

Bidder returns of small takeovers, payment method and public status

Abstract

Previous research on event related bidder returns systematically ignored small Mergers and Acquisitions(M&A). This paper uses an event-study methodology to study the effects of a small M&A deal on the stock returns of the bidding firm. These effects are being studied for both the 1981-1992 and 2010-2018 time period to increase comparability with Chang's (1998) study on large deals and to find results that are indicative for current markets. It is shown that public status, time period, payment method, formation of a new blockholder and relative size of acquisition all have an effect on the bidder returns. In this study's setting, no evidence was found that showed a significant effect of deal size on the level of event related bidder returns.

** The views stated in this thesis are those of the author and not necessarily those of Erasmus School of Economics or Erasmus University Rotterdam. **

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1 Introduction

Earlier this year, the Wall street Journal published an article which discussed the growing interest of banks in small takeovers. Last year, over 80% of the takeovers by American banks was one that can be categorised as small (Hoffman, 2019). Considering this huge interest of firms to acquire small companies, one would think that these bidding firms gain from such a purchase. To measure this, academics usually monitor a bidding firms stock price. That is, therefore, what will be the main focus of this study. These so called bidder returns can be appropriately defined as follows: 'the bidding firm's stock price reaction to a takeover proposal' (Chang, 1998, p. 773).

These bidder returns have been of interest to both academics and investors for a very long time, since it is a great tool to investigate the effect of an event on stock prices. One of the earliest academic works that used bidder returns as a tool to investigate the effect of an event is: 'Merger proposals, management discretion and stockholder wealth' (Dodd, 1980). Dodd used bidder returns to study the market reaction to the announcement and subsequent acceptance or rejection of merger proposals. Dodd found that the reaction to the first public announcement of a merger proposal is positive. This reaction remains positive when a proposal is completed, but becomes negative if a proposal is cancelled (Dodd, 1980). Investors, on the other hand, watch bidder returns carefully to find ways to enhance profits and manage their risk exposure.

Dodd's approach inspired many researchers to take a similar approach in their task to study the effects of an event. One study found, for example, that bidder returns for firms financing a takeover of a large, publicly traded target with common stock were negative and abnormal. Whereas a similar takeover financed with cash did not display any abnormal bidder returns (Travlos, 1987). Similar results were found in other studies (Asquith, Bruner, & Mullins, 1987; Henri, 1991; James, William, & Ho, 1987).

One of the most famous papers that used bidder returns as their main tool for analysing event related effects is: 'Takeovers of privately held targets, methods of payment, and bidder returns' (Chang, 1998). He found a positive abnormal bidder return for stock financed takeovers and no abnormal bidder returns for cash financed takeovers. Chang also explains that abnormal bidder returns can be caused by synergy gains, increased managerial monitoring and an influx of new information to the market (Chang, 1998).

When looking deeper into the paper written by Chang, one can see a remarkable choice in the selection of the data. He chose to exclude small deals from his dataset. His results will therefore only

hold for mergers with a value higher than \$10 million. Further examination of papers into the same matter, shows that small deals are being excluded from the vast majority of the studies. This is, however, a very interesting group of deals to investigate, since the interest in such deals is increasing (Hoffman, 2019). Besides that, small businesses usually have different capital structures compared to larger businesses (Degryse, de Goeij, & Kappert, 2012). For this reason, it is important to separately study small takeovers to find out if Chang's results remain the same. The verification of Chang's results are also vital for the investment choices of small firm investors. The research question for this thesis will therefore be: *What is the effect of a small takeover announcement on the returns of the bidding firm?*

To make this study both comparable to Chang's and relevant for the current timeframe, the takeovers in the dataset are from the periods 1981-1992 and 2010-2018. Based on availability of data, certain conditions apply when selecting the appropriate takeovers. The stock prices of the firms should be available for at least 100 days prior to the takeover announcement. Besides that, there should not be any other event within 3 days of the announcement date. Financial firms are excluded, because those have different capital structures. This makes them difficult to compare to other types of firms (Gornall & Strebulaev, 2018). The most important condition, however, is that the value of the acquisition should be smaller than \$10 million.

The methodology that will be used in this study is similar to Chang's. This means that the event study framework used in his study will also be used in this study to obtain a market model (Brown & Warner, 1985). The event date will be the announcement of a takeover at $t=0$, the test period will be $[-210,-11]$ and the evaluation period will be $[-1,0]$ (Chang, 1998). When the abnormal returns are calculated, I will try to find variables that have explanatory value for these returns. This will be done by performing a cross-sectional regression. Variables that will be used in this regression are: a blockholder dummy, a dummy for relatedness in business and relative size of acquisition.

To guide us through this research, 3 hypotheses will be tested. These hypotheses are inspired by Chang's (1998) limited competition, monitoring and information hypothesis. Differences in capital structures have proven to change the bidder returns as a result of a merger announcement (Boyd, Graham, & Hewitt, 1993). I therefore expect to find different results for the takeover of small firms compared to the takeover of large firms, since they have different capital structures (Degryse et al., 2012).

2 Theoretical framework

Mergers and acquisitions refers to the consolidation of companies or assets. Such a consolidation can occur through multiple transaction types. The two most important transaction types are a merger and an acquisition. Both these transaction types involve two parties, one party that attempts to merge with or acquire (*acquirer*) and one party that is being merged with or acquired (*target*). In a merger, management of two companies decide to combine its powers. As a result, the acquired company stops existing and becomes a part of the acquiring company. An acquisition happens when the acquiring firm buys enough stock of the acquired company to have a majority stake in that company. This means that there are still two firms after an acquisition (Kenton, 2019).

2.1 M&A motives

Mergers and acquisitions happen very frequently. Last year, for example, 14.833 mergers and acquisitions with a total value of almost \$2.000 billion took place in the United States (Institute for Mergers, Acquisitions and Alliances, 2018). It is therefore important to know why companies engage into such deals. Previous studies, such as Seth, Song, and Pettit (2002) have reviewed these reasons for mergers and acquisitions and called them the key to understanding failure or success of M&A's. Possible motives for M&A activity are usually divided into two categories: Financial and Managerial motives.

Financial motives

The first financial motive of M&A's is synergy. Synergy is: 'the combined power of a group of things when they are working together that is greater than the total power achieved by each working separately' (Cambridge University, 2013). In business terms that translates to: 'the ability of two or more units or companies to generate greater value working together than they could working apart' (Calipha, Tarba, & Brock, 2010, p. 8).

Synergy gains can be the result of several different sources. The first source is a reduction of the cost of capital, due to M&A activity. A drop in the cost of capital will enable a firm to attract funding at a lower price. It can, therefore, operate more efficiently and realize higher profits. Such a reduction in cost is called a financial synergy. The financial synergy gains will be relatively larger for small firms compared to large firms, because it is harder for small firms to attract funding (Steiner, 1975).

