

Master thesis

# THE RELATIONSHIP BETWEEN OWNERSHIP CONCENTRATION AND ACQUIRER'S PERFORMANCE

Comparison between the United States and Europe

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Master Economics - Corporate finance and control

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**ABSTRACT:** Blockholders can improve acquirer's performance via direct intervention, monitoring and trading of shares, but can also worsen performance via self-interested behavior. The focus of this study to examine the difference in relationship between ownership concentration and the performance of the acquiring company around the M&A announcement for the United States and Europe. A sample of M&A transactions by acquiring companies listed in the United States and Europe over the sample period January 1, 2009 to December 31, 2015 is used. Different threshold levels of ownership concentration (5, 10, 20 percent) are taken into account because the percentage of shares owned by a blockholder might affect the benefits and costs of a blockholder. This study underlines the importance of distinguishing different levels of ownership concentration by showing a significant negative relationship only between the number of blockholders at the 10 percent level and the cumulative abnormal return. Moreover, this study illustrates the importance of distinguishing between the United States and Europe by showing a significant difference in the relationship for the United States and Europe at the 10 percent level. The result can be explained by focusing on the benefits and costs of blockholders in combination with the legal system enforced.

**Keywords:** Ownership concentration, blockholders, performances of acquiring company, cumulative abnormal returns, heterogeneity, legal system.

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# 1. Introduction

Merger and acquisition (M&A) transactions have become a widely used tool for companies to acquire growth (Engelbrecht and Shah, 2017). *“Without a doubt, the level of mergers and acquisitions is one of the most important drivers of corporate performance over the last decade”* (Yen and André, 2010, p.1). Last year, over 48,000 M&A transactions were conducted worldwide, equivalent to the completion of one transaction every ten minutes (IMAA, 2017). M&A transactions have many potential benefits for shareholders by maximizing shareholders' value through among others economies of scale, network expansion and the diversification of risks (DePamphilis, 2015). However, M&A transactions also have some potential costs for shareholders. M&A transactions namely tend to intensify the conflicts of interest between management and shareholders of the acquiring company (Berle and Means, 1932; Jensen and Meckling, 1976). Since shareholders lack direct control, have limited incentives to monitor management's behavior and information asymmetries exist between shareholders and management, it is likely that management makes decisions in its own interest at the expense of the shareholders' interest (Williamson, 1984; Fama and Jensen, 1983). The potential for destruction of shareholders' value leads to a role for large shareholders, also known as blockholders. Blockholders have considerable stakes in the company, which gives them the incentives to bear the costs of intervention and monitoring management and the power to enforce shareholders' interest during an M&A transaction (Demsetz and Lehn, 1985; Shleifer and Vishny, 1986; Edmans, 2009; Admati and Pfleiderer, 2009; Edmans, 2014). As a result, blockholders can play a critical role in governance around M&A transactions. Although blockholders can improve the decisions made by management concerning M&A transactions, there are also some potential costs of blockholders which can worsen the acquirer's performance as a result of an M&A transaction. Potential costs are the result of expropriation and self-interested behavior by blockholders (Edmans, 2014).

The role of blockholders in M&A transactions can have implications for the other shareholders and might lead to adjustments of their trading strategy. However, the role of blockholders is not only an important question for shareholders, also policy makers around the world deal with this relationship. Policy makers who value high returns for the acquiring company can alter their legislation on ownership concentration in acquiring companies based on the relationship between ownership concentration and acquirer's performance. This relationship also does not lack attention in the scientific field. Though, the difficulty of estimating the benefits and costs of blockholders causes no consensus among scientists about the relationship.

Current studies on the relationship between ownership concentration<sup>1</sup> and the performance of the acquiring company show ambiguous results (i.e. Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007; Masulis, Wang and Zie, 2007; Roosenboom, Schlingemann and Vasconcelos, 2014; Danbolt, Siganos and Vagenas-Nanos, 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). The ambiguity in results can be explained by the different proxies used for ownership concentration, different time periods, different event windows and estimation windows to calculate the cumulative abnormal return and the different control variables used in the analyses.

The ambiguity of results can also be explained by the fact that blockholders differ from each other. Existing studies do not incorporate heterogeneity of blockholders, while in reality a diverse class of blockholders exists which all can have different relationship with company performance (Edmans and Holderness, 2017). This heterogeneity of blockholders also makes that the findings for the relationship between ownership concentration and acquirer's performance in one region do not automatically extent to another region (Edmans and Holderness, 2017). Despite the growing level of M&A transactions in Europe, current studies primarily focus on the United States (IMAA, 2017). The focus of this study is to investigate the heterogeneity of blockholders in the United States and Europe and examine how this heterogeneity influences the relationship between ownership concentration and the performance of an acquiring company in both topographical regions. According to the literature, heterogeneity among American and European blockholders is mainly visible in their activism and their relational or arm's length way of investing (Black, 1998; Edmans, 2009; Oosterhout, Heugens and Essens, 2013). The central question in this paper is: *To what extent differs the relationship between the ownership concentration in the acquiring company and the performance of the acquiring companies around the M&A announcement between acquiring companies listed in the United States and Europe?*

To examine the relationship between ownership concentration and acquirer's performance, a sample of 434 M&A transactions by acquiring companies listed in the United States and 105 M&A transactions by acquiring companies listed in Europe is included in the analyses. M&A

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<sup>1</sup> The number of blockholders, the presence of a blockholder, or the total percentage of shares owned by blockholders are used as operationalization of the concept ownership concentration in these studies (i.e. Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007; Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015).

transactions over the sample period January 1, 2009 to December 31, 2015 are used. Different threshold levels of ownership concentration (5 percent, 10 percent and 20 percent) are taken into account because the percentage of shares owned by a blockholder might affect the benefits and costs of a blockholder. The number of blockholders at each threshold level is used as a proxy for ownership concentration and the cumulative abnormal return (CAR) of the acquirer's stock is used as a proxy for the acquirer's performance.

The results of this study provide clarity with respect to the relationship between ownership concentration and the performance of the acquiring company. The results of the regression analysis state that the number of blockholders 10 percent level has a negative significant relationship with the cumulative abnormal return of the acquiring company. However, the analysis does not provide a significant relationship for the number of blockholders at the 5 percent level and at the 20 percent level. Taken these results into account, this study underlines the importance of distinguishing different threshold levels for defining ownership concentration, in contrast to the definition commonly used in the scientific field (i.e. Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007; Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). Specifically, it shows that the conclusions concerning the relationship between ownership concentration and the performance of the acquiring company depend on the threshold level used to define ownership concentration. Moreover, this study illustrates the importance of distinguishing between the United States and Europe. The results demonstrate a significant difference in the relationship between ownership concentration and the acquirer's performance between the United States and Europe at the 10 percent level. The result can be explained by focusing on the benefits and costs of blockholders in both regions in combination with the legal system enforced.

This paper is structured in the following way. Section two discusses theoretical and empirical evidence with regard to the relationship between blockholders and the performance of the acquiring company. Section three explains the methodology and variables used to analyze the central question. Section four covers the data description and major findings. Section five concludes and provides the limitations of the study and suggestions for future research.

