	87.77	0.000
Acquirer	[FFCACQ]NoAdvDummyModel – [MMACQ]NoAdvDummyModel	18.50	0.821

This table displays an overview of the results from the Chow-Test that is performed with the estimates of the models from table 7 and 8. The first column shows whether the results are for the target or acquirer CARs. The second model shows the Chow-Test. The last two columns show the results. The last column provides the significance of the results with * p < 0.10, ** p < 0.05 and *** p < 0.01.

When comparing the results of the four-factor model with the market model, it is noticeable that none of the explanatory variables changed in significance. The magnitude of the coefficients slightly changed for most variables, but not the direction. The biggest change in results is that most F-test results are higher in the four-factor models. This means that the explanatory variables explain the dependent variables better with the four-factor model.

6. Conclusion and Discussion

6.1 Conclusion

This paper examines the effect of dual role financial investors on the cumulative abnormal returns from both target and acquiring companies. The cumulative abnormal returns are calculated using the Market Model in the regular regressions. As a test for robustness, the Fama French & Carhart four-factor model is used. The sample consists of data of 496 unique deals in the period 2000-2019. In all deals that are included in the dataset, external financing is present, and the headquarters of the companies are located in the United States.

The evidence provided in this paper is in contradiction with Allen et al., (2004) and Povel et al., (2010), who both argue that target dual role financial advisors positively impact the target's CARs. The results from this paper show that there is a negative relation between the involvement of target dual role financial advisors regarding the CARs for the target shareholders. Similar results have been found regarding the target advisors and the acquirer's CARs, which is also a negative relationship. These findings are remarkable given that in less than 2% of the sample a dual role target advisors was involved, but the results are significant at the highest level (Saunders, Lewis, & Thornhill, 2009). This could explain the different results from past studies. All deals where these target dual role advisors are involved have the specific property that the target company has a larger market value than the acquirer. These deals might be biased due to the fact that they are not regular deals with large acquirers and smaller targets. Succes of mergers is higher if both parties have similar sizes (Ahuja & Katila, 2001) or larger acquirers that take over smaller targets (Cohen & Levinthal, 1990). These deviant results could be explained by the findings from Gupta et al. (2007). Acquirers that takeover relatively larger targets also prefer top-tier bidders which could potentially biase the OLS estimates (Golubov et al., 2012). Evidence on the duality among target advisors has not been found properly due to the lack of data on deals with 100% dual role advisors, and, therefore, no clear statement can be made on the duality. The deals that contained dual role financial advisors on the target side always had multiple advisors. From these advisory firms, not all were able to provide the financing such as the investment banks and therefore no 100% duality was present in the dataset.

Furthermore, this paper does not find any significant effects of the impact from dual role financial advisors on the acquirer side to the CARs of both target and acquiring companies. The dual role advisors are higher tier advisors and Golubovet al. (2012) found that target firms usually respond with similar tiers advisors towards the bidder advisors. It is also found that

top-tier advisors' ability to secure greater shares of synergies for the bidder firm is hampered with top-tier target advisors (Golubov et al., 2012). Another reason could be that as much as 1 month prior to the deal, stock prices might already reflect rumors about the transaction which could lead to insignificant results (Siming, 2011). However, evidence is found that confirms sub-hypothesis 4, which states that more dual role financial advisors have a stronger positive effect on the CARs, in line with the expectations that followed from Chen et al. (2019). Finally, evidence is found that the four-factor model renders singnificantly different otucomes compared to the Market Model (Bello, 2008).

6.2 Limitations and Recommendations

This paper is bound by several factors, which are discussed in the following part. First, there is no distinction made in the source of financing as long as it is externally provided. All deals that contain an externally financed element are included, but those different sorts do not render similar influences on the returns (Zhang & Zhang, 2011; Chen et al, 2020). Although there are control variables added regarding the financing methods, the sample selection is affected by these differences. Future research could replicate this paper using more accurate classifications of financing methods and the corresponding consequences for the sample. Moreover, a dataset divided into subsets categorized by the financing method to compare the true impact of the dual role advisors regarding the CARs will assumably improve the results.

Second, little data is available on the target's side dual role financial advisors, as they seem to be involved more in deals with companies that are not publicly traded (Allen et al., 2004; Ertugrul et al., 2014; Chen et al., 2019). They are present in the current sample but to a lesser extend than the acquirer advisors, and, therefore, it is difficult to make clear statements about their impact on the CARs. Future research may be aimed at collecting the dataset in an alternative manner. In combination with other perfomance measurements, it could be possible to use non-public companies which may contain more cases of target dual role advisors. Gates and Very (2003) discuss in their paper methods to measure the values that are created after the M&A. For example, the performance could be measured throughout the integration process (Gates et al., 2003). They use the approach created by Schweiger, Csiszar and Napier (1994) to identify appropriate measures and explain how to assess potential sources of value creation from a cash-flow persepctive. Besides the M&A performance, it could also be interesting to do more research on other dependent variables such as transaction completion time, litigation by

shareholders and post-integration diversture rate to provide a completer view of the impact of dual role advisors on the M&A performance.

Next, this paper uses the Market Model to predict the expected returns that are used to calculate the abnormal returns and tests for robustness with the Fama French and Carhart four-factor model. Bello (2008) found that the four-factor model is more accurate and this paper found that various models that are used to predict the returns render significantly different outcomes in the regressions models. Combining the findings in this paper with the findings of Bello (2008), it may even be argued that future research should use the four-factor model, with better predictive power, as a standard model with regards to the abnormal returns in M&As. At least, it should be considered to add regressions with different prediction models as robustness checks, as it shows significantly different results regarding the cumulative abnormal returns.

Finally, no significant results were found regarding the acquirer advisors. As discussed previously, reason for this could be related to the tiers of advisors (Golubov et al., 2012). Future research might add these tiers as control variables to test if the tiers bias the results. However, ranking the advisors in tiers should be handled with care, as there exist several methods that can result in different rankings among the advisors (Walter et al., 2008).

References

Agrawal, A., Coooper, T., Lian, Q., & Wang, Q. (2013). Common advisers in mergers and acquisitions: Determinants and consequences. *The Journal of Law and Economics, 56*(3), 691-740.

Ahuja, G., & Katila, R. (2001). Technological acquisitions and the innovation performance of acquiring firms: A longitudinal study. *Strategic Management Journal, 22*(3), 197-220.

Allen, L., & Peristiani, S. (2007). Loan underpricing and the provision of merger advisory services. *Journal of Banking & Finance, 31*(12), 3539-3562.

Allen, L., Jagtiani, J., Peristiani, S., & Saunders, A. (2004). The role of bank advisors in mergers and acquisitions. *Journal of Money, Credit and Banking, 32*(2), 197-224.

Amihud, Y., & Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *The bell journal of economics, 12*(2), 605-617.

Andrade, G., Mitchell, M., & Stafford, E. (2001). New evidence and perspectives on mergers. *Journal of Economic Perspectives, 15*(2), 103-20.

Bao, J., & Edmans, A. (2011). Do investment banks matter for M&A returns? *The Review of Financial Studies, 24*(7), 2286-2315.

Barry, C. B., & Brown, S. J. (1984). Differential information and the small firm effect. *Journal of Financial Economics, 13*(2), 283-294.

Bauer, F., & Matzler, K. (2014). Antecedents of M&A success: The role of strategic complementarity, cultural fit, and degree and speed of integration. *Strategic Management Journal, 35*(2), 269-291.