Besides a reduction in the cost of capital, the cost of production can drop as a result of combining forces. Lower costs of production will enable a firm to make more profit, since its costs drop. This type of synergy gains can be qualified as operational synergy. Operational synergy will

mostly be larger for small firms, because of economies of scale. A production process exhibits economies of scale over a range of output when average cost declines as output increases (Besanko, Dranove, Shanley, & Schaefer, 2017). The smaller firms will profit more from these economies of scale, since the average cost curve decreases stronger when output is relatively low. Operating cost can, however, also drop as a result of economies of scope. Economies of scope exist when a firm can save money when it increases its variety of goods and services in production (Besanko et al., 2017). M&A activity can be the cause of economies of scope when the target and bidder operate in different industries.

Thirdly, there can be an effect on the prices of the firms. When two firms that operate in the same industry merge, their market power grows. This gives them the opportunity to price their products higher and, as a result, make more profit. This type of synergy gains is called collusive synergy. Research on the American market showed that collusive synergy is relatively large and financial synergy tends to have a bigger effect than operational synergy (Chatterjee, 1996).

The second financial motive for M&A activity is growth. When a firm wants to expand, there are two ways to do so. A firm can choose to grow internally or externally. Internal growth means that a firm simply enlarges its production levels. External growth refers to: 'replacing ownership control with cooperative means of getting access to resources needed to fulfil commitments' (Johannisson, 1990, p. 34). A different study stated that the acquisition of a firm in the market where the acquiring firm wants to grow is easier and faster than growing internally (Trautwein, 1990). M&A activity, therefore, is a suitable solution for firms that intend to grow.

Besides the ease of growing externally, there is another reason why firms want to grow through M&A activity. A company can increase its market share quicker by acquiring a firm that operates in the same market than by growing internally (Gopinath, 2003). Such an event enables a firm to use their enlarged position in the market to increase their market power. Something that has been brought forward in some studies as a reason on its own to engage in M&A activity (Pennings, Barkema, & Doma, 1994).

The third financial motive for M&A activity is diversification. One of the reasons to diversify through M&A's is, similar to growth, to expand the company easily and quickly. A second reason is to attract more customers. When a firm sells a bigger variety of goods and services, a consumer is more likely to buy it from you than from a specialised firm, because people prefer to be supplied by one firm rather than multiple firms (Motta, 2004). A third reason for diversification through M&A's is risk spreading. When a firm diversifies, the firm's portfolio will also be further diversified. A better

diversified portfolio can lead to lower interest and financial distress cost (Pennings et al., 1994; Trautwein, 1990).

It is important, however, to distinguish between two different types of diversification. Concentric diversification on the one hand and conglomerate diversification on the other. Concentric diversification means that a company grows into a related industry, whereas conglomerate diversification means that the company grows into an unrelated industry (Reed & Luffman, 1986). This difference is important, because several studies found that a concentrically diversifying deals cause positive returns to the bidding firm, whereas conglomerately diversifying deals cause negative returns to the bidding firm (Morck, Shleifer, & Vishny, 1990). This empirical finding is especially important when acquiring a small business, because there are more small businesses available to take over than large businesses. Because of this extensive availability of small businesses, an acquiring firm can most probably choose between similar firms to take over where one will be concentrically and one will be conglomerately diversifying.

Managerial motives

Other than financial motives, there are also managerial motives to engage in M&A activities. A motive will be considered managerial when the manager's personal opinion or preference plays a prominent role in the takeover decision.

The first managerial motive is managerialism. This motive was first described in an economic book in 1964 (Marris, 1964). Later studies have called it the 'conflict-of-interest' or 'agency' hypothesis (Berkovitch & Narayanan, 1993; Seyhun, 1990). Although they all called it something different, they refer to the same behaviour. Namely, managers acquiring targets to maximize their own utility without taking into account the effect on the shareholders' value.

As an example of managerialism, one could consider Jensen's free-cash-flow problem. He found that managers more often acquire targets when there are larger free cash flows. He then reasoned that managers with larger cash flows than strictly necessary, are more likely to invest in too risky projects, instead of distributing the money to the shareholders (Jensen, 1986). Managers act like this, because they prefer sales and growth maximization over creating shareholders' welfare (Baumol, 1962; Marris, 1964). This because their wage is usually tied to the amount of assets under their control, instead of shareholders' wealth created.

The second managerial motive is hubris. Hubris describes a personality trait of extreme overconfidence, often paired with arrogance. In an M&A context, this means that a manager overestimates the value of its own firm. If this overestimation of the own company is combined with

an underestimation of the target, bad deals take place. These deals are considered bad, because they do not create any value to the bidding firm's shareholders. This all due to the overconfidence of the manager (Roll, 1986).

An American study presented a theory that suggested a possible accelerant for these bad deals. The study claimed that the overconfidence can be created by the limited amount of deals that most managers make in their career. Because of this limited amount of opportunities, managers convince themselves that the deal they are working on, will be profitable. The theory states that they overlook the possibility that they might have wrongfully estimated their own companies and the targets value (Roll, 1986).

2.2 Previous research on bidder returns

Bidder returns through mergers and acquisitions have been a popular subject in economic studies. Firstly, an early American study found that bidder returns after an M&A announcement were on average +2,8%. This shows that M&A deals, on average, have a positive effect on shareholders' value. The same study found, however, that what happens after the announcement is very important for the returns in the long run. If the deal is announced, but eventually does not go through, the bidder returns on average decrease by over 15% in the following month (Asquith, Bruner, & Mullins, 1983).

A different study, secondly, showed that the method of payment is of importance. The study used data from 1972 through 1981 to examine the difference in bidder returns when the target is acquired using purely stock, compared to when the target is acquired using cash. They found that the bidder returns were significantly lower when the payment was with stock (Travlos, 1987). This result is especially interesting for this study, because the proportion of small M&A deals that is paid with stock is relatively large compared to large deals (Faccio & Masulis, 2005).

A third result on bidder returns has to do with the public status of the company. An American study found that the acquisition of publicly traded targets caused negative or zero bidder returns as a result of an M&A announcement. Privately traded targets, on the other hand, caused positive or zero bidder returns (Chang, 1998). Data from 1981 through 1992 was used to obtain these results.

A fourth result from previous studies presents the level of competition as an important factor for the level of bidder returns. The study used an extensive database to investigate whether the amount of bidding firms had an effect on the bidder returns. They found that a higher level of interest mitigated a big part of the shareholders' wealth that could have resulted from the acquisition (Sankar, Fedania, & Triantis, 1996).

The next empirical result is about the variable relatedness. Relatedness refers to the presence of common characteristics between the bidding firm and the target firm. Such a common characteristic can be a commonality on a great number of firm specific features. One factor that has been studied, is cultural distance. A 1995 study found that bidder returns were significantly higher for mergers with a small cultural distance compared to a big cultural difference (Datta & Puia, 1995). A more intuitive commonality that has been studied is the market where the bidder and target operate. Multiple studies found that M&A's of firms that operate in the same market, generate more event related returns than M&A's of firms that operate in different markets (Rumelt, 1974; Salter & Weinhold, 1979).