## **2. Literature review**

This section explores the relationship between ownership concentration and the performance of the acquiring company theoretically. Section 2.1 discusses the theoretical and empirical

evidence with regard to the relationship between blockholders and acquirer's performance. The majority of the studies shows a positive relationship between blockholders and acquirer's performance, these studies are discussed in section 2.1.1. However, a minority finds a negative or no significant relationship between blockholders and acquirer's performance. These findings are discussed in section 2.1.2. Section 2.2 describes the differences in blockholders between the United States and Europe and argues how these differences can affect the relationship between ownership concentration and the acquirer's performance for the United States and Europe.

## **2.1 Relationship between blockholders and acquirer's performance**

### **2.1.1. Direct intervention, monitoring and trading of shares by blockholders**

Within a company, management is hired to represent the company's ultimate owners, the shareholders. Shareholders concede control rights to management to run the company on their behalf because management has more expertise and information due to their close involvement in the company. But this delegation separates ownership from control, which can lead to agency problems due to conflict of interest between management and shareholders. While the shareholders want to maximize the company value, management is mainly interested in gaining money and power (Jensen, 2002). Since management is distinct from the shareholders and does not bear the full costs of their decisions, management has inadequate incentives to pursue the shareholders' interests. Management tries to conduct M&A transactions that maximize its private benefits, which are not necessarily in the interest of the shareholders. Management is able to behave in this way because the shareholders lack direct control and information asymmetries exist between shareholders and management (Williamson, 1984; Fama and Jensen, 1983).

An M&A transaction tends to intensify the inherent conflict of interest between managers and shareholders<sup>2</sup>, and therefore increases the need for monitoring the actions of management by the shareholders (Berle and Means, 1932; Jensen and Meckling, 1976). However, more dispersed shareholders who own small stakes in the company have limited incentives to monitor management's behavior and are typically less involved in the decision making because of high

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<sup>2</sup> Management is well placed to negotiate private benefits for themselves during the M&A process due to insider knowledge and daily control of the company. These benefits can include bonuses on the completion of an M&A transaction, an increase in compensation, or an increase in their standing or prestige in the business community (Lorenzi and Viotto, 2015). These benefits can incentivize management to conduct an M&A transaction which is not in the interest of the shareholders.



monitoring costs and collective action problems <sup>3</sup> (Black, 1990). Blockholders<sup>4</sup> have considerable stakes in the company, which give them the incentives to bear the cost of intervention and to monitor the actions of management, and the power to enforce shareholders' interests during an M&A transaction (Edmans, 2014).

Via direct intervention, blockholders can improve the decision making by management concerning M&A transactions. Improved decision making will lead to better M&A transactions and an increase in the performance of the acquiring company (Demsetz and Lehn, 1985; Shleifer and Vishny, 1986). The blockholders can restrain management from risky, opportunistic M&A transactions that are not in the shareholders' interest. Due to economies of scale, blockholders have more incentives to develop monitoring capabilities, compared to more dispersed shareholders. The enhanced monitoring capabilities enable the blockholders to closer monitor management which results in improved decision making as well (Edmans, 2014). Besides from direct intervention, blockholders can also use the market to defend shareholders' interest by trading a company's shares. If blockholders are dissatisfied with the actions of management, for instance because management involves in value destroying M&A transactions, blockholders can sell their shares in the company. The sale of the shares reduces the stock price and punishes management ex post. The threat of divesting encourages management to pursue shareholders' interests ex ante and engage in value creating M&A transactions (Edmans, 2009; Admati and Pfleiderer, 2009). Thereby, blockholders increase the performance of the acquiring company around an M&A transaction.

The potential benefits of blockholders are found in studies by among others Moeller and Schlingemann (2005), Ben-Amar and André (2006) and Chen, Harford and Li (2007). They find that a more concentrated ownership structure is associated with superior acquirer's performance (i.e. Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007).

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<sup>3</sup> The cooperative action problem has its roots in game theory which highlights the problem of cooperation of dispersed shareholders. Shareholders can choose to cooperate with other minority shareholders to monitor management's behavior or to defect. The most preferred outcome for each individual shareholder is to defect while the other shareholders cooperate, yielding the highest payoff. Since shareholders know that everyone's most preferred outcome is to defect, the rational is to expect that these other shareholders will defect. The equilibrium of the game becomes noncooperation (Jansson, 2007).

<sup>4</sup> A blockholder is "any investor who has sufficient incentives to monitor management" (Edmans, 2014, p. 34).

Based on the positive findings for the relationship between ownership concentration and the performance of the acquiring company, the following hypothesis is formulated:

*Hypothesis 1a: Ownership concentration in an acquiring company is positively related to the performance of the acquiring company around the M&A announcement.*

### **2.1.2. The costs of blockholders**

Besides the positive relationship of blockholders and acquirer's performance, there are also some potential costs of blockholders. Blockholders may be concerned about unsystematic risk because of their considerable stakes in the company. They can induce the company to forgo a risky, value-maximizing M&A transaction in exchange of a more stable, less valuable M&A transaction. Moreover, blockholders can stimulate the company to involve in an M&A transaction which is beneficial for the blockholders themselves but which is not in the interest of the minority shareholders and/or the acquiring company (Edmans, 2014). With this kind of intervention, blockholders will lower the performance of the acquiring company around the M&A announcement.

The potential costs of blockholders are found in a minority of studies (i.e. Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). They show a negative or insignificant relationship between the blockholders and the performance of an acquiring company. The researchers argue that the insignificant relationship can indicate that the benefits and the costs of blockholders around an M&A announcement balance each other out (i.e. Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). The ambiguity in results can be explained by the different proxies used for ownership concentration, different time periods, different event windows and estimation windows to calculate the cumulative abnormal return and the different control variables used in the analyses.

Based on the negative findings for the relationship between ownership concentration and the performance of the acquiring company hypothesis 1b is formulated. Based on the insignificant findings hypothesis 1c is formulated:

*Hypothesis 1b: Ownership concentration in an acquiring company is negatively related to the performance of the acquiring company around the M&A announcement.*

*Hypothesis 1c: Ownership concentration in an acquiring company is not related to the performance of the acquiring company around the M&A announcement.*

## **2.2 Heterogeneity of blockholders between United States and Europe**

Despite the large differences between different kind of blockholders, most studies do not account for blockholder heterogeneity and study blockholders in aggregate (i.e. Edmans and Holderness, 2017; Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007; Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). However, different kind of blockholders may engage in different forms of governance, be affected by company characteristics in different ways, possess different skills, preferences and objectives, and have different effects on company performance. The importance of heterogeneity for blockholders in large public companies in the United States is stressed by Cronqvist and Fahlenbrach (2009). Cronqvist and Fahlenbrach (2009) find that heterogeneity across American blockholders has a statistically significant effect on investment and financial policies. Besides heterogeneity across blockholders in a single country as the United States, blockholders across different countries are also heterogeneous (Edmans, 2014). Edmans and Holderness (2017) state that “findings in the United States do not naturally extend to other countries and so studying other countries – even if the results end up being the same as in the United States – is valuable” (Edmans and Holderness, 2017, p.75). Following this recommendation, this study looks at the heterogeneity of blockholders in the United States and Europe. The heterogeneity across blockholders in the United States and Europe is expected to cause a difference in the relationship between ownership concentration and the performance of the acquiring company for the United States and Europe. The following two paragraphs discuss this heterogeneity in the United States and Europe and show how the differences in blockholders affect the relationship between ownership concentration and the performance of the acquiring company.