Bello, Z. Y. (2008). A statistical comparison of the CAPM to the Fama-French Three Factor Model and the Carhart's Model. *Global Journal of Finance and Banking Issues, 2*(2), 14-24.

Betrand, O., & Zitouna, H. (2008). Domestic versus cross-border acquisitions: which impact on the target firms' performance? *Applied Economics, 40*(17), 2221=2238.

Bharadwaj, A., & Shivdasani, A. (2003). Valuation effects of bank financing in acquisitions. *Journal of Financial Economics, 67*(1), 113-148.

Björkman, I., Stahl, G. K., & Vaara, E. (2007). Cultural differences and capability transfer in cross-border acquisitions: The mediating roles of capability complementarity, absorptive capacity, and social integration. *Journal of International Business Studies, 38*(4), 658-672.

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.

Buono, A. F., & Bowditch, J. L. (2003). *The human side of mergers and acquisitions: Managing collisions between people, cultures, and organizations* . Washington D.C.: Beard Books.

Calipha, R., Tarba, S., & Brock, D. (2010). Mergers and acquisitions: A review of phases, motives, and success factors. In C. L. Cooper, & S. Finkelstein, *Advances in Mergers and Acquisitions* (Vol. 9, pp. 1-24). Bingley: Emerald Group Publishing Limited.

Campbell, J. Y., Andrew, L. W., & MacKinlay, A. C. (1997). *The Econometrics of Financial Markets.* NJ: Princeton University Press.

Capron, L., & Pistre, N. (2002). When do acquirers earn abnormal returns? *Strategic Management Journal, 23*(9), 781-794.

Chahine, S., & Ismail, A. (2009). Premium, merger fees and the choice of investment banks: A simultaneous analysis. *The Quarterly Review of Economics and Finance, 49*(2), 159-177.

Chakrabarti, R., Gupta-Mukherjee, S., & Jayaraman, N. (2009). Mars–Venus marriages: Culture and cross-border M&A. *Journal of International Business Studies, 40*(2), 216-236.

Chang, X., Shekhar, C., Tam, L. H., & Yao, J. (2016). Industry expertise, information leakage and the choice of M&A advisors. *Journal of Business Finance & Accounting, 43*(1-2), 191-225.

Chatterjee, R. A. (2000). The financial performance of companies acquiring very large takeover targets. *Applied Financial Economics, 10*(2), 185-191.

Chen, C., & Wu, X. (2016). Advisor Lending to the Advised Acquirer During M&A: Conflict of Interest or Last Resort Financing? *29th Australasian Finance and Banking Conference.* Sydney.

Chen, C., & Wu, X. (2019). Winning Megadeals: The Dual Role of Acquirer Advisors in Loan Financed M&As. *Unknown*.

Chen, J., Zhao, X., Niu, X., Fan, Y. H., & Taylor, G. (2020). Does M&A Financing Affect Firm Performance under Different Ownership Types? *Sustainability, 12*(8), 1-15.

Chen, X., & Ullah, S. (2018). Motives and Consequences of White Knight Takeovers. *Journal of Corporate Accounting & Finance, 29*(3), 47-69.

Chen, Y. (2001). On vertical mergers and their competitive effects. *RAND Journal of Economics, 32*(4), 667-685.

Clara, D., & Lindrooth, R. (2006). Ordinary Least Squares. *Methods and Designs for Outcomes Research, 93*, 93-104.

Cohen, W. M., & Levinthal, D. A. (1990). Absorptive capacity: A new perspective on learning and innovation. *Administrative Science Quarterly, 35*, 128-152.

Das, A., & Kapil, S. (2012). Explaining M&A performance: a review of empirical research. *Journal of Strategy and Management, 5*(3), 284-330.

Dieudonne, S., Cretin, F., & Bouacha, S. (2015). M&A Activity: Where are we in the cycle? *Alternative Investment Analysis Review, 4*(2), 38-44.

Doukas, J., & Travlos, N. G. (1988). The effect of corporate multinationalism on shareholders' wealth: Evidence from international acquisitions. *The Journal of Finance, 43*(5), 1161-1175.

Dutordoir, M., Roosenboom, P., & Vasconcelos, M. (2014). Synergy disclosures in mergers and acquisitions. *International Review of Financial Analysis, 31*, 88-100.

Eckbo, B. E., & Thorburn, K. S. (2008). Corporate Restructuring: Breakups and LBOs. *Elsevier*, 431-495.

Ertugrul, M., & Krishnan, K. (2014). Investment banks in dual roles: Acquirer M&A advisors as underwriters. *Journal of Financial Research, 37*(2), 159-189.

Fama, E. F., & French, K. R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economies, 33*(1), 3-56.

Fang, L. H. (2005). Investment bank reputation and the price and quality of underwriting services. *The Journal of Finance, 60*(6), 2729-2761.

Fischer, M. (2017). The source of financing in mergers and acquisitions. *The Quarterly Review of Economics and Finance, 65*, 227-239.

Flanagan, D. J., & O'Shaughnessy, K. C. (2003). Core-related acquisitions, multiple bidders and tender offer premiums. *Journal of Business Research, 56*(8), 573-585.

Francis, B. B., Hasan, I., & Sun, X. (2014). Does relationship matter? The choice of financial advisors. *Journal of Economics and Business, 73*, 22-47.

Froot, K. A. (1989). Consistent covariance matrix estimation with cross-sectional dependence and heteroskedasticity in financial data. *Journal of Financial and Quantitative Analysis, 24*, 333-355.

Gande, A., Puri, M., & Saunders, A. (1999). Bank entry, competition, and the market for corporate securities underwriting. *Journal of Financial Economics, 54*(2), 165-195.

Gates, S., & Very, P. (2003). Measuring performance during M&A intergration. *Long Range Planning, 36*(2), 167-185.

George, A., Fuller, K. P., Terhaar, L., & Travlos, N. G. (2013). Deal size, acquisition premia and shareholder gains. *Journal of Corporate Finance, 20*, 1-13.

Golubov, A., Petmezas, D., & Travlos, N. G. (2012). hen it pays to pay your investment banker: New evidence on the role of financial advisors in M&As. *The Journal of Finance, 67*(1), 271-311.

Graham, M., Walter, T. S., Yawson, A., & Zhang, H. (2017). The value-added role of industry specialist advisors in M&As. *Journal of Banking & Finance, 8*, 81-104.

Gupta, A., & Misra, L. (2007). Deal size, bid premium and gains in bank mergers: The impact of managerial motivations. *Financial Review, 42*(3), 373-400.

Gutknecht, J. E., & Keys, J. B. (1993). Mergers, acquisitions and takeovers: Maintaining morale of survivors and protecting employees. *Academy of Management Perspectives, 7*(3), 26-36.

Hackbarth, D., & Morellec, E. (2008). Stock returns in mergers and acquisitions. *The Journal of Finance, 63*(3), 1213-1252.

Hietala, P., Kaplan, S. N., & Robinson, D. (2003). What is the price of hubris? Using takeover battles to infer overpayments and synergies. *Financial Management, 32*(3), 1-32.

Huang, Y.-S., & Walkling, R. A. (1987). Target abnormal returns associated with acquisition announcements: Payment, acquisition form, and managerial resistance. *Journal of Financial Economics, 19*(2), 329-349.