The effect of relatedness is, however, not as established as the previously cited articles make it seem. Several researchers have found very different results. Some concluded that the higher returns are not being caused by related firm specific factors, but by market characteristics (Bettis & Hall, 1982; Lecraw, 1984). A different critic of the relatedness argument even concluded that there is no difference in returns whatsoever between related and unrelated M&A's (Lubatkin, 1987).

Lastly, I will discuss the effect of size on the event related returns of the bidding firm. There are several versions of the variable size that have been studied. One of those versions is deal-size. Where most of the discussed variables have been extensively researched, deal-size has proven to be less popular over the years. There are, nonetheless, several empirical results regarding this variable. One study found evidence in favour of the interpretation that a large deal size is a proxy for unobserved complexity. They continue their interpretation by stating that a larger deal-size, therefore, mitigates some of the value created by a merger and, therefore, lowers the bidder returns (Alexandridis, Fuller, & Travlos, 2013). Some theories, on the other hand, say that a larger deal corresponds to a larger company acquired. This should mean that economies of scale will have a larger effect and, therefore, increase the level of wealth creation (Besanko et al., 2017).

Size has also been studied in the form of relative size. Returns are supposedly higher when the target size is relatively large compared to the bidder size (Asquith et al., 1983). A different study, however, found that relative size did not have a significant effect on bidder returns (Chang, 1998).

2.3 Small firms

This study tests the effects of a small M&A deal on bidder returns. The division between small and large firms has academically not been very clear or consistent. A notable and commonly used source that attempts to distinguish these types of firms is a report by the Bolton Committee. This committee reasoned that there are three characteristics that best describe a small company. Firstly,

a small company should have a relatively small market share. Secondly, it should be managed in a personalised way by its owners and part-owners. Lastly, a small firm should be independent from large enterprises, meaning that managers are free from outside control when taking decisions (Bolton, 1971).

This definition, however, is not flawless. For example, small businesses can have large market shares if they operate in a specialised market (Stanworth & Curran, 1976). Furthermore, the limited availability of data on ownership and management structures presents methodological drawbacks, an issue faced in multiple studies (Chittenden, Hall, & Hutchinson, 1996; Hamilton & Fox, 1998).

Target firm size, as opposed to many other financial variables, has not been studied in relation to event related bidder returns. Different types of financial studies, however, have researched the effect of firm size. Most importantly, the effect of size on stock performance has been studied. Possibly the most famous study into this matter is the three-factor model of Fama and French (1993). They found that their size factor which measures the return difference between a small stock and a large stock portfolio to be positive. Moreover, the coefficient of their size factor had the highest values for the smallest stocks. This implies that the size factor is even more important for small stocks when explaining the height of their returns (Fama & French, 1993).

2.4 Hypotheses

Public status & payment method

Chang's first hypothesis is the limited competition hypothesis. The theory says that the takeover market for publicly traded targets is a competitive market. Conform Sankar's (1995) results, Chang reasons that this should mean that the bidder returns for this competitive market should be smaller than for M&A's in non-competitive markets. Chang even expects the bidder returns to be 0 when the level of competition is high enough. The takeover market for privately traded targets is, supposedly, less competitive than the public takeover market. This could be the case, because there is a limited amount of public information available on private firms. As a result, the information search cost is relatively high. These information search costs will be even higher when acquiring a relatively small target. This will be a reason for a lot of companies not to engage in a takeover of a private firm. This lack of competition leaves room for underpayment and, therefore, positive bidder returns when the takeover is financed in cash. The bidder returns can, however, also be positive when there are synergy gains that end up with the bidding firm. The enlarged information costs when acquiring small firms can lower the level of competition in the small private firm takeover

market even further compared to the large private firm takeover market. This would mean that the bidder returns for small takeovers would exceed the bidder returns for large takeovers when the target is privately traded.

The first hypothesis (H1) will therefore be: *Bidder returns will be significantly higher when taking over a small privately traded company compared to a small publicly traded company, when financed in cash.*

Furthermore, Chang developed the information hypothesis. When firms try to acquire a publicly traded target with a large number of shareholders with stock, it could be a sign that management of the bidding firm knows their stock is overvalued (Myers & Majluf, 1984). If the market picks up on this, the bidder returns should be negative.

When firms try to acquire privately traded targets with stock, this problem can be solved by including bidder firm specific private information in the deal. As a result of this, the target firm has an incentive to carefully value the bidding firm. If the target firm decides to accept the payment in stock, it conveys a message to the market that the stock is not overvalued. The addition of overseers can therefore be interpreted as the release of favourable information to the market. This should result in positive bidder returns.

A difference between large and small firms, is the number of shareholders that own the company. It is therefore not to be expected that the theory of Chang (1998) holds when acquiring small firms, because in this case bidder firm specific private information can be disclosed in both public and private deals.

The second hypothesis (H2) will therefore be: *Bidder returns will not be significantly different when taking over a small privately traded company compared to a small publicly traded company, when financed with stock.*

New blockholder

The third hypothesis, as described by Chang (1998), is the monitoring hypothesis. When a firm acquires a target, common stock is exchanged. For privately traded targets, this means that there is a substantial chance that an outside blockholder is created, because they are owned by a small group of shareholders. One is considered a blockholder when more than five percent of the outstanding shares is owned (Morck, Shleifer, & Vishny, 1988). Publicly traded companies are on average larger in size. This means that the probability that an outside blockholder is created is lower, but not impossible. An outside blockholder can serve as an effective managerial monitor or it can facilitate takeovers. Doing this means that more stockholders' value is created and should,

therefore, increase bidder returns. An outside blockholder can, on the other hand, decrease firm value if it makes room for managerial entrenchment.

If an outside blockholder is created through a relatively small deal, this means that the target is a small firm. It seems intuitively more probable that an outside blockholder will act as an effective managerial monitor than that it will cause managerial entrenchment. The third hypothesis (H3) will therefore be: *Bidder returns will be significantly higher when the transaction creates a new blockholder at the target firm and the method of payment is stock.*

3 Data & Methodology

3.1 Data

To select the M&A deals in the dataset, Thomson One is used. To obtain the desired set of deals, the several restriction were imposed. Firstly, the deal value could not be greater than 10 million \$ and the deal had to have been successful. Furthermore, both the target and the acquirer have to be based in the United States of America and the announcement date must have been between 01/01/1981 – 12/31/1992 or 01/01/2010 – 12/31/2018, creating two separate datasets. To avoid any interference in the stock data, no other takeovers or other major events are allowed by the same company in the 100 days leading up to the announcement date. Moreover, financial firms and tender offers are excluded from the dataset. Additionally, the primary SIC code, public status of the target, payment method and percentage of the target owned by the acquirer after the transaction should be available.