First, American blockholders show a high level of passivism, while European blockholders are characterized by activism (Black, 1998; Edmans, 2009). The blockholders in the United States rarely intervene because they experience significant institutional and legal barriers, which make active monitoring more difficult (Black, 1998; Edmans, 2009). The active European blockholders show more engagement, invest more effort in influencing the company’s policy and involve more in monitoring management. Via intervention and close monitoring, active blockholders can lead to better acquirer’s performance compared to passive blockholders.

Relatedly, several studies find stronger positive effects of active blockholders on the performance of acquiring companies (Cronqvist and Fahlenbrach, 2009; Clifford and Lindsey, 2016).

Second, American blockholders are more arm's length investors, while European blockholders are classified as more relational investors (Oosterhout, Heugens and Essen, 2013). Relational investors are often durable and actively involved in decision making of the company they invest in, whereas arm's length investors take a more hands-off approach towards management (Oosterhout et al., 2013). Relational blockholders have a bigger incentive to require information and closely monitor management due to their relationship with company's management (Bhagat, Black and Blair, 2001; Ayres and Cramton, 1994). Since relational investors in general have a larger commitment to management, relational investors can restrain management from an inefficient M&A transaction and search more extensively for value-enhancing target companies. The increase of company performance by relational investors is supported by the findings of Oosterhout et al. (2013).

Based on the above-mentioned differences in blockholders between the United States and Europe, the expectation is that the relationship between ownership concentration and the performance of the acquiring company is more positive in Europe compared to the United States. The more positive relationship will be indicated by a positive interaction term for Europe. If the relationship for the United States is negative, the relationship becomes less negative or even positive for Europe. If the relationship for the United States is positive, the relationship becomes stronger positive for Europe. The following hypotheses are formulated:

*Hypothesis 2: The relationship between ownership concentration and the performance of the acquiring company around the M&A announcement is more positive for an acquiring company listed in Europe compared to an acquiring company listed in the United States.*

### **3. Methods**

In this chapter the methods and variables are discussed. Section 3.1 describes the criteria used in the data collection process. Section 3.2 and section 3.3 discuss the cumulative abnormal return as dependent variable and the number of blockholders as independent variable. Section 3.4 describes the control variables which are included to provide a more accurate description of the relationship between ownership concentration and acquirer's performance. An overview of all the variables is included in the appendix (table A1). Finally, section 3.5 describes the model used and validates the basic assumptions of the method used.

#### **3.1 Data selection**

This study focuses on completed M&A transactions with announcement dates between January 1, 2009 and December 31, 2015. The rationale for this period arises from the adoption of Directive 2006/46/EC by the European Commission in 2006. This directive requires all listed European companies to produce a corporate governance statement in their annual report, providing increased attention to corporate governance in general and ownership concentration in specific (European Commission, 2006). Furthermore, the European Commission issued the Shareholders' Rights Directive (Directive 2007/36/EC) in 2007. This directive aims to protect shareholders and promotes the smooth and effective exercise of shareholders' rights. This promotion of shareholders' rights can make it easier for blockholders to intervene or monitor management (European Commission, 2007). The implementation of both directives might influence the relationship between ownership concentration and acquirer's performance. Since member states have up to two years to implement the directives in national law, January 1, 2009 is the start of the data period (European Commission, 2007). December 31, 2015 is the end of the data period to assure the data availability. There have not been any major changes in the legislation concerning ownership concentration in the United States for this time period. Therefore, the used time frame fits with the American data as well and will not cause a bias in the results.

The sample includes 434 completed M&A transactions by acquiring companies listed in the United States and 105 completed M&A transactions by acquiring companies listed in Europe. An M&A transaction is defined as completed when the independent target company is fully merged with or acquired by the acquiring company. The focus is on listed companies as most available data concerning ownership concentration is based on public information. Target and

acquiring companies classified as financial company (SIC codes 6000-6999), utility company (SIC codes 4000-4999) or governance related company (SIC 9111-9999) are excluded from the sample. Research shows that corporate governance mechanisms for companies in the financial-, utility and governance related industry are very different compared to other industries (i.e. Berger, Ofek and Yermack, 1997; Vafeas and Theodorou, 1998; Swanstrom, 2006). The reasons for the different results is that M&A transactions in these industries are often launched by government authority to save the distressed company (Swanstrom, 2006), different regulatory environments are applicable (Vafeas and Theodorou, 1998; Masulis and Simsir, 2013) and these companies often have different operating characteristics and capital structures (Bliss and Rosen, 2001). Excluding the mentioned industries prevents biased results.

The data used in this study is retrieved from different databases. The sample of M&A transactions is selected from ThomsonOne. Data on the performance of the acquiring company and the number of blockholders is retrieved from Eikon. Data on the control variables is retrieved from Thomson One and Eikon. All the dataset are merged via a variable indicating a unique company code.

### **3.2. Dependent variable**

The performance of the acquiring company is measured by the cumulative abnormal return (CAR) of the acquirer's shares around the M&A announcement (e.g. Lewellen, Loderer and Rosenfel 1985; Hayward and Hambrick, 1997). CAR is indicated in the academic literature as an established indicator for performance of the acquiring company around an M&A announcement (i.e. Hayward and Hambrick, 1997; Bruner, 2002). Event studies have been widely used to assess the CAR (i.e. Bruner, 2004; Swanstrom, 2006). The focus is on the M&A announcement date instead of the effective date since the announcement date captures the market reaction more accurately (Fama, 1980; Bodie, Kane and Marcus, 2008). The cumulative abnormal return for the acquiring company is calculated in the following steps.

First, the expected average return is calculated to compare it with the market reaction around an M&A announcement. The estimation window for the average return is -255 till -5 trading days relative to the event date. A longer estimation window for the expected average return might generate a better view of the co-movement of the stock with the market, however a longer time period might also capture other events which distort this relationship. The estimation window of 250 days is in line with previous literature (i.e. MacKinlay, 1997; Campbell, Lo and

MacKinlay, 1997; Thomsen and McKenzie, 2001). The S&P500 is used as the market return for acquiring companies in the United States and the S&P Europe 350 is used for acquiring companies in Europe. The expected average return is calculated by:

$$E(R_{i,t}) = \alpha_i + \beta_i R_{m,t} + \varepsilon_t$$

With:  $E(R_{i,t})$  = Expected average return on share i at time t

$\alpha_i$  = Average return on share in period with no market return

$\beta_i R_{m,t}$  = Co-movement of the stock with the market

$\varepsilon_t$  = Error term

Second, the abnormal return within the event window is calculated. The event window is the range of days around the M&A announcement. The choice of the time interval for the event window has implications for the interpretation of the relationship between ownership concentration and performance around the M&A transaction. A shorter period might not capture the full consequences of the M&A transaction on the performances of the acquiring company. However, a shorter period can reduce the influence of other events on the return of the company.<sup>5</sup> The trade-off is made between both sides and an event window of -5 till +5 trading days relative to the event date is used as the estimation period. This event window is in line with previous literature (i.e. Shah and Arora, 2014; Adnan and Hossain, 2016). The inclusion of trading days before and after the event window ensures that abnormal returns due to potential information leakage prior to the announcement or post-event drifts are also included in the analysis. The abnormal return is calculated by:

$$AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})$$

With:  $AR_{i,t}$  = Abnormal return on share i at time t

$R_{i,t}$  = Average return on share i at time t

Third, the cumulative abnormal return variable is constructed. The daily abnormal returns are cumulated for each share over the event window. Research has shown that CAR reflects the

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<sup>5</sup> A shorter pre-merger period may decrease the cumulative abnormal returns because it might take some time before the information concerning the M&A transaction is incorporated in the stock price by the investors. This can make it more difficult to observe a relationship between ownership concentration and performances. As a robustness test, see paragraph 4.3, a wider event window is included to assure that the relationship found is not the consequence of the chosen event window.

market reaction better than daily abnormal returns because investor reactions might fluctuate per day in the event window (Bodie et al., 2008). The cumulative abnormal return is calculated by:

$$CAR_{i,t1,t2} = \sum_{t=t1}^{t2} AR_{i,t}$$

With:  $CAR_{i,t1,t2}$  = Cumulative abnormal return on share i at time t1 till t2

t1= -5 trading days relative to the event date

t2= +5 trading days relative to the event date

The cumulative abnormal return of the acquiring company will serve as the dependent variable indicating the performance of the acquiring company around the M&A announcement. A positive cumulative abnormal return means that the shareholders have revised their expectations upwards for the future return of the acquiring company around the M&A announcement.