Huber, P. J. (1967). The behavior of maximum likelihood estimates under nonstandard conditions. In *Proceedings of the Fifth Berkeley Symposium on Mathematical Statistics and Probability* (Vol. 1, pp. 221-233). Berkeley, CA: University of California Press.

Humphery-Jenner, M. L., & Powell, R. G. (2011). Firm size, takeover profitability, and the effectiveness of the market for corporate control: Does the absence of anti-takeover provisions make a difference? *Journal of Corporate Finance, 17*(3), 418-437.

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.

Hutcheson, G. D., & Moutinho, L. (2011). Ordinary least-squares regression. *The SAGE dictionary of quantitative management research*, 224-228.

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.

Jacobsen, R. (1988). The persistence of abnormal returns. *Strategic Management Journal, 9*(5), 415-430.

Jarrell, G. A., & Poulsen, A. B. (1989). The returns to acquiring firms in tender offers: Evidence from three decades. *Financial Management, 18*(3), 12-19.

Jensen, M. C., & Ruback, R. S. (1983). The market for corporate control. *Journal of Financial Economics, 11*(1-4), 5-50.

Kaplan, S. N., & Stromberg, P. (2009). Leveraged buyouts and private equity. *Journal of Economic Perspectives, 23*(1), 121-146.

Karampatsas, N., Petmezas, D., & Travlos, N. G. (2014). Credit ratings and the choice of payment method in mergers and acquisitions. *Journal of Corporate Finance, 25*, 474-493.

Kedia, B. L., & Bilgili, T. V. (2015). When history matters: The effect of historical ties on the relationship between institutional distance and shares acquired. *International Business Review, 24*(6), 921-934.

Kolari, J. W., & Pynnönen, S. (2010). Event study testing with cross-sectional correlation of abnormal returns. *The Review of financial studies, 23*(11), 3996-4025.

Laamanen, T. (2007). On the role of acquisition premium in acquisition research. *Strategic Management Journal, 28*(13), 1359-1369.

Long, J. S., & Ervin, L. H. (2000). Using heteroscedasticity consistent standard errors in the linear regression model. *The American Statistician, 54*(3), 217-224.

Loughran, T., & Vijh, A. M. (1997). Do long-term shareholders benefit from corporate acquisitions? *The Journal of Finance, 52*(5), 1765-1790.

Lyu, H., & Wang, W. (2020). Individual financial advisor's reputation concern and M&A performance: Evidence from China. *Pacific-Basin Finance Journal, 60*.

Ma, J., Pagan, J. A., & Chu, Y. (2009). Abnormal Returns to Mergers and Acquisitions in Ten Asian Stock Markets. *International Journal of Business, 14*(3), 235-250.

Maneesh, S., & Thistle, P. D. (1996). Is acquisition of market power a determinent of horizontal mergers? *Journal of Financial and Strategic decisions, 9*(1), 45-55.

Martynova, M., & Renneboog, L. (2009). What determines the financing decision in corporate takeovers: Cost of capital, agency problems, or the means of payment? *Journal of Corporate Finance, 15*(3), 290-315.

Matsusaka, J. G. (1993). Takeover motives during the conglomerate merger wave. *The RAND Journal of Economies*, 357-379.

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.

MergerMarket. (2019). *Global & Regional M&A Report.* Retrieved from https://www.mergermarket.com/

Michel, A., Shaked, I., & Lee, Y.-T. (1991). An evaluation of investment banker acquisition advice: The shareholders' perspective. *Financial Management, 20*(2), 40-49.

Moeller, S. B., Schlingemann, F. P., & Stulz, R. (2005). Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave. *The Journal of Finance, 60*(2), 757-782.

Motis, J. (2007). Mergers and acquisitions motives. *Toulouse School of Economics EHESS (GREMAQ) and University of Crete*.

Motta, M. (2004). *Competition policy: theory and practice.* Cambridge: Cambridge University Press.

Mukherjee, T. K., Kiymaz, H., & Baker, H. K. (2004). Merger motives and target valuation: A survey of evidence from CFOs. *Journal of Applied Finance, 14*(2), 7-24.

Mulherin, H. J., & Boone, A. L. (2000). Comparing acquisitions and divestitures. *Journal of Corporate Finance, 6*(2), 117-139.

Povel, P., & Singh, R. (2010). Stapled Finance. *The Journal of Finance, 65*(3), 927-953.

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

Reed, S. F., Lajoux, A. R., & Nesvold, H. P. (2007). *The Art of M&A: A Merger Acquisition Buyout Guid.* McGraw Hill.

Ruback, R. S. (1982). The effect of discretionary price control decisions on equity values. *Journal of Financial Economies, 10*(1), 83-105.

Ruback, R. S., & Jensen, M. C. (1983). The market for corporate control: The scientific evidence. *Journal of Financial Economics, 11*(1-4), 5-50.

Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students.* Pearson Education.

Scheuering, U. (2014). M&A and the tax benefits of debt-financing. *ZEW-Centre for European Economic Research Discussion Paper (14-019)*.

Schnitzer, M. (1996). Hostile versus friendly takeovers. *Economica*, 37-55.

Schweiger, D. M., Csiszar, E. N., & Napier, N. K. (1994). *A strategic approach to implementing mergers and acquisitions.* London: Palgrave Macmillan.

Sehgal, S., Banerjee, S., & Deisting, F. (2012). The impact of M&A announcement and financing strategy on stock returns: Evidence from BRICKS markets. *International Journal of Economics and Finance, 4*(11), 76-90.

Servaes, H. (1991). Tobin's Q and the Gains from Takeovers. *The Journal of Finance, 46*(1), 409-419.

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

Sherman, A. J. (2018). *Mergers and Acquisitions from A to Z* (Fourth Edition ed.). Washington D.C.: Amacom.

Shimizu, K., Hitt, M. A., Vaidyanath, D., & Pisano, V. (2004). Theoretical foundations of cross-border mergers and acquisitions: A review of current research and recommendations for the future. *Journal of Internatioanl Management, 10*(3), 307-353.

Siming, L. (2011). Dual Role Advisors and Conflicts of Interest. *Corporate Ownership and Control, 8*(3), 1-42.

Sirower, M. L. (1997). *The Synergy Trap: How Companies Lose the Acquisition Game.* New York City: Simon and Schuster.

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.

Tichy, G. (2001). What do we know about success and failure of mergers? *Journal of Industry, Competition and Trade, 1*(4), 347-394.

Toshihisa, T. (1974). Use of the Chow test under heteroscedasticity. *Econometrica: Journal of the Econometric Society*, 601-608.

Toyoda, T. (1974). Use of the Chow test under heteroscedasticity. *Econometrica: Journal of the Econometric Society*, 601-608.

Trautwein, F. (1990). Merger motives and merger prescriptions. *Strategic Management Journal, 11*(4), 283-295.

Tuch, A. F. (2005). Investment Banks as Fiduciaries: Implications for Conflicts of Interest. *Melbourne University Law Review, 2*, 478-512.

Walkling, R. A., & Edmister, R. O. (1985). Determinants of tender offer premiums. *Financial Analysts Journal, 41*(1), 27-37.

Walter, T. S., Yawson, A., & Yeung, C. P. (2008). The role of investment banks in M&A transactions: Fees and services. *Pacific-Basin Finance Journal, 16*(4), 341-369.

Weber, J. A., & Dholakia, U. M. (2000). Including marketing synergy in acquisition analysis: A step-wise approach. *Industrial Marketing Management, 29*(2), 157-177.