Subsequently, the stock price of the remaining acquirers and market value of both the remaining acquirers and targets were obtained from Datastream. Determining when a target firm can be considered a small firm, a criterion, applicable to financial research, originating from the U.S. Exchange Commission is used. This commission drafted a law that defines an American business as small, when the market value is less than 25 million \$ (U.S. Government, 2019).

Applying these restrictions resulted in two datasets, belonging to the two time periods. For the 1981-1992 period, the dataset consists of 599 deals with a privately traded target and 554 deals with a publicly traded target. The 2010-2018 dataset is comprised of 733 privately and 65 publicly traded targets. The increasing number of private takeovers in the 2010-2018 period could be due to lowered interest in large deals after the financial crisis, giving space for robust companies to buy weakened competitors (Ravichandran, 2009). The low number of public deals in the 2010-2018 period could be due to the US government interfering in the takeover market during the crisis to

stabilize the economy (Krugman, 2008). In this light, interfering in the market of publicly traded firms has a bigger impact than interfering in the market of privately traded firms, because more people are affected. Besides that, the amount of new start-ups during and after the financial crisis was at a low (Bloomberg, 2019). This could have resulted in a lower ‘supply’ of publicly traded targets, explaining the low number of deals in the dataset.

Table 1 and 2 provide descriptive statistics for the 1981-1992 and 2010-2018 periods, respectively. The market value that will be used in the analysis is measured 10 days before the announcement date. Relative size of acquisition is defined as the value of acquisition divided by the market value of bidder equity. Mixed offers will be considered as stock offers and a blockholder is an owner of at least 5 percent of the shares outstanding.

Table 1: Descriptive statistics of the M&A deals in the 1981-1992 period, including difference in means

1981-1992	ACQUISITION OF PRIVATELY HELD TARGET (N=599)	ACQUISITION OF PUBLICLY HELD TARGET (N=554)	DIFFERENCE IN MEANS
NUMBER OF CASH OFFERS	90	265	
NUMBER OF STOCK OFFERS	509	289	
MARKET VALUE OF BIDDER EQUITY IN MILLION \$	442.1 (45.56)	448.5 (62.1)	6.4
VALUE OF ACQUISITION IN MILLION \$	4.1 (3.6)	3.9 (3.3)	-0.2
RELATIVE SIZE OF ACQUISITION	0.16 (0.06)	0.11 (0.05)	-0.05**
NUMBER OF OBSERVATIONS WITH A NEW BLOCKHOLDER FROM TARGET	497	198	
SHARE OWNERSHIP OF NEW BLOCKHOLDER	96.5% (100%)	44.3% (18.8%)	-52.2%**

**indicates significance at 1%

In the 1981-1992 sample, there is no significant difference in means for the market value of bidder equity and the value of the acquisition between the private and public subsamples. For relative size of acquisition and share ownership of new blockholder, a significant difference in means at a 1 percent level is found. For both variables, the mean is higher in the private subsample.

Table 2: Descriptive statistics of the M&A deals in the 2010-2018 period, including difference in means

2010-2018	ACQUISITION OF PRIVATELY HELD TARGET (N=733)	ACQUISITION OF PUBLICLY HELD TARGET (N=65)	DIFFERENCE IN MEANS
NUMBER OF CASH OFFERS	148	57	
NUMBER OF STOCK OFFERS	585	8	
MARKET VALUE OF BIDDER EQUITY IN MILLION \$	1037.2 (52.4)	2473.3 (43.4)	1436.1
VALUE OF ACQUISITION IN MILLION \$	3.9 (3.2)	3.7 (3.0)	-0.2
RELATIVE SIZE OF ACQUISITION	0.19 (0.04)	0.15 (0.05)	-0.04
NUMBER OF OBSERVATIONS WITH A NEW BLOCKHOLDER FROM TARGET	574	8	
SHARE OWNERSHIP OF NEW BLOCKHOLDER	97.2% (100%)	100% (100%)	2.8**

**indicates significance at 1%

In the 2010-2018 sample, there is no significant difference in means for the market value of bidder equity, this seems counterintuitive, because the difference in means is very large. This is, however, due to very large variances. A similar result was found for value of acquisition and relative size of acquisition. For share ownership of new blockholder, there is a significant difference in means at a 1 percent level. The mean of the private subsample is significantly higher than the mean of the public subsample.

3.2 Methodology

In this section, I will discuss the methodology of this study. In the first part, I will explain the event study framework that will be used to derive the cumulative abnormal returns. In the second part, I will discuss how the hypotheses will be tested, using several subsamples. The second part will also include a cross-sectional regression analysis to further investigate the monitoring hypothesis and explain variation in bidder returns.

Event study

The first time an event study methodology was used, was in 1969. The study found that stock prices have the tendency to react to new information. To measure what part of the stock price reaction can be assigned to the influx of information, the event study methodology was designed (Fama, Fisher,

Jensen, & Roll, 1969). The vast majority of later studies on stock market events has used the event study methodology. The event study methodology used in this study is a later version of the original work (Brown & Warner, 1985).

The first step of an event study, is to calculate a Market Model over the estimation period. The Market Model predicts what level of return would be expected, if there was no event. The Market Model used in this study is:

$$E(R_{it}) = \alpha_i + \beta_i R_{MI t} + u_{it} \quad (1)$$

Where: $E(R_{it})$ is the expected return for stock i on day t

α_i is the firm-specific return on stock i

β_i is part of the stock return that is influenced by market-wide influences

$R_{MI t}$ is the return on the market index MI for period t

u_{it} is the error term of the regression

This Market model will be estimated from 210 to 11 days before the announcement date, [-210,-11] conform Chang (1998). Estimating a model over such a long period prior to the event will ensure that temporary fluctuations in the stock price will not influence our results significantly. The market index used for the 2010-2018 period is the S&P600 SmallCap, because it is a good proxy for small American businesses. Since this index did not yet exist in the 1981-1992 period, the standard S&P500 will be used.

The second step is to use the estimated alfa and beta coefficients to predict what the returns would have been, if there was no event. The formula that will be used is:

$$R_{it}^* = \hat{\alpha}_i + \hat{\beta}_i R_{MI} \quad (2)$$

Where: R_{it}^* is the normal return as justified by its beta risk

$\hat{\alpha}_i$ is the firm-specific return on stock i as estimated by the Market Model

$\hat{\beta}_i$ is part of the stock return that is influenced by market-wide influences as estimated by the Market Model

R_{MI} is the return on the market index MI

These normal returns will be estimated for the evaluation period [-5,5].

To decide what part of the movement of the stock prices can be assigned to the event, the abnormal return is calculated. This will be done by subtracting the normal return from the observed return.