### 3.3 Independent variables

The independent variables measure the ownership concentration by looking at the number of blockholders. As stated in section 2.1, a blockholder is “any investor who has sufficient incentives to monitor management” (Edmans, 2014, p. 34). However, empirically it is more difficult to classify the stake required for a blockholder to have sufficient incentives. Previous empirical studies defined a blockholder as a shareholder holding at least 5 percent of the shares (i.e. Moeller and Schlingemann, 2005; Ben-Amar and André, 2006; Chen et al., 2007; Masulis et al., 2007; Roosenboom et al., 2014; Danbolt et al., 2014; Ryu and Brush, 2014; Ahn and Chung, 2015). Instead of being driven by theory, this 5 percent is chosen because shareholders have to dispose their position upon crossing the 5 percent threshold in the United States (SEC, 2012). However, the percentage of shares owned by a blockholder can affect the benefits and costs of a blockholder. The incentives to monitor and the ability to engage in intervention may become larger when the blockholder is holding a larger stake in the company. But the concern about unsystematic risk and self-interested behavior may also become larger when the stake increases. The relationship between the number of blockholders and the performance of an acquiring company therefore may depend on the threshold level taken to define a blockholder. The findings including only the threshold at the 5 percent level may not be generalizable to blockholders at higher levels of ownership concentration. Edmans (2014) recommends to make



the empirical distinction between different threshold levels used to define ownership concentration (Edmans, 2014).

Besides the 5 percent level, the number of blockholders of the acquiring company is distinguished at the 10 percent and 20 percent level to deal with the possible differences in benefits and costs of a blockholder at different threshold levels of ownership concentration. The 10 percent level and the 20 percent level are included because studies describe that shareholders can exert effective influence on management when they cross these thresholds (La Porta, Lopez-de-Silanes and Shleifer, 1999; Isakov and Weisskopf, 2009; Almeida, 2016). The different defined thresholds can be explained by the different countries investigated and the chosen time frame. A larger amount of shareholders that reach the predefined threshold indicates higher ownership concentration.

To investigate the heterogeneity across blockholders between the United States and Europe, variables indicating the total number of active and passive blockholders as a percentage of total number of blockholders at the 5 percent, 10 percent and 20 percent level are included. “An active blockholder is a group or an individual who uses an equity stake in a corporation to put pressure on the corporation’s management and change the behavior of corporations with a view to increase shareholder value” (Reuters, 2017). Furthermore, variables for the number of relational blockholders and the number of arm’s length blockholders as a percentage of the total number of blockholders at the 5 percent, 10 percent and 20 percent level are included. Relational blockholders include banks and trusts, research firms, holding companies, corporations, other insider investors, foundations, individual investors and government agencies. Arm's length blockholders include investment advisors, hedge funds, pension funds, sovereign wealth funds, private equity, venture capitalists and insurance companies (Oosterhout et al., 2013).

### **3.4 Control variables**

Consistent with prior research on ownership concentration and the performance of the acquiring company, certain transaction and company characteristics are included as control variables to provide a more accurate description of the relationship between ownership concentration and acquirer’s performance. Previous literature shows that the incorporated control variables explain acquirer’s performance, this means they distort the investigated relationship between ownership concentration and acquirer’s performance.

The first control variables added to the regression is the size of the acquiring company (SIZE). In general, the interests of management in smaller companies are better aligned with the interests of the shareholders, compared to larger companies. This alignment of interests prevents exploitation of the shareholders by management and results in higher performance of the acquiring company around an M&A announcement. Furthermore, management in large companies is more prone to hubris and overconfidence about the proposed synergies, which can lead to paying larger premiums for the target company and lower acquirer's performance. A negative relationship between size of the acquiring company and acquirer's performance is expected. This relationship is supported by among others Moeller, Schlingemann and Stulz (2004) and Rademakers (2011). The company size is measured by the acquirer's book value of total assets (Moeller et al., 2004).

Second, the regression is controlled for the leverage position of the acquiring company (LEV). Creditors serve as an effective monitoring mechanism which improves the decision making by management (Jensen and Meckling, 1976). Highly leveraged companies may be subject to severe monitoring by the creditors which can prevent wasteful M&A transactions. A positive relationship between the leverage position and acquirer's performance is expected. This relationship is empirically supported by among others Ghosh and Jain (2000), Kang, Shivdasani and Yamada (2000) and Harford (1999). The leverage is measured by the debt-to-common equity ratio (i.e. Ghosh and Jain, 2000; Kang et al., 2000; Harford, 1999).

Third, the regression is controlled for the relatedness of target and acquiring company, implying that the acquirer and the target are in the same industry (RELAT). If the target and acquirer are related, it is easier to integrate knowledge, combine operations, and realize economies of scale. An M&A transaction involving related target and acquirer will lead to more benefits and less costs, causing higher performance. A positive relationship between the relatedness and acquirer's performance is expected. This relationship is supported by among others Krishnan, Miller and Judge (1997), Heron and Lie (2002) and Moeller et al. (2005). A dummy variable is included indicating whether both companies are in the same industry.<sup>6</sup> The relatedness dummy variable takes one if both companies are in the same industry, and zero otherwise (i.e. Krishnan et al., 1997; Heron and Lie, 2002; Moeller et al., 2005).

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<sup>6</sup> The company industry a company is in is determined based on the Reuters "TF Macro Code".

Fourth, the regression is controlled for prior year stock performance of the acquiring and the target company (PERFACQ, PERFTARG). The performance of both companies is expected to persist after the M&A transaction. The merge with or acquisition of a well performing target company will revise the investors' expectations upwards for the future return of the acquiring company, and will thereby positively affect the performance of the acquiring company. A positive relationship between prior year stock performance of the acquiring company and the acquirer's performance as well as a positive relationship between prior year stock performance of the target company and the acquirer's performance is expected. Both relationships are empirically supported by among others Morck, Shleifer and Vishny (1990), Eisenberg, Sundgren and Wellset (1998), Hayward (2002) and Jindra and Moeller (2013). Past performance is measured by the Return on Assets (ROA) of the acquiring company and of the target company (i.e. Morck et al., 1990; Eisenberg et al., 1998)<sup>7</sup>.