White, H. (1980). A heteroskedasticity-consistent covariance matrix estimator and a direct test for heteroskedasticity. *Econometrica, 48*, 817-830.

Wulf, J. (2004). Do CEOs in mergers trade power for premium? Evidence from “mergers of equals". *Journal of Law, Economics and Organization, 20*(1), 60-101.

Xu, E. Q. (2017). Cross-Border Merger Waves. *Journal of Corporate Finance, 46*, 207-231.

Yasuda, A. (2005). Yasuda, A. (2005). Do bank relationships affect the firm's underwriter choice in the corporate-bond underwriting market? *The Journal of Finance, 60*(3), 1259-1292.

Yuanyuan, H., & Wenxia, T. (2016). Experience comparison on the choosing of coal enterprise vertical integration architecture and path based on panel data mining. *Revista Ibérica de Sistemas e Tecnologias de Informação, 8*, 335.

Zaheer, A., Castañer, X., & Souder, D. (2013). Synergy sources, target autonomy, and integration in acquisitions. *Journal of Management*, 604-632.

Zhang, J., & Zhang, Y. (2011). Study on the Methods of Payment with Mergers & Acquisitions. *Applied Economics, Business and Development, 208*, 203-208.

Zollo, M., & Meier, D. (2008). What is M&A performance? *Academy of Management Perspectives, 22*(3), 55-77.

Appendices

Appendices A: Descriptive Statistics

Appendix 1: Control variables

Control Variables: Finance of the deal	
DummyBorrowing	M&A financed by borrowing
DummyBridgeLoan	M&A financed by a bridge loan
DummyComStockIss	M&A financed by a common stock issue
DummyDebtIssue	M&A financed by a debt issue
DummyForeignFunds	M&A financed by foreign funds
DummyCorpFunds	M&A financed by corporate funds
DummyLineOfCredit	M&A financed by a line of credit
DummyMezzFinance	M&A financed by mezzanine financing
DummyPrefStockIss	M&A financed by a preferred stock issue
DummyRightsIss	M&A financed by new stock in a rights issue
Control Variables: Hostility / Reasoning behind M&A	
DummyLBO	The M&A was a leveraged buy out
DummyMergerEquals	The M&A was a merger of equals
DummyAcqWhiteKnight	The acquirer company was a white knight
DummyTenderOffer	The target company received a tender offer
Control Variables: Other	
LogDealValue	The logarithmic value of the deal ($ million)
TargetSize	The market value of the target company on a logarithmic scale
AcquirerSize	The market value of the acquirer company on a logarithmic scale
MktValBookValue	The market value of the target company divided by the book value of the company
DummySameSIC	Variable indicating whether the target and acquirer company are in the same industry
DummyAllShares	Variable indicating whether the acquirer company bought all shares in the transaction

This table described all control variables that are used in this study. The control variables are divided into three categories regarding the characteristics and function of the variables. Table 4 shows the descriptive statistics of the variables described in this table. Data from Thomson ONE and WRDS.