The formula is:

$$ar_{it} = R_{it} - R_{it}^* \quad (3)$$

Where: ar_{it} is the abnormal return for stock i on day t

R_{it} is the observed return for stock i on day t

R_{it}^* is the normal return as justified by its beta risk

When this abnormal return is calculated over a period longer than 1 day, it is possible to calculate an average abnormal return using the following formula:

$$AR_t = \frac{1}{N} \sum_{i=1}^N ar_{it} \quad (4)$$

Where: AR_t is the average abnormal return

N is the number of observations

In this study, the average abnormal return over days -1 and 0 will be used.

To correct for event-date uncertainty, the abnormal returns will be cumulated. When the abnormal returns are cumulated, you have the Cumulative Abnormal Return (CAR). The formula for this is:

$$CAR_i(T_1, T_2) = \sum_{t=T_1}^{T_2} AR_{it} \quad (5)$$

Where: $CAR_i(T_1, T_2)$ is the cumulated abnormal return of sample i

In this study the CAR will be calculated over the days -1 and 0 conform Chang (1998). In his study, Chang called this CAR, the announcement period return.

Hypothesis testing

This study investigates bidder returns, guided by the limited competition, monitoring and information hypothesis. To test these 3 hypotheses, several subsamples will be created. In this section, I will discuss how these subsamples are formed and what tests will be performed.

Methodology public status & payment method

To test these hypotheses, the datasets for both periods will be split into a set of deals where the target is a publicly traded target and a set where the target is a privately traded target. These two sets will be further divided into a set where the method of payment is cash and a set where the

method of payment is stock. For both periods, the average abnormal returns over days -1 and 0 will be calculated, using the event study methodology, and compared. This comparison will happen through a z-test (Dodd & Warner, 1983). The formula of this z-test for the first hypothesis is:

$$Z = \frac{AR_{private,cash} - AR_{public,cash}}{\sqrt{\frac{N_{private,cash}}{2} + \frac{N_{public,cash}}{2}}} \quad (6)$$

Where: $AR_{private,cash}$ and $AR_{public,cash}$ are the average abnormal returns for private and public cash bidders, respectively

$N_{private,cash}$ and $N_{public,cash}$ are the number of observations in the private stock and cash sample, respectively

For the second hypothesis, the formula is:

$$Z = \frac{AR_{stock,public} - AR_{stock,private}}{\sqrt{\frac{N_{stock,public}}{2} + \frac{N_{stock,private}}{2}}} \quad (7)$$

Where: $AR_{stock,public}$ and $AR_{stock,private}$ are the average abnormal returns for stock bidders of publicly and privately traded targets, respectively

$N_{stock,public}$ and $N_{stock,private}$ are the number of observations in the stock sample for publicly and privately traded firms, respectively

To conduct further research on the hypotheses, a Wilcoxon signed-rank test will be performed to test whether the distribution of positive and negative AR significantly differs from 50%. This test ranks the values of the AR according to size, before allocating a + or – sign according to whether it is a positive or negative value. Adding up the ranks of the positive values and the ranks of the negative values results in a testable set of values. If the tests shows a significant difference in the positive and negative values, it is an extra supporting indication to the results of the t-test that checks whether the AR significantly differs from 0.

Furthermore, to test whether or not the AR significantly differ from 0, a standard t-test will be used. The formula of such a t-test is:

$$t = \frac{AR}{s/\sqrt{N}}$$

Where: AR is the subsample average abnormal return

s is the subsample standard deviation

Methodology new blockholder

To test the new blockholder hypothesis, the datasets for both periods will firstly be divided into deals with publicly and privately traded targets where the method of payment is stock. Secondly, the subsets will further be divided into a set where the bidding firm becomes a new blockholder and a set where the bidding firm does not become a new blockholder. For these newly created subsets, the average abnormal return will be calculated and compared. The comparison will be done through the following z-test:

$$Z = \frac{AR_{new\ blockholder,stock} - AR_{no\ new\ blockholder,stock}}{\sqrt{\frac{2}{N_{new\ blockholder,stock}} + \frac{2}{N_{no\ new\ blockholder,stock}}}} \quad (8)$$

Where: $AR_{new\ blockholder,stock}$ and $AR_{no\ new\ blockholder,stock}$ are the average abnormal returns for bidders that do and do not create a new blockholder at the target firm at a stock offer, respectively

$N_{new\ blockholder,stock}$ and $N_{no\ new\ blockholder,stock}$ are the number of observations in the sample for bidders that do and do not create a new blockholder at the target firm at a stock offer, respectively

To further investigate the new blockholder hypothesis and to explain any variation in abnormal returns, a cross-sectional regression will be performed on these abnormal returns. A dummy variable that indicates whether a new blockholder is formed will be used as the explanatory variable. A dummy for relatedness of business between the bidder and target firm and the relative size of the acquisition will be used as control variables. The CAR (-1,0) will be used as the dependent variable. The regression equation will therefore be:

$$CAR(-1,0) = \alpha + \beta_1 Dummy(new\ blockholder) + \beta_2 Dummy(Relatedness\ of\ Business) + \beta_3 Relative\ size\ of\ acquisition + \varepsilon \quad (9)$$

Where: α is the constant of the regression

$Dummy(new\ blockholder)$ is a dummy variable that takes value 1 if a new blockholder emerges as a result of an M&A deal

$Dummy(Relatedness\ of\ Business)$ is a dummy variable that takes the value 1 if the bidding and target firm share the same primary two-digit SIC code

Relative size of acquisition is the value of acquisition divided by the market value of bidder equity 10 days before the acquisition announcement

β_1 , β_2 and β_3 are the regression coefficients corresponding to their variables

ε is the error-term of the regression

4 Results

Public status & payment method

Table 3 provides the results of the event study for the 1981-1992 period. The average abnormal returns for bidding firms are grouped by method of payment.

Table 3: Average and median two-day abnormal stock returns for bidders at the announcement of a takeover proposal by method of payment for the 1981-1992 period. Abnormal returns are calculated with the Brown and Warner (1985) event study methodology. The market model is calculated from day -210 to -11, evaluation period is established at days -1 and 0 and the announcement date is day 0. Mixed offers are combined with the stock offers and percent positive refers to the percentage of AR in the subsample that turn out to be positive. The Wilcoxon signed-rank test is used to establish significance of percent positive.

1981-1992	NUMBER OF OBSERVATIONS	AVERAGE (MEDIAN) ABNORMAL RETURN	T-STATISTIC	PERCENT POSITIVE
PANEL A: ACQUISITION OF PRIVATELY HELD TARGET				
CASH OFFERS	90	0.10% (-0.01%)	0.36	46.7
STOCK OFFERS	509	0.71% (0.08%)	2.65**	54.4*
PANEL B: ACQUISITION OF PUBLICLY HELD TARGET				
CASH OFFERS	265	0.20% (0.03%)	1.11	54.7
STOCK OFFERS	289	0.87% (0.46%)	4.06**	62.3**

*indicates significance at a 5 percent level; **indicates significance at a 1 percent level

Panel A shows the results for deals with a privately held target. These results show that cash bidders experience an insignificant 0.10 percent average abnormal return (t=0.36). Stock bidders, however, earn a 0.71 percent return that is significant at the 1 percent level (t=2.65). Median abnormal

returns for cash and stock bidders are -0.01 and 0.08 percent, respectively. The difference in means between cash and stock transactions is significant at the 1 percent level ($z=3.77$). The Wilcoxon signed-rank test on the proportion of positive returns shows a similar image as the mean abnormal return. The proportion differs significantly from 50 percent for stock offers and does not differ significantly for cash offers.