Fifth, the regression is controlled for the deal value (DEALV). A large deal value means that the acquiring company is either paying a high premium for the target company or acquires a large target. Due to managerial hubris, acquiring management overestimates the proposed synergies and tend to pay higher premiums for the target company. The higher the premium paid, the smaller the value creation potential. The overpayment will lead to lower acquirer's performance for the acquiring company. Moreover, the integration costs and complexity of acquiring a large target will be higher, resulting in potentially lower performance. A negative relationship between the deal value and acquirer's performance is expected. This relationship is empirically supported by among others Carline, Linn and Yadav (2002) and Moeller et al. (2004). The deal value is the total value of consideration paid by the acquiring company, excluding fees and expenses. (i.e. Carline et al., 2002; Moeller et al., 2004).

Sixth, the regression is controlled for the payment method (PAYM). M&A transactions can be financed via different methods, including all-cash transactions, all-stock transactions or a combination of cash and stock. Financing an M&A transaction with stock can indicate to shareholders that the shares of the acquiring company are overvalued and therefore lead to a negative return around the M&A announcement. A positive relationship between all-cash transactions and acquirer's performance is expected, compared to other forms of payment. This relationship is empirically supported by among others Andrade et al. (2001), Ghosh (2001) and

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<sup>7</sup> "Accounting-based performance measures present the management actions outcome and are hence preferred over market-based measures when the relationship between corporate governance and firm performance is investigated" (Al-Matari, Al-Swidi, Fadzil, 2014, p.29). Since Return on Assets is the most popular accounting-based performance measure, it is included as measure of past performance of the target and acquiring company (Al-Matari, Al-Swidi, Fadzil, 2014).

Moeller et al. (2004). A dummy variable is included indicating whether the acquirer used all cash or an alternative form of financing. The payment method dummy variable takes one if acquirer involved in an all-cash transaction, and zero otherwise (i.e. Andrade et al., 2001; Ghosh, 2001; Moeller et al., 2004).

Finally, the regression is controlled for unobserved yearly events by including regression fixed year effects.

### 3.5 Model

The relationship between ownership concentration and the performance of the acquiring company is investigated using a multivariate ordinary least squares (OLS) regression. It is verified that the sample validates the basic assumptions of an OLS regression. First, the dataset is checked for outliers and influential points, individual cases that have large residuals and a disproportionally large influence on the outcome of the analysis. The influence of outliers is checked for by cook's D and Dfits<sup>8</sup> (Berry and Feldman, 2013). The influential points are checked for by the standardized and studentized tests (Berry and Feldman, 2013). The variables CAR, DEALV, SIZE, PERFACQ and PERFTAR show some influential cases which are corrected for by winsorizing these variables at 1 percent (Berry and Feldman, 2013). Second, the distribution of the variables is checked. To get non-biased results, a normal distribution is demanded. The variables are tested for a normal distribution graphically using a histogram and a density plot with a normal density overlaid on the plot, and numerically using a skewness test (Berry and Feldman, 2013). The values for skewness between -1.96 and +1.96 are considered acceptable in order to prove a normal distribution (George and Mallery, 2010). The correction for skewness of the variables DEALV and SIZE is made by taking the logarithm to reduce right skewness<sup>9</sup> (Berry and Feldman, 2013). Third, homoscedastic of the residuals is demanded, which means that variance should be the same for each value of the independent variables. The residuals are tested for homoscedasticity graphically by plotting the residuals versus fitted values and numerical using a Breusch-Pagan test (Berry and Feldman, 2013). The residuals are homoscedastic.

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<sup>8</sup> Rule of thumb for removing values is for the Cook test  $D > 4/n$ , where  $n$  is the number of observations. The critical value for the DfFit test is  $2\sqrt{(p/n)}$ , where  $n$  is the number of observations and  $p$  is the number of model parameters (Berry and Feldman, 2013).

<sup>9</sup> If the value for skewness is positive, the median is usually less than the mean. The distribution is skewed to the right (Stata, n.d.)

The dataset can be considered as panel data, as the dataset consists of multiple companies, of which some of the companies are included several times in the sample because they conducted multiple M&A transactions through the time period. Separate models are conducted for the number of blockholders at the 5 percent, 10 percent and 20 percent level. The regression is conducted for the complete sample and for the subsample for the United States and Europe. The basic model is the following logistic regression:

$$\text{CAR5}_{i,t} = \alpha + \beta_1 \text{NBLOCK}_{i,t} + \beta_2 \text{PERFACQ}_{i,t} + \beta_3 \text{LEV}_{i,t} + \beta_4 \text{SIZE}_{i,t} + \beta_5 \text{PAYM}_{i,t} \\ + \beta_6 \text{DEALV}_{i,t} + \beta_7 \text{RELAT}_{i,t} + \beta_8 \text{PERFTARG}_{i,t} + \sum \beta_9 \text{Fixed year effects} + \varepsilon_{i,t}$$

With: CAR = Cumulative abnormal return, using event window of -5 till +5

NBLOCK = Number of blockholders

PERFACQ = Prior performance of the acquiring company

LEV = Leverage position of the acquiring company

SIZE = Size of the acquiring company

PAYM = Payment method

DEALV = Deal value

RELAT = Relatedness of acquiring and target company

PERFTARG = Prior performance of the target company

## 4. Results

In this chapter, the results with regard to the formulated hypotheses are presented. Section 4.1 provides a description of the different variables and looks for correlations among the variables. To test the first hypotheses with respect to the relationship between ownership concentration and performance, a regression is conducted for the complete sample in section 4.2.1. To test the second hypothesis with respect to the effect of heterogeneity of blockholders, a regression is conducted for the relationship between ownership concentration and performance for the subsample of the United States and Europe. The differences between both topographical regions are compared in section 4.2.2. More insight in the different blockholders and their relationship with acquirer's performance is provided in section 4.2.3. Finally, an alternative explanation of the findings is provided and the robustness of the results is tested in section 4.3.

### 4.1 Descriptive statistics

Table A2–4 in the appendix present descriptive data of the dependent, independent and control variables for the complete sample and the subsamples of American and European acquiring companies. The cumulative abnormal return for the complete sample is positive. A company includes on average 2.42 blockholders at the 5 percent level, 0.60 blockholder at the 10 percent level and 0.20 blockholder at the 20 percent level. By comparing the tables for the United States and Europe, the differences between both regions become clear. Particularly, acquiring companies in the United States have a lower ownership concentration, which is indicated by the significant lower means for the number of blockholders at the 10 percent and 20 percent level. Of the companies in the United States, 83 percent has at least one blockholder at the 5 percent level, 38 percent of the companies at the 10 percent level and 12 percent of the companies at the 20 percent level. Comparable, 98 percent of the companies in Europe has at least one blockholder at the 5 percent level, 70 percent of the companies at the 10 percent level and 47 percent of the companies at the 20 percent level. The cumulative abnormal return of the American and European acquiring companies does not differ significantly.

For the complete sample, a company includes on average more arm's length and active blockholders at the 5 percent and 10 percent level and more relational and passive blockholders at the 20 percent level. At the 5 percent and 10 percent level, most of the blockholders in the United States are arm's length, active investors, while at the 20 percent level most of the blockholders are relational, passive investors. In Europe, at the 5 percent level most of the

blockholders are also arm's length, active investors, while at the 10 percent and 20 percent level most of the blockholders are relational, passive investors. The difference in number of active blockholders between both samples is only significant at the 20 percent level, in which European companies have significant more active blockholders. The result at the 20 percent level is in line with previous studies (Black, 1998; Edmans, 2009). The difference in the number of relational blockholders between both samples is significant at all three levels, in which European companies have significant more relational blockholders. This is in line with previous studies (Oosterhout et al., 2013).