Appendices B: Extended Event Window

Appendix 2: Market Model, [-2, +2] event window, Dual Role Financial Advisors

Dependent Variable	TAR_CAR		ACQ_CAR		TAR_CAR		ACQ_CAR	
Explanatory Variables								
DualDummyTar	-0.122***	(0.024)			-0.125***	(0.027)	-0.089***	(0.016)
DualDummyAcq			0.009	(0.012)	0.005	(0.018)	0.010	(0.012)
Control Variables								
DummyBorrowing	0.016	(0.018)	-0.007	(0.011)	0.015	(0.018)	-0.007	(0.011)
DummyBridgeLoan	0.040*	(0.023)	-0.003	(0.012)	0.038	(0.024)	-0.003	(0.012)
DummyComStockIss	-0.040	(0.029)	-0.008	(0.019)	-0.040	(0.030)	-0.008	(0.019)
DummyDebtIssue	0.042	(0.027)	-0.014	(0.013)	0.042	(0.027)	-0.014	(0.013)
DummyForeignFunds	0.015	(0.031)	0.050***	(0.017)	0.013	(0.033)	0.049***	(0.017)
DummyCorpFunds	0.005	(0.017)	-0.010	(0.009)	0.005	(0.017)	-0.009	(0.009)
DummyLineOfCredit	0.026	(0.016)	0.005	(0.011)	0.026	(0.016)	0.004	(0.011)
DummyMezzFinance	0.195***	(0.047)	0.139***	(0.019)	0.195***	(0.046)	0.138***	(0.019)
DummyPrefStockIss	-0.016	(0.054)	0.048	(0.032)	-0.016	(0.054)	0.047	(0.032)
DummyRightsIss	0.094*	(0.048)	0.016	(0.014)	0.096**	(0.048)	0.016	(0.014)
DummyLBO	-0.025	(0.053)	0.031*	(0.017)	-0.027	(0.053)	0.031*	(0.017)
DummyMergerEquals	-0.146***	(0.038)	-0.058***	(0.019)	-0.145***	(0.037)	-0.058***	(0.019)
DummyAcqWhiteKnight	-0.047	(0.064)	-0.037	(0.090)	-0.048	(0.063)	-0.038	(0.091)
DummyTenderOffer	0.050**	(0.022)	-0.004	(0.010)	0.050**	(0.022)	-0.004	(0.010)
LogDealValue	-0.001	(0.027)	-0.014	(0.012)	-0.001	(0.027)	-0.014	(0.012)
TargetSize	-0.051*	(0.027)	-0.007	(0.011)	-0.051*	(0.027)	-0.007	(0.011)
AcquirerSize	0.027***	(0.007)	0.019***	(0.005)	0.028***	(0.007)	0.018***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.028*	(0.016)	0.013	(0.009)	-0.028*	(0.016)	0.012	(0.009)
DummyAllShares	0.046	(0.040)	-0.002	(0.024)	0.045	(0.040)	-0.002	(0.024)
_constant	0.277***	(0.061)	-0.008	(0.036)	0.277***	(0.062)	-0.008	(0.036)
Observations	468		467		468		467	
Adjusted R^2	0.160		0.046		0.158		0.046	
F-test	25.02***		0.58		12.50***		17.16***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target and acquirer companies on dummy variables created whether dual role financial advisors are involved and control variables with an estimation window [-2, +2]. The CARs are calculated using the Market Model to predict the expected returns. The dependent variables are the CARs and the main independent variables are the dummy variables on whether dual role financial advisors are involved. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 3: Market Model, Targets' Cumulative Abnormal Returns, [-2, +2] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberTarAdvisors	-0.026**	(0.011)			-0.026**	(0.011)	-0.026**	(0.011)
NumberAcqAdvisors	0.004	(0.007)			0.006	(0.007)	0.001	(0.008)
NumberTarDualAdvisors			-0.120***	(0.025)	-0.108***	(0.025)		
NumberAcqDualAdvisors			-0.006	(0.010)	-0.007	(0.010)		
TarPartDualDummy							-0.128***	(0.031)
AcqAllDualDummy							-0.007	(0.021)
AcqPartDualDummy							0.020	(0.024)
Control Variables								
DummyBorrowing	0.018	(0.018)	0.017	(0.018)	0.019	(0.018)	0.018	(0.018)
DummyBridgeLoan	0.040*	(0.023)	0.042*	(0.023)	0.041*	(0.023)	0.038	(0.024)
DummyComStockIss	-0.036	(0.029)	-0.041	(0.030)	-0.038	(0.029)	-0.037	(0.029)
DummyDebtIssue	0.041	(0.027)	0.042	(0.027)	0.041	(0.027)	0.039	(0.027)
DummyForeignFunds	0.018	(0.031)	0.018	(0.031)	0.021	(0.032)	0.016	(0.033)
DummyCorpFunds	0.000	(0.017)	0.004	(0.017)	-0.001	(0.017)	0.000	(0.017)
DummyLineOfCredit	0.030*	(0.016)	0.026	(0.016)	0.030*	(0.016)	0.028*	(0.017)
DummyMezzFinance	0.190***	(0.053)	0.196***	(0.048)	0.191***	(0.057)	0.199***	(0.057)
DummyPrefStockIss	-0.017	(0.056)	-0.011	(0.054)	-0.012	(0.056)	-0.017	(0.056)
DummyRightsIss	0.091*	(0.055)	0.090*	(0.048)	0.085	(0.055)	0.092*	(0.056)
DummyLBO	-0.033	(0.058)	-0.016	(0.055)	-0.027	(0.059)	-0.030	(0.058)
DummyMergerEquals	-0.152***	(0.037)	-0.147***	(0.040)	-0.155***	(0.039)	-0.159***	(0.036)
DummyAcqWhiteKnight	-0.025	(0.057)	-0.048	(0.064)	-0.025	(0.059)	-0.023	(0.059)
DummyTenderOffer	0.049**	(0.021)	0.05**	(0.022)	0.049**	(0.022)	0.049**	(0.021)
LogDealValue	0.003	(0.027)	0.000	(0.027)	0.004	(0.028)	0.004	(0.028)
TargetSize	-0.052*	(0.027)	-0.050*	(0.027)	-0.051*	(0.027)	-0.052*	(0.027)
AcquirerSize	0.027***	(0.007)	0.027****	(0.007)	0.026***	(0.007)	0.027***	(0.007)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.028*	(0.015)	-0.028*	(0.016)	-0.028*	(0.016)	-0.028*	(0.016)
DummyAllShares	0.045	(0.041)	0.048	(0.040)	0.047	(0.041)	0.045	(0.041)
_constant	0.292***	(0.061)	0.274***	(0.062)	0.288***	(0.062)	0.295***	(0.061)
Observations	468		468		468		468	
Adjusted R^2	0.166		0.158		0.164		0.163	
F-test	2.93*		12.53***		8.22***		6.89***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-2, +2]. The CARs are calculated using the Market Model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 4: Market Model, Acquirers' Cumulative Abnormal Returns, [-2, +2] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberAcqAdvisors	-0.005	(0.005)			-0.006	(0.005)	0.000	(0.005)
NumberTarAdvisors	-0.002	(0.007)			-0.002	(0.007)	0.000	(0.007)
NumberAcqDualAdvisors			0.001	(0.006)	0.004	(0.006)		
NumberTarDualAdvisors			-0.083***	(0.014)	-0.084***	(0.015)		
AcqAllDualDummy							0.032**	(0.013)
AcqPartDualDummy							-0.016	(0.017)
TarPartDualDummy							-0.063***	(0.019)
Control Variables								
DummyBorrowing	-0.005	(0.011)	-0.006	(0.011)	-0.006	(0.011)	-0.006	(0.010)
DummyBridgeLoan	0.002	(0.011)	-0.001	(0.012)	0.000	(0.012)	-0.001	(0.012)
DummyComStockIss	-0.010	(0.019)	-0.009	(0.019)	-0.010	(0.019)	-0.008	(0.018)
DummyDebtIssue	-0.014	(0.013)	-0.014	(0.013)	-0.014	(0.013)	-0.011	(0.012)
DummyForeignFunds	0.055***	(0.017)	0.052***	(0.017)	0.053***	(0.017)	0.049****	(0.017)
DummyCorpFunds	-0.010	(0.009)	-0.010	(0.009)	-0.009	(0.009)	-0.007	(0.009)
DummyLineOfCredit	0.005	(0.011)	0.005	(0.011)	0.005	(0.011)	0.007	(0.010)
DummyMezzFinance	0.138***	(0.021)	0.137***	(0.019)	0.137***	(0.021)	0.123***	(0.027)
DummyPrefStockIss	0.052	(0.036)	0.047	(0.033)	0.049	(0.036)	0.051	(0.036)
DummyRightsIss	0.012	(0.014)	0.013	(0.014)	0.014	(0.015)	0.014	(0.014)
DummyLBO	0.044**	(0.022)	0.032	(0.020)	0.040*	(0.022)	0.032	(0.023)
DummyMergerEquals	-0.057***	(0.016)	-0.059***	(0.018)	-0.056***	(0.016)	-0.045***	(0.021)
DummyAcqWhiteKnight	-0.038	(0.091)	-0.036	(0.092)	-0.039	(0.090)	-0.048	(0.087)
DummyTenderOffer	-0.005	(0.010)	-0.004	(0.010)	-0.005	(0.010)	-0.005	(0.010)
LogDealValue	-0.013	(0.012)	-0.014	(0.012)	-0.013	(0.012)	-0.015	(0.012)
TargetSize	-0.007	(0.011)	-0.007	(0.011)	-0.007	(0.011)	-0.006	(0.011)
AcquirerSize	0.018***	(0.005)	0.018***	(0.005)	0.018***	(0.005)	0.019***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	0.013	(0.009)	0.012	(0.009)	0.012	(0.009)	0.011	(0.009)
DummyAllShares	0.001	(0.024)	-0.001	(0.024)	0.000	(0.025)	-0.001	(0.024)
_constant	-0.008	(0.036)	-0.009	(0.036)	-0.006	(0.036)	-0.011	(0.036)
Observations	467		467		467		467	
Adjusted R^2	0.045		0.044		0.044		0.058	
F-test	0.53		16.87***		8.92***		12.10***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from acquirer companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-2, +2]. The CARs are calculated using the Market Model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendices C: Cut-Off Points Deal Value