Panel B Shows the results for deals with a publicly held target. Cash bidders earn an insignificant 0.20 percent average abnormal return ($t=1.11$). Similarly to the acquisition of privately held targets, bidding return when acquiring publicly held targets are significantly positive for stock payments. The average abnormal return is 0.80 percent, significant at the 1 percent level ($t=4.06$). Median abnormal returns are 0.03 and 0.46 percent for cash and stock bidders, respectively. The results for the Wilcoxon signed-rank test for the proportion of positive returns is consistent with the t-tests on the average abnormal returns. The difference in means between cash and stock transactions is significant at the 1 percent level ($z=5.52$).

To test the first hypothesis, the AR for publicly and privately traded targets are being compared when the method of payment is cash. The difference in returns is statistically insignificant ($z=-0.58$). The insignificant average abnormal returns for acquiring publicly traded targets with cash is, however, consistent with the presupposition that the market for publicly traded firms is competitive. The first hypothesis will therefore be rejected for the 1981-1992 period.

To test the second hypothesis, the AR for publicly and privately traded targets are being compared when the method of payment is stock. A statistically insignificant difference in the means of the two groups is found ($z=-1.54$). Additionally, the significantly positive AR for acquiring both privately and publicly traded firms with stock is consistent with the theory that bidding firms can signal to the market that they are correctly valued by disclosing private information to the target firm. The second hypothesis is therefore not be rejected for the 1981-1992 period.

Furthermore, the significantly higher returns for stock offers compared to cash offers is inconsistent with Travlos (1987). A possible reason for this is that private firm specific information can more easily be disclosed in a deal with a small firm, because there are less shareholders to deal with as opposed to a deal with a large target firm. Additionally, the AR of cash offers are consistent with Chang's (1998) results on large deals. The level of AR for stock offers, however, appear not to be as far away from zero as Chang's (1998) results. These results are consistent with the theory that a larger acquisition gives opportunity to larger economies of scale (Besanko et al., 2017).

Table 4 provides the results of the event study for the 2010-2018 period, with AR grouped by method of payment.

Table 4: Average and median two-day abnormal stock returns for bidders at the announcement of a takeover proposal by method of payment for the 2010-2018 period. Abnormal returns are calculated with the Brown and Warner (1985) event study methodology. The market model is calculated from day -210 to -11, evaluation period is established at days -1 and 0 and the announcement date is day 0. Mixed offers are combined with the stock offers and percent positive refers to the percentage of AR in the subsample that turn out to be positive. The Wilcoxon signed-rank test is used to establish significance of percent positive.

2010-2018	NUMBER OF OBSERVATIONS	AVERAGE (MEDIAN) ABNORMAL RETURN	T-STATISTIC	PERCENT POSITIVE
PANEL A: ACQUISITION OF PRIVATELY HELD TARGET				
CASH OFFERS	148	0.38% (-0.03%)	0.50	48.0
STOCK OFFERS	585	8.35% (0.01%)	2.09*	52.1*
PANEL B: ACQUISITION OF PUBLICLY HELD TARGET				
CASH OFFERS	57	-0.01% (0.08%)	-0.14	56.1
STOCK OFFERS	8	3.63% (1.26%)	1.35	62.5

*indicates significance at a 5 percent level

Panel A shows the results for the acquisition of privately traded targets. Acquiring a privately traded target with cash earns companies an insignificant 0.38 percent average abnormal return ($t=0.50$). On the other hand, AR for acquiring a publicly traded firm with stock earns a 8.35 percent return, significant at the 5 percent level ($t=2.09$). Median average abnormal returns are -0.03 and 0.01 percent for cash and stock bidders respectively. The Wilcoxon signed-rank test on the proportion of positive returns portrays the same image as the t-tests. The difference in means between cash and stock offers is significant at the 1 percent level ($z=61.25$).

Panel B shows the results for the acquisition of a publicly traded target. Doing this with cash earns a firm an insignificant average abnormal return of -0.01 percent ($t=-0.14$). Using stock as method of payment earns the bidding firm an insignificant 3.63 percent AR ($t=1.15$). The difference in means between these two methods of payments is significant at the 1 percent level ($z=6.82$). The

median abnormal returns for cash and stock offers are 0.08 and 1.26 percent, respectively. The Wilcoxon signed-rank test is consistent with the t-tests.

To test the first hypothesis, the AR of deals with a publicly traded target and paid with cash is compared to the AR of cash deals with a publicly traded target. The difference in means is statistically insignificant ($z=1.77$). The insignificant AR for the public deals is, similar to the results of the early period, consistent with the presupposition that the market for publicly traded firms is competitive. The first hypothesis will therefore be rejected for the 2010-2018 period.

The second hypothesis is tested by comparing the AR of deals with a publicly traded target and paid with stock to the AR of stock deals with a privately traded target. A statistically significant difference in means at the 1 percent level is found ($z=9.38$). Furthermore, the significantly positive AR for the acquisition of privately traded companies with stock is consistent with the theory that bidding firms can signal to the market that they are correctly valued by disclosing private information to the target firm. The insignificant AR for the public subsample is, however, not consistent with this theory. The second hypothesis will, therefore, have to be rejected for the 2010-2018 period.

Furthermore, the mainly positive AR for stock deals are consistent with the third hypothesis, that creating outside blockholders can result in a positive share price reaction through more efficient monitoring. To formally test this, additional research has been performed. These results are mainly consistent with the results from the 1981-1992 sample. The most notable difference is that the AR for stock-financed public deals are positive for the 1981-1992 and insignificant for the 2010-2018 period. The small size of the 2010-2018 respective subsample could play a significant role in this outcome.

New blockholder

Table 5 provides the results of the event study for acquisitions where the method of payment is stock for the 1981-1992 period. The average abnormal returns are grouped according to the creation of a new blockholder at the bidding firm.