Table A5 provides a correlation matrix including the variables relevant for the regression analyses. Only the number of blockholders at the 10 percent level are significantly negatively correlated with the cumulative abnormal return. Furthermore, the percentage of active blockholders at the 10 percent level, the percentage of passive blockholders at the 20 percent level and the percentage of arm's length blockholders at the 10 and 20 percent level are correlated with the cumulative abnormal return. The number of blockholders at the 5 percent, 10 percent and 20 percent level are highly correlated, which means that they all measure somewhat the same construct. The active blockholders at all three levels as well as the relational blockholders at all three levels are also highly correlated with each other. The control variables indicating the prior performance of the acquiring and target company, the size of the acquiring company, the payment method and the transaction value are significantly correlated with the cumulative abnormal return.

## **4.2 Analysis**

### **4.2.1. Regression on ownership concentration and acquirer's performance**

In this section, the main findings regarding the first hypotheses are presented. The first hypotheses investigate the relationship between ownership concentration in an acquiring company and the performance of the acquiring company around the M&A announcement. Table 1 presents the results of the OLS regression of different models testing the relationship between ownership concentration and the performance of the acquiring company. Separate models are estimated because the different threshold levels at which the number of blockholders is measured are all proxies of ownership concentration.

<b>Table 1</b> <b>Relationship between number of blockholders and cumulative abnormal return (-5, +5)</b>				
CAR5	Predicted sign	(1)	(2)	(3)
NBLOCK5	+/-	0.444 (1.59)		
NBLOCK10	+/-		-1.310* (-2.25)	
NBLOCK20	+/-			-0.4 (-0.37)
PERFACQ	+	0.0309 (0.8)	0.0412 (1.07)	0.0391 (1.01)
LEV	+	-0.00751 (-1.86)	-0.00683 (-1.69)	-0.00732 (-1.79)
lnSIZE	-	0.128 (0.4)	-0.163 (-0.53)	-0.0568 (-0.19)
PAYM	+	1.943* (2.07)	1.517 (1.6)	1.85 (1.94)
lnDEALV	+	0.0685 (0.21)	0.0256 (0.08)	0.0472 (0.14)
RELAT	+	1.817 (1.76)	2.128* (2.07)	1.983 (1.92)
PERFTARG	+	0.0772*** (3.75)	0.0754*** (3.67)	0.0782*** (3.79)
Constant		-7.617 (-1.76)	-1.481 (-0.39)	-3.931 (-1.07)
Fixed year effects		Yes	Yes	Yes
Observations		444	444	444
R-squared		0.1021	0.1074	0.0971
Adjusted R-squared		0.0728	0.0782	0.0676
Notes: Model (1) is the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1-3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				



Model A, including the number of blockholders at the 5 percent level (NBLOCK5), and model C, including the number of blockholders at the 20 percent level (NBLOCK20), show no significant relationship between the number of blockholders and the cumulative normal return of the acquiring company. Model B, including the number of blockholders at the 10 percent level (NBLOCK10), shows a significant negative relationship between the number of blockholders and the cumulative abnormal return of the acquiring company. The insignificant relationship at the 5 percent and 20 percent level is in line with the findings by Masulis et al. (2007), Roosenboom et al. (2014), Danbolt et al. (2014), Ryu and Brush (2014) and Ahn and Chung (2015). The negative relationship at the 10 percent level is in line with the findings by Roosenboom et al. (2014). In answer to the first hypotheses, the results imply that for the ownership at the 5 percent and 20 percent level hypothesis 1c can be accepted. For the ownership at the 10 percent level hypothesis 1b and 1c cannot be rejected.

The results can be explained by focusing on the benefits and costs of blockholders. While blockholders may improve acquirer's performance via direct intervention and close monitoring, they may also stimulate the company to involve in an M&A transaction which is mainly beneficial for the blockholders themselves. At the 5 percent level, the benefits and the costs of blockholders are low. Due to the relative small stake owned, the capabilities of blockholders to directly intervene, monitor management and improve the decisions making by management concerning M&A transactions is limited. The costs are limited because the blockholders have limited capabilities to induce the company to involve in an M&A transaction which is mainly beneficial for the blockholders themselves. Blockholders are also less concerned about the unsystematic risk at the 5 percent level. Apparently, the low benefits balance out with the low costs of blockholders at the 5 percent level, resulting in an insignificant relationship between ownership concentration and acquirer's performance. At the 10 percent level, the costs of blockholders are high, while the benefits are still limited. The stake is not considerable enough to incentive blockholders to bear the costs of intervention and monitoring of management. However, the concern about the unsystematic risk, the possibilities for private benefits and the threat of expropriation by blockholders become larger. Apparently, the increased costs of blockholders at the 10 percent level cause the costs to be larger than the benefits of blockholders, resulting in a significant negative relationship between ownership concentration and acquirer's performance. At the 20 percent level, the benefits and the costs of blockholders are high. The considerable stake owned by the blockholders incentivizes them to bear the costs of intervention, to monitor management, and it makes the threat of divesting more influential.

The costs of blockholders also increase because the stake enables them to induce the company to involve in an M&A transaction which is mainly beneficial for the blockholders themselves. Apparently, the high benefits balance out the high costs of blockholders at the 20 percent level, resulting in an insignificant relationship between ownership concentration and the performance of the acquiring company. These results imply that the balance between the benefits and costs of blockholders differs at different threshold levels used to define ownership concentration. The relationship between ownership concentration and acquirer's performance does depend on the threshold level used to define ownership concentration.

The control variable PAYM is positive and significant in model 1. The positive sign of the coefficient indicates that all-cash transactions are positively associated with acquirer's performance. The positive relationship is in line with previous studies (i.e. Andrade et al., 2001; Ghosh, 2001; Moeller et al., 2004). The variable RELAT is positive and significant in model 2. The positive sign of the coefficient indicates that if both companies are in the same industry, the performance of the acquiring company is higher. This positive relationship is in line with previous studies (i.e. Krishnan et al., 1997; Heron and Lie, 2002; Moeller et al., 2005). The variable PERFTARG is positive and significant in model 1-3. This positive relationship is in line with previous studies (i.e. Morck et al., 1990; Eisenberg et al., 1998; Hayward, 2002; Jindra and Moeller, 2013). The other control variables are not related with the acquirer's performance.<sup>10</sup> The explanatory power of the regression models is low.

#### **4.2.2 Comparative regression on ownership concentration and acquirer's performance between the United States and Europe**

In this section the main findings regarding the second hypothesis are presented. The second hypothesis investigates whether the relationship between ownership concentration and the performance of the acquiring company differs between the United States and Europe. Table 2

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<sup>10</sup> First, the control variable PERFACQ might not be the relevant variable to include in the regression because the past performance of the acquiring company can be influenced by external events which are not the result of the company's business plan, skills or knowledge. Second, the insignificant control variable LEV shows that creditors are not involved as monitors in M&A transactions or M&A transactions are not of interest to the creditors. Third, with regard to SIZE, besides the negative relationship due to better alignment of interests and less hubris, arguments can be given for a positive relationship. Larger acquiring companies might have more experience in conducting M&A transactions. More acquisition experience results in higher quality acquisition decisions that will result in better acquirer's performance. Further research can including a variable indicating M&A experience to empirically support this argument. Apparently, the positive and negative relationship balance each other out to result in an insignificant effect. Fourth, with regard to DEALV, besides the negative relationship due to either paying a high premium or acquiring a large target, arguments can be given for a positive relationship. Larger M&A transactions can result in more synergy benefits and greater economies of scale. The potential upside to these transactions can result in a positive relationship. Apparently, the positive and negative relationship balance each other out to result in an insignificant effect.

presents the results of the OLS regression of separate models for the United States and Europe. Table 3 includes interaction terms to test whether the regression coefficients between the United States differ significantly.