Appendix 5: Market Model, Target, [-1, +1] event window, >50m Deal Value

	1		*2*		*3*	
Dependent Variable	TAR_CAR		TAR_CAR		TAR_CAR	
Explanatory Variables						
DualDummyTar	-0.100***	(0.027)				
DualDummyAcq	-0.010	(0.018)				
NumberTarDualAdvisors			-0.090***	(0.025)		
NumberAcqDualAdvisors			-0.015	(0.010)		
NumberTarAdvisors			-0.023**	(0.011)	-0.024**	(0.011)
NumberAcqAdvisors			0.007	(0.007)	0.000	(0.007)
TarPartDualDummy					-0.100***	(0.031)
AcqAllDualDummy					-0.019	(0.021)
AcqPartDualDummy					0.001	(0.024)
Control Variables						
DummyBorrowing	0.022	(0.018)	0.027	(0.018)	0.025	(0.018)
DummyBridgeLoan	0.038	(0.024)	0.040*	(0.023)	0.038*	(0.024)
DummyComStockIss	-0.051*	(0.030)	-0.050*	(0.029)	-0.049	(0.029)
DummyDebtIssue	0.030	(0.026)	0.028	(0.026)	0.027	(0.026)
DummyForeignFunds	0.026	(0.030)	0.032	(0.029)	0.030	(0.031)
DummyCorpFunds	0.011	(0.017)	0.006	(0.017)	0.007	(0.017)
DummyLineOfCredit	0.021	(0.017)	0.025	(0.017)	0.023	(0.017)
DummyMezzFinance	0.216***	(0.052)	0.214***	(0.064)	0.218***	(0.061)
DummyPrefStockIss	-0.024	(0.062)	-0.014	(0.063)	-0.024	(0.064)
DummyRightsIss	0.025	(0.026)	0.015	(0.024)	0.021	(0.024)
DummyLBO	-0.005	(0.054)	0.000	(0.058)	-0.006	(0.059)
DummyMergerEquals	-0.151***	(0.025)	-0.160***	(0.026)	-0.162***	(0.027)
DummyAcqWhiteKnight	-0.046	(0.059)	-0.028	(0.054)	-0.024	(0.054)
DummyTenderOffer	0.041*	(0.022)	0.041*	(0.022)	0.040*	(0.022)
LogDealValue	-0.023	(0.024)	-0.019	(0.025)	-0.019	(0.025)
TargetSize	-0.028	(0.024)	-0.028	(0.024)	-0.028	(0.024)
AcquirerSize	0.023***	(0.007)	0.022***	(0.007)	0.023***	(0.007)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.023	(0.015)	-0.023	(0.015)	-0.023	(0.015)
DummyAllShares	0.067*	(0.039)	0.067*	(0.039)	0.066*	(0.040)
_constant	0.283***	(0.061)	0.287***	(0.061)	0.295***	(0.061)
Observations	456		456		456	
Adjusted R^2	0.137		0.145		0.140	
F-test	10.20***		6.68***		5.49***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target companies the number of financial advisors, dual role advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model to predict the expected returns. Deals value is cut-off at a minimum value of 50m USD. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 6: Market Model, Acquirer, [-1, +1] event window, >50m Deal Value

	1		*2*		*3*	
Dependent Variable	ACQ_CAR		ACQ_CAR		ACQ_CAR	
Explanatory Variables						
DualDummyAcq	0.004	(0.011)				
DualDummyTar	-0.082***	(0.015)				
NumberAcqDualAdvisors			0.002	(0.006)		
NumberTarDualAdvisors			-0.079***	(0.014)		
NumberAcqAdvisors			-0.004	(0.005)	0.001	(0.005)
NumberTarAdvisors			-0.003	(0.006)	-0.002	(0.006)
AcqAllDualDummy					0.024*	(0.013)
AcqPartDualDummy					-0.021	(0.015)
TarPartDualDummy					-0.056***	(0.018)
Control Variables						
DummyBorrowing	-0.010	(0.010)	-0.009	(0.010)	-0.009	(0.010)
DummyBridgeLoan	-0.006	(0.011)	-0.004	(0.011)	-0.004	(0.011)
DummyComStockIss	-0.018	(0.020)	-0.019	(0.020)	-0.018	(0.020)
DummyDebtIssue	-0.015	(0.012)	-0.015	(0.012)	-0.011	(0.012)
DummyForeignFunds	0.031*	(0.018)	0.034*	(0.018)	0.031*	(0.019)
DummyCorpFunds	-0.015*	(0.009)	-0.015*	(0.009)	-0.013	(0.009)
DummyLineOfCredit	0.006	(0.010)	0.006	(0.010)	0.008	(0.009)
DummyMezzFinance	0.152***	(0.027)	0.151***	(0.029)	0.137***	(0.035)
DummyPrefStockIss	-0.002	(0.037)	0.000	(0.039)	0.002	(0.040)
DummyRightsIss	0.002	(0.013)	0.001	(0.013)	0.000	(0.013)
DummyLBO	0.018	(0.018)	0.025	(0.022)	0.016	(0.022)
DummyMergerEquals	-0.068**	(0.029)	-0.066**	(0.027)	-0.056*	(0.029)
DummyAcqWhiteKnight	-0.021	(0.070)	-0.021	(0.069)	-0.028	(0.065)
DummyTenderOffer	-0.003	(0.009)	-0.004	(0.009)	-0.004	(0.009)
LogDealValue	-0.011	(0.013)	-0.010	(0.013)	-0.012	(0.013)
TargetSize	-0.007	(0.012)	-0.006	(0.012)	-0.006	(0.012)
AcquirerSize	0.014***	(0.005)	0.014***	(0.005)	0.015***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	0.013	(0.008)	0.013	(0.009)	0.011	(0.009)
DummyAllShares	0.010	(0.021)	0.011	(0.021)	0.010	(0.021)
_constant	-0.001	(0.033)	0.001	(0.033)	-0.003	(0.033)
Observations	454		454		454	
Adjusted R^2	0.045		0.043		0.058	
F-test	16.09***		8.26***		11.30***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from acquirer companies the number of financial advisors, dual role advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model to predict the expected returns. Deals value is cut-off at a minimum value of 50m USD. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 7: Market Model, Target, [-1, +1] event window, >100m Deal Value

	1		*2*		*3*	
Dependent Variable	TAR_CAR		TAR_CAR		TAR_CAR	
Explanatory Variables						
DualDummyTar	-0.124***	(0.021)				
DualDummyAcq	-0.007	(0.017)				
NumberTarDualAdvisors			-0.113***	(0.019)		
NumberAcqDualAdvisors			-0.013	(0.010)		
NumberTarAdvisors			-0.024**	(0.011)	-0.025**	(0.011)
NumberAcqAdvisors			0.007	(0.007)	0.001	(0.007)
TarPartDualDummy					-0.125***	(0.026)
AcqAllDualDummy					-0.017	(0.020)
AcqPartDualDummy					0.004	(0.024)
Control Variables						
DummyBorrowing	0.017	(0.017)	0.021	(0.017)	0.019	(0.017)
DummyBridgeLoan	0.023	(0.020)	0.025	(0.019)	0.023	(0.020)
DummyComStockIss	-0.060**	(0.025)	-0.059**	(0.024)	-0.058**	(0.024)
DummyDebtIssue	0.006	(0.020)	0.005	(0.020)	0.003	(0.021)
DummyForeignFunds	0.022	(0.031)	0.029	(0.029)	0.026	(0.031)
DummyCorpFunds	0.012	(0.016)	0.007	(0.016)	0.007	(0.016)
DummyLineOfCredit	0.024	(0.016)	0.029*	(0.016)	0.027	(0.016)
DummyMezzFinance	0.248***	(0.073)	0.244***	(0.088)	0.250***	(0.086)
DummyPrefStockIss	-0.072	(0.052)	-0.061	(0.056)	-0.072	(0.055)
DummyRightsIss	0.029	(0.025)	0.019	(0.024)	0.024	(0.023)
DummyLBO	-0.047	(0.032)	-0.044	(0.036)	-0.050	(0.037)
DummyMergerEquals	-0.163***	(0.026)	-0.172***	(0.027)	-0.175***	(0.028)
DummyAcqWhiteKnight	-0.053	(0.053)	-0.033	(0.048)	-0.030	(0.048)
DummyTenderOffer	0.049**	(0.020)	0.048**	(0.020)	0.047**	(0.020)
LogDealValue	-0.036**	(0.016)	-0.032*	(0.017)	-0.032*	(0.017)
TargetSize	-0.003	(0.013)	-0.004	(0.014)	-0.004	(0.014)
AcquirerSize	0.019***	(0.007)	0.018***	(0.007)	0.018***	(0.007)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.028*	(0.015)	-0.028*	(0.015)	-0.027*	(0.015)
DummyAllShares	0.075*	(0.039)	0.076*	(0.039)	0.075*	(0.040)
_constant	0.239***	(0.059)	0.244***	(0.059)	0.251***	(0.059)
Observations	443		443		443	
Adjusted R^2	0.118		0.176		0.124	
F-test	24.29***		14.22***		13.06***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target companies the number of financial advisors, dual role advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model to predict the expected returns. Deals value is cut-off at a minimum value of 100m USD. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 8: Market Model, Acquirer, [-1, +1] event window, >100m Deal Value