Table 5: Average and median two-day abnormal stock returns for bidders offering stock at the announcement of a takeover proposal by whether a new Blockholder emerges from target firm for the 1981-1992 period. *Abnormal returns are calculated with the Brown and Warner (1985) event study methodology. The market model is calculated from day -210 to -11, evaluation period is established at days -1 and 0 and the announcement date is day 0. Mixed offers are combined with the stock offers and percent positive refers to the percentage of AR in the subsample that turn out to be positive. The Wilcoxon signed-rank test is used to establish significance of percent positive.*

1981-1992	NUMBER OF OBSERVATIONS	AVERAGE (MEDIAN) ABNORMAL RETURN	T-STATISTIC	PERCENT POSITIVE
PANEL A: ACQUISITION OF PRIVATELY HELD TARGET				
NEW BLOCKHOLDER FROM TARGET	497	0.74% (0.08%)	3.53**	54.7*
NO NEW BLOCKHOLDER FROM TARGET	12	-0.36% (-0.25%)	-0.46	41.7
PANEL B: ACQUISITION OF PUBLICLY HELD TARGET				
NEW BLOCKHOLDER FROM TARGET	198	0.89% (0.47%)	3.25**	62.6**
NO NEW BLOCKHOLDER FROM TARGET	91	0.80% (0.46%)	2.85**	61.5*

*indicates significance at a 5 percent level; **indicates significance at a 1 percent level

Panel A shows the results for the acquisition of privately held targets. If the target firms becomes a new blockholder after the acquisition, bidding firms earn a 0.74 percent AR, significant at the 1 percent level ($t=3.25$). If the target firm does not become a new blockholder, the average abnormal bidder returns are an insignificant -0.36 percent ($t=-0.46$). The median abnormal returns are 0.08 and -0.25 percent for the new blockholder and no new blockholder situation, respectively. The Wilcoxon signed-rank test on the proportion of positive returns is consistent with the results of the t-tests. The difference in means between the new blockholder and no new blockholder situation is significant at the 1 percent level ($z=2.66$) for deals with privately traded targets.

Panel B shows the results for the acquisition of publicly traded targets. Bidding firms earn a significant 0.89 percent AR at the 1 percent level ($t=3.25$) if the target firm becomes a new blockholder at the bidding firm. The AR is a significant 0.80 percent ($t=2.85$) at the 1 percent level if

the target firm does not become a new blockholder. The difference in means test shows insignificant results for this public sample ($z=0.50$). The results of the Wilcoxon signed-rank test is consistent with the results of the t-tests. The median AR are 0.47 and 0.46 percent for the new blockholder and the no new blockholder situation, respectively.

Table 6 provides the results of the event study for acquisitions where the method of payment is stock for the 2010-2018 period, grouped according to the creation of a new blockholder at the bidding firm.

Table 6: Average and median two-day abnormal stock returns for bidders offering stock at the announcement of a takeover proposal by whether a new Blockholder emerges from target firm for the 2010-2018 period. Abnormal returns are calculated with the Brown and Warner (1985) event study methodology. The market model is calculated from day -210 to -11, evaluation period is established at days -1 and 0 and the announcement date is day 0. Mixed offers are combined with the stock offers and percent positive refers to the percentage of AR in the subsample that turn out to be positive. The Wilcoxon signed-rank test is used to establish significance of percent positive.

2010-2018	NUMBER OF OBSERVATIONS	AVERAGE (MEDIAN) ABNORMAL RETURN	T-STATISTIC	PERCENT POSITIVE
PANEL A: ACQUISITION OF PRIVATELY HELD TARGET				
NEW BLOCKHOLDER FROM TARGET	574	8.45% (0.00%)	2.08*	51.9*
NO NEW BLOCKHOLDER FROM TARGET	11	2.96% (0.77%)	1.47	63.6
PANEL B: ACQUISITION OF PUBLICLY HELD TARGET				
NEW BLOCKHOLDER FROM TARGET	8	3.63% (1.26%)	1.35	62.5
NO NEW BLOCKHOLDER FROM TARGET	0	NA	NA	NA

*indicates significance at a 5 percent level

Panel A shows the results for deals with a privately traded target. Bidding firms earn a 8.45 percent average abnormal return when the target firm becomes a new blockholder at the bidding firm. This

AR is significant at the 5 percent level ($t=2.08$). When the target firm does not become a new blockholder at the bidding firm, these AR are an insignificant 2.96 percent. The Wilcoxon signed-rank test is consistent with the t-tests. The median abnormal returns are 0.00 and 0.77 percent for the new blockholder and the no new blockholder situation, respectively. The difference in means test shows that the AR for both subsample differ significantly at the 1 percent level ($z=12.75$).

Panel B shows the results for deal with a publicly traded target. Here I find that there is not a sufficient amount of data available in this subsample to properly conduct research. Furthermore, there are no data points at all for the acquisition of publicly traded targets where there is not a new blockholder from the target firm. For this reason, this study will not be able to conclude anything about this subsample.

For both periods, the subsamples for the acquisition of privately held targets provide results consistent with the third hypothesis. The only available subsample for acquisitions of publicly held targets, does, however, not provide results to support the hypothesis. The third hypothesis is therefore rejected for the public subsample. Before definitively evaluating the third hypothesis for the private subsample, further analysis will be performed.

To further investigate this hypothesis and to attempt to explain the variation in abnormal bidder returns, a cross-sectional linear regression analysis will be performed on the private subsample of the stock offers for both periods. Ordinary Linear Regression analysis (OLS) requires several assumptions. One of those is the homoscedasticity assumption. This means that the variance of the errors is constant. If this assumption is violated, errors are said to be heteroskedastic. If one estimates an OLS model with heteroskedastic data, without correcting for this heteroscedasticity, the OLS estimators will no longer be the best linear unbiased estimators. As a consequence, the standard errors of the coefficient do not hold and therefore decrease the reliability of the analysis. To test whether the dataset of this study violates the homoscedasticity assumption, a White's test is performed. This test shows that this dataset violates the homoscedasticity assumption, something that is very common in financial datasets (Schwert & Seguin, 1990). To assure that the OLS estimators are reliable, heteroscedasticity-robust standard errors will be used. Using such a standard error corrects for the effects of heteroscedasticity causing more evidence to be present to be able to reject the null hypothesis (White, 1980).

The results of the cross-sectional regression are presented in Table 7. The results are grouped by announcement date period.

Table 7: Regression results explaining announcement-period abnormal bidder returns when acquiring a privately held firm with stock as method of payment for both periods. T-statistics are presented in brackets. Heteroskedastic standard errors are used.

	PANEL A	PANEL B
	1981-1992 (N=509)	2010-2018 (N=585)
INTERCEPT	-0.003 (-0.20)	0.040 (-1.53)
NEW BLOCKHOLDER DUMMY	0.018 (1.97*)	0.049 (1.99*)
RELATED IN BUSINESS DUMMY	-0.005 (-0.68)	-0.210 (-1.53)
RELATIVE SIZE OF ACQUISITION	0.008 (3.47**)	0.017 (1.96*)
ADJUSTED R²	0.02	0.01

*indicates significance at a 5 percent level; **indicates significance at a 1 percent level

Panel A provides the results for the 1981-1992 period. I find that, consistent with the event study results, the dummy variable for a new blockholder at the target firm is significant at the 5 percent level ($t=1.97$). When a new blockholder is formed at the bidding firm, the abnormal bidder returns are on average 1.8 percent higher. Furthermore, I find a significant effect of the relative size on the cumulative abnormal returns at the 1 percent level ($t=3.47$). The relatedness in business dummy, however is not found to have a significant effect on the CAR ($t=-0.68$), a results that adds to the large amount of conflicting evidence on this variable (Bettis & Hall, 1982; Lubatkin, 1987; Rumelt, 1974).