Panel A and Panel C of table 2 show no significant relationship between the number of blockholders at the 5 percent and 20 percent level and the cumulative abnormal return of the acquiring company listed in the United States. Panel B shows a significant negative relationship between the number of blockholders at the 10 percent level and the cumulative abnormal return of the acquiring company listed in the United States. Model D, model E and model F show no significant relationship between the number of blockholders and the performance of the acquiring company listed in Europe. These separate regressions indicate that at the 10 percent level the relationship between ownership concentration and acquirer's performance might differ between the United States and Europe. Furthermore, the regressions show that the relationship between ownership concentration and acquirer's performance depends on the threshold level used to define ownership concentration.

The interaction terms of table 3 are used to test whether the regression coefficients between both subsamples differ significantly. The interaction term is significant positive at the 10 percent level. The positive interaction term implies that the relationship between ownership concentration and acquirer's performance is more positive for Europe at the 10 percent than for the United States. While the relationship is negative for the United States, the relationship becomes insignificant for Europe. Based on the interaction term, it can be concluded that the relationship between ownership concentration and acquirer's performance differs significantly between the United States and Europe at the 10 percent level. In answer to the second hypothesis, the results imply that for the ownership concentration at the 5 percent and 20 percent level hypothesis 2 can be rejected. For the ownership concentration at the 10 percent level, hypothesis 2 cannot be rejected.

**Table 2**  
**Relationship between number of blockholders and cumulative abnormal return (-5, +5)**  
**for United States and Europe**

	Predicted sign	Panel A: 5% level		Panel B: 10% level		Panel C: 20% level	
		United States	Europe	United States	Europe	United States	Europe
NBLOCK5	+/-	0.608 (-1.96)	-0.269 (-0.37)				
NBLOCK10	+/-			-2.065** (-2.85)	-0.579 (-0.52)		
NBLOCK20	+/-					-1.722 (-1.19)	1.424 (0.7)
PERFACQ	+	0.0172 (0.42)	-0.0097 (-0.07)	0.0287 (0.71)	-0.0126 (-0.09)	0.0302 (0.74)	-0.0016 (-0.01)
LEV	+	-0.00779 (-1.93)	-0.0395 (-0.04)	-0.00672 (-1.67)	-0.0879 (-0.08)	-0.00694 (-1.69)	0.0619 (0.06)
lnSIZE	-	0.423 (1.09)	-1.016 (-1.59)	-0.0985 (-0.27)	-0.949 (-1.57)	0.0741 (0.2)	-1.004 (-1.65)
PAYM	+	2.177* (2.08)	1.949 (0.68)	1.683 (1.6)	1.963 (0.68)	2.041 (1.94)	1.72 (0.6)
lnDEALV	+	-0.144 (-0.38)	0.992 (1.3)	-0.0834 (-0.22)	0.994 (1.32)	-0.108 (-0.28)	1.097 (1.47)
RELAT	+	2.138 (1.91)	-1.841 (-0.64)	2.560* (2.3)	-1.9 (-0.67)	2.392* (2.13)	-2.171 (-0.76)
PERFTARG	+	0.0805*** (3.67)	0.106 (1.56)	0.0737*** (3.36)	0.101 (1.5)	0.0782*** (3.54)	0.0978 (1.45)
Constant		-12.73* (-2.51)	14.92 (1.56)	-3.085 (-0.68)	14.01 (1.68)	-6.438 (-1.46)	13.54 (1.66)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74
R-squared		0.1367	0.1904	0.146	0.1923	0.1299	0.1953
Adjusted R-squared		0.1027	0.0017	0.1123	0.0007	0.0956	0.0044

Notes: : Panel A includes the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return for the United States and Europe, panel (B) for the 10 percent level and panel (C) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-C show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013).

t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

<b>Table 3</b> <b>Relationship between number of blockholders and cumulative abnormal return (-5, +5)</b> <b>including interaction terms</b>				
CAR5	Predicted sign	(1)	(2)	(3)
NBLOCK5	+/-	0.43 (1.51)		
NBLOCK5*EU	+	0.0911 (0.25)		
NBLOCK10	+/-		-2.145** (-3.10)	
NBLOCK10*EU	+		2.045* (2.21)	
NBLOCK20	+/-			-1.879 (-1.32)
NBLOCK20*EU	+			3.118 (1.58)
PERFACQ	+	0.0299 (0.76)	0.0351 (0.92)	0.0411 (1.07)
LEV	+	-0.0075 (-1.85)	-0.00643 (-1.60)	-0.00661 (-1.61)
lnSIZE	-	0.129 (0.4)	-0.228 (-0.75)	-0.132 (-0.43)
PAYM	+	1.982* (2.08)	1.644 (1.74)	1.992* (2.08)
lnDEALV	+	0.0798 (0.24)	0.128 (0.38)	0.125 (0.37)
RELAT	+	1.801 (1.74)	2.093* (2.04)	1.94 (1.88)
PERFTARG	+	0.0767*** (3.71)	0.0710*** (3.45)	0.0741*** (3.57)
Constant		-7.707 (-1.78)	-0.996 (-0.26)	-3.212 (-0.87)
Fixed year effects		Yes	Yes	Yes
Observations		444	444	444
R-squared		0.1022	0.1174	0.1023
Adjusted R-squared		0.0708	0.0865	0.0709
Notes: Model (1) is the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1-3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

### **4.2.3. Heterogeneity**

To explain the difference in relationship between ownership concentration and acquirer's performance for the United States and Europe, this section looks at the heterogeneity across blockholders in both topographical regions. Additionally, the influence of the different kind of blockholders on the relationship between ownership concentration and acquirer's performance is examined. The different subcategories of blockholders (section 2.2: active and passive blockholders, relational and arm's length blockholders) for the United States and Europe are validated. It is assessed whether these subcategories can be used to explain the previous found result that the relationship between ownership concentration and acquirer's performance is more positive for Europe at the 10 percent level compared to the United States. Table A6 shows the regression on the relationship between percentage of active and passive blockholders and cumulative abnormal return. Table A7 shows the regression on the relationship between percentage of relational and arm's length blockholders and cumulative abnormal return.