	1		*2*		*3*	
Dependent Variable	ACQ_CAR		ACQ_CAR		ACQ_CAR	
Explanatory Variables						
DualDummyAcq	0.005	(0.011)				
DualDummyTar	-0.080***	(0.016)				
NumberAcqDualAdvisors			0.003	(0.006)		
NumberTarDualAdvisors			-0.077***	(0.015)		
NumberAcqAdvisors			-0.005	(0.005)	0.001	(0.005)
NumberTarAdvisors			-0.004	(0.006)	-0.003	(0.006)
AcqAllDualDummy					0.025**	(0.013)
AcqPartDualDummy					-0.020	(0.015)
TarPartDualDummy					-0.055***	(0.018)
Control Variables						
DummyBorrowing	-0.012	(0.010)	-0.006	(0.011)	-0.012	(0.010)
DummyBridgeLoan	-0.008	(0.011)	-0.014	(0.020)	-0.006	(0.011)
DummyComStockIss	-0.013	(0.020)	-0.014	(0.012)	-0.013	(0.020)
DummyDebtIssue	-0.013	(0.012)	0.034	(0.018)	-0.010	(0.012)
DummyForeignFunds	0.031*	(0.018)	-0.014*	(0.009)	0.031*	(0.019)
DummyCorpFunds	-0.014	(0.009)	0.006	(0.010)	-0.012	(0.009)
DummyLineOfCredit	0.006	(0.010)	0.149	(0.034)	0.009	(0.010)
DummyMezzFinance	0.151***	(0.030)	-0.011***	(0.050)	0.136***	(0.040)
DummyPrefStockIss	-0.013	(0.046)	0.000	(0.013)	-0.009	(0.051)
DummyRightsIss	0.002	(0.013)	0.041	(0.017)	0.000	(0.013)
DummyLBO	0.033***	(0.011)	-0.064**	(0.027)	0.032**	(0.016)
DummyMergerEquals	-0.066**	(0.029)	0.000**	(0.000)	-0.054*	(0.029)
DummyAcqWhiteKnight	-0.020	(0.069)	-0.006	(0.010)	-0.027	(0.064)
DummyTenderOffer	-0.005	(0.009)	-0.010	(0.013)	-0.005	(0.010)
LogDealValue	-0.011	(0.013)	-0.008	(0.013)	-0.012	(0.013)
TargetSize	-0.009	(0.013)	0.015	(0.005)	-0.008	(0.013)
AcquirerSize	0.016***	(0.005)	0.000***	(0.000)	0.016***	(0.005)
MktValBookTar	0.000	(0.000)	0.012	(0.009)	0.000	(0.000)
DummySameSIC	0.012	(0.009)	0.017	(0.021)	0.011	(0.009)
DummyAllShares	0.015	(0.021)	-0.006	(0.034)	0.016	(0.021)
_constant	-0.008	(0.034)	-0.006	(0.011)	-0.010	(0.034)
Observations	441		441		441	
Adjusted R^2	0.050		0.049		0.064	
F-test	14.84***		7.70***		10.53***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from acquirer companies the number of financial advisors, dual role advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the Market Model to predict the expected returns. Deals value is cut-off at a minimum value of 100m USD. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendices D: Fama French & Carhart four-factor Model

Appendix 9: FFC four-factor Model, [-1, +1] event window, Dual Role Financial Advisors

	1		*2*		*3*		*4*	
Dependent Variable	TAR_CAR		ACQ_CAR		TAR_CAR		ACQ_CAR	
Explanatory Variables								
DualDummyTar	-0.116***	(0.024)			-0.114***	(0.027)	-0.083***	(0.015)
DualDummyAcq			0.001	(0.011)	-0.004	(0.018)	0.001	(0.011)
Control Variables								
DummyBorrowing	0.024	(0.018)	-0.005	(0.010)	0.024	(0.018)	-0.005	(0.010)
DummyBridgeLoan	0.030	(0.023)	-0.002	(0.011)	0.031	(0.024)	-0.003	(0.011)
DummyComStockIss	-0.055*	(0.031)	-0.021	(0.020)	-0.056*	(0.031)	-0.021	(0.020)
DummyDebtIssue	0.037	(0.026)	-0.013	(0.011)	0.037	(0.026)	-0.013	(0.012)
DummyForeignFunds	0.010	(0.031)	0.038**	(0.018)	0.011	(0.033)	0.038**	(0.018)
DummyCorpFunds	0.012	(0.017)	-0.014	(0.009)	0.011	(0.017)	-0.013	(0.009)
DummyLineOfCredit	0.019	(0.017)	0.007	(0.010)	0.019	(0.017)	0.007	(0.010)
DummyMezzFinance	0.206***	(0.048)	0.154***	(0.026)	0.206***	(0.049)	0.154***	(0.026)
DummyPrefStockIss	-0.024	(0.065)	-0.004	(0.035)	-0.024	(0.065)	-0.005	(0.035)
DummyRightsIss	0.012	(0.025)	-0.002	(0.013)	0.010	(0.025)	-0.003	(0.013)
DummyLBO	-0.004	(0.055)	0.021	(0.018)	-0.003	(0.056)	0.021	(0.018)
DummyMergerEquals	-0.147***	(0.024)	-0.068**	(0.028)	-0.147***	(0.025)	-0.068**	(0.028)
DummyAcqWhiteKnight	-0.057	(0.060)	-0.017	(0.071)	-0.056	(0.061)	-0.017	(0.072)
DummyTenderOffer	0.042*	(0.022)	-0.006	(0.009)	0.042*	(0.022)	-0.006	(0.010)
LogDealValue	-0.033	(0.030)	-0.012	(0.012)	-0.033	(0.030)	-0.012	(0.012)
TargetSize	-0.019	(0.030)	-0.007	(0.011)	-0.019	(0.030)	-0.007	(0.011)
AcquirerSize	0.027***	(0.007)	0.014***	(0.005)	0.026***	(0.007)	0.014***	(0.005)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.019	(0.015)	0.013	(0.008)	-0.019	(0.015)	0.013	(0.008)
DummyAllShares	0.073*	(0.039)	0.007	(0.021)	0.074*	(0.040)	0.007	(0.021)
_constant	0.257***	(0.061)	0.010	(0.031)	0.256***	(0.062)	0.010	(0.031)
Observations	470		468		470		468	
Adjusted R^2	0.142		0.049		0.140		0.049	
F-test	23.36***		0.00		11.78***		17.34***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target and acquirer companies on dummy variables created whether dual role financial advisors are involved and control variables with an estimation window [-1, +1]. The CARs are calculated using the Fama French & Carhart four-factor Model to predict the expected returns. The dependent variables are the CARs and the main independent variables are the dummy variables on whether dual role financial advisors are involved. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 10: Fama French & Carhart four-factor Model, Targets' Cumulative Abnormal Returns, [-1, +1] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberTarAdvisors	-0.025**	(0.011)			-0.024**	(0.011)	-0.025**	(0.011)
NumberAcqAdvisors	0.002	(0.007)			0.006	(0.007)	-0.001	(0.007)
NumberTarDualAdvisors			-0.113***	(0.024)	-0.101***	(0.025)		
NumberAcqDualAdvisors			-0.010	(0.010)	-0.012	(0.010)		
TarPartDualDummy							-0.118***	(0.031)
AcqAllDualDummy							-0.015	(0.021)
AcqPartDualDummy							0.011	(0.023)
Control Variables								
DummyBorrowing	0.026	(0.018)	0.026	(0.018)	0.028	(0.018)	0.027	(0.018)
DummyBridgeLoan	0.031	(0.022)	0.035	(0.023)	0.034	(0.023)	0.031	(0.023)
DummyComStockIss	-0.052*	(0.030)	-0.057*	(0.031)	-0.054*	(0.030)	-0.053*	(0.030)
DummyDebtIssue	0.036	(0.026)	0.036	(0.026)	0.035	(0.026)	0.033	(0.027)
DummyForeignFunds	0.013	(0.031)	0.016	(0.032)	0.018	(0.032)	0.015	(0.033)
DummyCorpFunds	0.007	(0.017)	0.010	(0.017)	0.006	(0.018)	0.007	(0.018)
DummyLineOfCredit	0.024	(0.017)	0.020	(0.017)	0.024	(0.017)	0.022	(0.017)
DummyMezzFinance	0.202***	(0.053)	0.208***	(0.051)	0.203***	(0.058)	0.210***	(0.058)
DummyPrefStockIss	-0.023	(0.066)	-0.014	(0.064)	-0.016	(0.066)	-0.023	(0.067)
DummyRightsIss	0.009	(0.023)	0.005	(0.025)	0.001	(0.024)	0.007	(0.024)
DummyLBO	-0.007	(0.060)	0.012	(0.057)	0.002	(0.060)	-0.002	(0.060)
DummyMergerEquals	-0.152***	(0.024)	-0.148***	(0.027)	-0.156***	(0.026)	-0.159***	(0.026)
DummyAcqWhiteKnight	-0.037	(0.053)	-0.058	(0.061)	-0.037	(0.055)	-0.034	(0.056)
DummyTenderOffer	0.041*	(0.022)	0.041*	(0.022)	0.041*	(0.022)	0.040*	(0.022)
LogDealValue	-0.030	(0.031)	-0.031	(0.030)	-0.029	(0.031)	-0.029	(0.031)
TargetSize	-0.019	(0.031)	-0.018	(0.030)	-0.019	(0.031)	-0.019	(0.031)
AcquirerSize	0.026***	(0.007)	0.025***	(0.007)	0.025***	(0.007)	0.026***	(0.007)
MktValBookTar	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	-0.019	(0.015)	-0.019	(0.015)	-0.019	(0.015)	-0.019	(0.015)
DummyAllShares	0.073*	(0.040)	0.076*	(0.040)	0.075*	(0.040)	0.074*	(0.040)
_constant	0.271***	(0.061)	0.251***	(0.062)	0.265***	(0.062)	0.273***	(0.062)
Observations	470		470		470		470	
Adjusted R^2	0.148		0.142		0.147		0.144	
F-test	2.57*		12.06***		7.70***		6.33***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from target companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the four-factor model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.