Panel B provides the results for the 2010-2018 period. Here I find results similar to those of the early period. The new blockholder dummy is significant at the 5 percent level ($t=1.99$). The CAR is on average 4.9 percent higher with a new blockholder at the acquirer. Relative size of the acquisition is found to have a significant effect on the CAR at a percent level ($t=1.96$), whereas relatedness in business does not have a significant effect ($t=-1.53$).

Combining the evidence from the event study and the cross-sectional analysis, no evidence was found against the third hypothesis for the takeover of privately held targets. The third hypothesis will therefore for the private subsample, unlike for the public subsample, not be rejected.

5 Conclusion

This paper studied the bidder returns, related to the announcement of a small M&A deal. The systematic exclusion of these small transactions in earlier research caused a hiatus in the academic literature. Besides that, small firms have different capital structures as opposed to large firms (Degryse et al., 2012), something that has been found to be a cause of differences in stock performance (Gornall & Strebulaev, 2018).

The stock performance of the bidding firm was studied using an event-study methodology. The inspiration of this methodology originates from the Brown and Warner (1985) study. To be able to compare the results of small deals with the results of large deals, the 1981-1992 period from Chang's (1998) study is chosen. Additionally, the 2010-2018 period is studied to provide results that are more indicative for current markets.

The first hypothesis theorised that bidder returns will be significantly higher when taking over a small privately traded company compared to a small publicly traded company, when financed in cash. The reasoning behind this is that the takeover market for privately traded companies would be less competitive compared to the takeover market for publicly traded companies. The evidence led us to reject this hypothesis for both the 1981-1992 and 2010-2018 samples. This means that there is no time effect that influenced the level of bidder returns in cash-financed small firm takeovers, based on this theory.

Furthermore, Chang (1998) studied bidder returns in a similar way, the only difference being that he studied large deals. His study also concluded that this first hypothesis should be rejected. This study, however, theorized that the takeover market for small cash-financed privately traded firms is more competitive than its large equivalent. Yet, the evidence does not support this theory. For this reason it has to be concluded that there is no deal size effect that influenced the level of bidder returns in cash-financed takeovers in the 1981-1992 period, based on this theory.

The second hypothesis theorized that bidder returns will not be significantly different when taking over a small privately traded company compared to a small publicly traded company, when financed with stock. The reasoning behind this is that the negative effects of offering stock can be mitigated by disclosing bidder specific private information to the target firm, if the target firm has a small number of shareholders. The results from the 1981-1992 sample provided evidence in favour of this hypothesis. Additionally, both the private and the public subsample showed significantly positive average abnormal returns, consistent with the theory. Furthermore, Chang (1998) provided evidence that the positive AR disappeared when the target firm was owned by a large number of

shareholders. For this reason it has to be concluded that, based on this theory, there is a target firm size effect that influenced the level of bidder returns in stock-financed takeovers in the 1981-1992 period.

In contrast, the 2010-2018 sample did not provide evidence in favour of the second hypothesis. This results is mainly driven by the zero-return of the public subsample. A possible reason that this subsample does not show a positive AR, which would have been consistent with the theory, is the introduction of the Regulation Fair Disclosure (2000). This regulation prohibits firms from disclosing material information selectively to analysts and institutional investors (U.S. Securities and Exchange Commission, 2014). A paper on the effects of this regulation found that it decreased the amount of information shared by the bidding firm (Irani & Karamanou, 2003). This paper does not distinct between sharing information with private and public targets firms. It is therefore probable that the difference in height of the average abnormal bidder returns becomes similar to the large deal situation as described by Chang (1998). Meaning that the private subsample should show positive and the public subsample should show negative AR. The evidence supports this theory. For these reasons it has to be concluded that there is a time effect that influenced the level of bidder returns in stock-financed small firm takeovers, based on this theory.

The third hypothesis theorized that bidder returns will be significantly higher when the transaction creates a new blockholder at the target firm and the method of payment is stock. The reasoning behind this is that if the target firm becomes a blockholder at the acquirer, the level of effective monitoring will increase. As a result, the AR should be significantly higher when a blockholder is created. The results from both the 1981-1992 and 2010-2018 private subsample provide evidence in favour of this theory. It can therefore be concluded that there is, based on this theory, no time effect that influenced the level of bidder returns in stock-financed small firm private takeovers. Additionally, Chang (1998) concluded the same for large private M&A deals. It can therefore also be concluded that there is no deal size effect that influenced the level of bidder returns in stock-financed private takeovers, based on this theory. Furthermore, a cross-sectional regression analysis provided extra supporting evidence on the new blockholder theory. The analysis showed that the formation of a new blockholder from a private deal increased the abnormal bidder returns with, on average, 1.8 percent for the 1981-1992 period and 4.9 percent for the 2010-2018 period. The relative size of the acquisition was found to have explanatory power for the height of the cumulative abnormal return.

The unavailability of data made it not possible to test the third hypothesis for public deals in the 2010-2018 period. The possible presence of a time effect on the level of abnormal returns can

therefore not be determined. The results of the public subsample for the 1981-1992 period provided evidence against the new blockholder theory. Both the new blockholder and the no new blockholder group turned out to be positive and differed insignificantly from each other. A possible explanation might be that negative information effects that are associated with issuing stock to the public dominated the new blockholder effect (Eckbo, Masulis, & Norli, 2000). The rejection of this hypothesis for the public subsample is consistent with the findings of Chang (1998). It should therefore be concluded that, based on this theory, there is a public status effect that influenced the level of bidder returns in stock-financed small firm takeovers.

These results have not provided evidence that, in this setting, deal size has a significant effect on the level of bidder returns. The time period, public status of the target firm and method of payment did, on the contrary, appear to have significant influence on the level of bidder returns. The significant influence of the time period is particularly interesting, because the second period is right after the latest financial crisis. Future research could focus on such an effect of the financial crisis on the level of bidder returns. This was not fully possible at this moment in time, because data was only limitedly available. Furthermore, it was shown that governmental intervention possibly affected the level of bidder returns. Future research could focus on the specific effects of governmental interventions on the stock performance of companies. This would particularly be interesting for political institutions that should consider the effects of their policies on every party involved. Additionally, it could be interesting to incorporate extra variables into the cross-sectional regression analysis to find more characteristics that have explanatory power in explaining the level of event related bidder returns. The scope of this paper did not allow for the addition of such extra variables.

All in all, it can be concluded that a small takeover has an effect on the event related bidder returns. These results are mainly being observed when the method of payment is stock and a new blockholder is formed through the deal.

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