Appendix 11: Fama French & Carhart four-factor Model, Acquirers' Cumulative Abnormal Returns, [-1, +1] event window

	1		*2*		*3*		*4*	
Explanatory Variables								
NumberAcqAdvisors	-0.003	(0.004)			-0.003	(0.005)	0.002	(0.005)
NumberTarAdvisors	-0.003	(0.006)			-0.003	(0.006)	-0.002	(0.006)
NumberAcqDualAdvisors			-0.004	(0.010)	0.001	(0.006)		
NumberTarDualAdvisors			-0.001***	(0.011)	-0.081***	(0.014)		
AcqAllDualDummy							0.022*	(0.012)
AcqPartDualDummy							-0.024	(0.015)
TarPartDualDummy							-0.056***	(0.018)
Control Variables								
DummyBorrowing	-0.004	(0.010)	-0.022	(0.020)	-0.004	(0.010)	-0.004	(0.010)
DummyBridgeLoan	-0.001	(0.011)	-0.013	(0.012)	-0.001	(0.011)	-0.001	(0.011)
DummyComStockIss	-0.022	(0.020)	0.040	(0.017)	-0.022	(0.020)	-0.021	(0.020)
DummyDebtIssue	-0.013	(0.012)	-0.014	(0.008)	-0.013	(0.012)	-0.010	(0.011)
DummyForeignFunds	0.040**	(0.017)	0.008**	(0.010)	0.039**	(0.018)	0.037**	(0.018)
DummyCorpFunds	-0.014*	(0.008)	0.154	(0.027)	-0.013	(0.009)	-0.012	(0.009)
DummyLineOfCredit	0.008	(0.010)	-0.002	(0.037)	0.007	(0.010)	0.010	(0.009)
DummyMezzFinance	0.154***	(0.027)	-0.003***	(0.013)	0.154***	(0.028)	0.139***	(0.034)
DummyPrefStockIss	-0.002	(0.037)	0.027	(0.021)	-0.003	(0.037)	-0.002	(0.037)
DummyRightsIss	-0.003	(0.013)	-0.067	(0.026)	-0.003	(0.013)	-0.005	(0.012)
DummyLBO	0.027	(0.021)	0.000	(0.000)	0.026	(0.022)	0.017	(0.021)
DummyMergerEquals	-0.067**	(0.026)	-0.017**	(0.071)	-0.067**	(0.027)	-0.056*	(0.029)
DummyAcqWhiteKnight	-0.017	(0.071)	-0.011	(0.012)	-0.017	(0.071)	-0.025	(0.068)
DummyTenderOffer	-0.006	(0.010)	-0.007	(0.011)	-0.006	(0.010)	-0.006	(0.010)
LogDealValue	-0.011	(0.012)	0.014	(0.005)	-0.011	(0.012)	-0.013	(0.013)
TargetSize	-0.007	(0.011)	0.000	(0.000)	-0.007	(0.011)	-0.006	(0.012)
AcquirerSize	0.014***	(0.005)	0.013***	(0.008)	0.013***	(0.005)	0.014***	(0.005)
MktValBookTar	0.000	(0.000)	0.007	(0.021)	0.000	(0.000)	0.000	(0.000)
DummySameSIC	0.013	(0.008)	0.012	(0.032)	0.013	(0.008)	0.012	(0.008)
DummyAllShares	0.007	(0.021)	-0.004	(0.010)	0.007	(0.021)	0.007	(0.021)
_constant	0.012	(0.032)	-0.001	(0.011)	0.012	(0.031)	0.032	(0.032)
Observations	468		468		468		468	
Adjusted R^2	0.048		0.049		0.046		0.061	
F-test	0.37		17.38***		8.83***		12.45***	

This table displays an overview of the estimates of ordinary least squares regressions of the cumulative abnormal returns from acquirer companies on the number of financial advisors, dual role advisors, dummy variables created on the share of dual role financial advisors and control variables with an estimation window [-1, +1]. The CARs are calculated using the four-factor model. The dependent variables are the CARs and the main independent variables are number of financial advisors and dual role financial advisors. Standard errors are reported in parentheses and *, **, *** indicate the significance at respectively the 10%, 5% and 1% levels.