#### **Active and passive blockholders**

The percentage of active blockholders and the percentage of passive blockholders have no significant relationship with performance of the acquiring company for the United States and Europe.<sup>11</sup> The difference in relationship between active and passive blockholders and the acquirer's performance is significant at the 20 percent level for the United States and for Europe. Active blockholders have a more positive relationship with performance compared to passive blockholders at the 20 percent level. The more positive relationship is in line with previous findings (Cronqvist and Fahlenbrach, 2009; Clifford and Lindsey, 2016; Shleifer and Vishny, 1997). The results stress the importance of distinguishing the different threshold levels of ownership concentration. As described in section 4.1, European acquiring companies have significant more active blockholders at the 20 percent level compared to the American companies. Combining this difference with the fact that active blockholders have a stronger positive relationship with acquirer's performance than passive blockholders at the 20 percent level, would result in a more positive relationship between the ownership concentration and acquirer's performance for Europe at the 20 percent level. These results do not explain the results of section 4.2.2, which show that the relationship between ownership concentration and

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<sup>11</sup> The relationship between the percentage of active blockholders at each level and the cumulative abnormal return of the acquiring company does not differ significant between the United States and Europe. This implies that active blockholders in the United States have the same relationship with performance as active blockholders in Europe. No heterogeneity between active blockholders in both regions is present.

acquirer's performance is only more positive for Europe at the 10 percent, compared to the United States.

### **Relational and arm's length blockholders**

The percentage of relational blockholders have no significant relationship with performance of the acquiring company for the United States and Europe.<sup>12</sup> The difference in relationship between relational and arm's length blockholders and the acquirer's performance is significant at the 5 percent and 20 percent level only for the United States. Relational blockholders have a stronger negative relationship with performance, compared to arm's length blockholders at the 5 percent level and at the 20 percent level. This finding contradict previous findings that find an increase of company performance by relational investors, compared to arm's length investors (Oosterhout et al., 2013) Due to their close relationship with company's management, relational blockholders might seek less additional information to make informed decisions with regard to an M&A transaction. Relational blockholders might judge suggested M&A transactions more favorable and overestimate the proposed synergies (Ishii and Xuan, 2014). Moreover, relational blockholders might be less experienced and lack skills compared to arm's length blockholders. Finally, the large influence of relational blockholders and their close relationship with management might enable them to extract more private benefits. As described in section 4.1, American acquiring companies have significant less relational blockholders at all three level compared to European companies. Combining this difference with the fact that blockholders have a more negative relationship with performance than arm's length blockholders at the 5 percent and 20 percent level, would result in a more positive relationship between blockholders and the acquirer's performance for the United States at the 5 percent and 20 percent level. These results do not explain the results of section 4.2.2, which show that the relationship between ownership concentration and acquirer's performance is only more positive for Europe at the 10 percent compared to the United States.

To conclude, the differences between subcategories of blockholders in the United States and Europe do not explain the result of section 4.2.2. that the relationship between ownership concentration and the performance of the acquiring company is more positive for Europe at the 10 percent compared to the United States.

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<sup>12</sup> The relationship between the percentage of relational blockholders at each level and the cumulative abnormal return of the acquiring company does not differ significant between the United States and Europe at all three levels. This implies that relational blockholders in the United States have the same relationship with performance as relational blockholders in Europe. No heterogeneity between relational blockholders in both regions is present.

### 4.3 Alternative explanation and robustness checks

In this paragraph, the results of supplementary analyses build on the above analyses are presented. Since the difference in the relationship between ownership concentration and acquirer's performance in the United States and Europe cannot be explained by the different subcategories, an alternative explanation for the difference in the relationship at the 10 percent level is investigated. Furthermore, alternative measures are used for ownership concentration and acquirer's performance.

An alternative explanation for the difference in relationship can be found by focusing on the benefits and costs of blockholders in both regions in combination with the legal system enforced. At the 5 percent level, the benefits and the costs of blockholders are low, in the United States as well as in Europe. This stands in contrast to the 20 percent level, for that level in both regions the benefits and costs are high. The difference between the United States and Europe arises at the 10 percent level. At the 10 percent level in the United States, the costs of blockholders are high, while the benefits are still limited. Contrary, at the 10 percent level in Europe, the benefits as well as the costs of blockholders are high. These difference can be explained by focusing on the legal system enforced in both regions. The United States are considered as a common-law country, in which outsider minority shareholders are strongly protected against expropriation by management. In the United States, blockholders play a smaller role in stimulating management to fulfill shareholders' interests. In civil-law Europe, the legal protection for shareholders is smaller, which increases the role of blockholders to monitor management (Johnson, La Porta, Lopez-de-Silanes and Shleifer, 2000).<sup>13</sup> The relationship between ownership concentration and acquirer's performances is therefore different in Europe, where fewer legal remedies against expropriation are available for minority shareholders. The blockholders in Europe function as an alternative governance mechanism, as a reaction to the poorer shareholder protection to counter expropriation by management.

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<sup>13</sup> The difference between common and civil law countries lies in the main source of law and the role of the judge. Although laws, codes and statutes are extensively used, common law is generally uncoded and juridical cases are the main source of law. Judges have an active role in the development of rules. In civil law countries, by contrast, law, codes and statutes are codified and are developed to cover all possible matters capable of being brought to the court. The role of the judge is limited to establishing the facts and applying the applicable legislation to the case (La Porta, Lopez-De-Silanes, Shleifer, and Vishny, 2002). Better shareholder protection in common law countries is the consequence of more flexibility. Judges in common law countries are expected to rule by applying general principles such as fairness or fiduciary duty, even when a specific event is not described or prohibited in the legislation. This flexibility offers the judge the possibility to expand the legal precedents to unprecedented events by management which are unfair to outsider shareholders. In contrast, judges in civil law countries are not supposed to go beyond the legislation. As a consequence, management who finds a way to expropriate the shareholders not explicitly forbidden by legislation can proceed (Coffee, 2000; Johnson et al., 2000).



Moreover, the role of blockholders is also influenced by the differences in culture in both regions. In general, management in European acquiring companies is willing to collaborate with the blockholders, which provides possibilities for intervention and monitoring, increasing the benefits of the blockholders. Management in the United States acts more independent from its blockholders, limiting the role of blockholders in monitoring and controlling management in the United States (Cools, 2005). The limited involvement of blockholders can for instance be seen in the legislation concerning shareholder approval around M&A transactions. Management in Europe needs shareholders' approval for a wide range of decision (European Commission, 2007). Contrary, the listing rules of the three major stock exchanges in the United States (NYSE, AMEX and NASDAQ) only require the acquiring company to call for a special meeting and obtain shareholders' approval when the company intends to issues more than 20 percent of new shares to finance the transaction. As a results, cash transactions involving a large target company do not require shareholders' approval, even if the plan is to refinance through the issuance of new shares in next term (NYSE, 2017). The shareholders' approval in Europe offers more opportunities for blockholders to restrain management from risky, opportunistic M&A transactions which will most probably result in negative returns for the acquiring company.

A small nuance is necessary to the above mentioned argumentation, the statement that Europe is considered as a civil-law region does not hold for all countries in Europe. The legal regime in the United Kingdom is not comparable to Europe. However, at the moment the regression for European acquiring companies also includes acquiring companies listed in the United Kingdom. In line with the argumentation, acquiring companies listed in the United Kingdom are excluded from European subsample. The tables showing the results of this robustness test can be found in the appendix (table A8–11). The results are comparable as those presented in table 2, 3, A6 and A7. The explanatory power of all the models for Europe excluding the United Kingdom increases.<sup>14</sup>

As a further robustness check, the total percentage of shares owned by the blockholders is included as an alternative measure of the number of blockholders. The tables showing the results of this robustness test can be found in the appendix (table A12–14).The results are comparable as those presented in table 1, 2, and 3..

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<sup>14</sup> Further research can empirically test this explanation by analyzing the relationship between ownership concentration, legal regimes and the performance of the acquiring company on a single country level. Research can make a further distinction between French civil law, German civil law and the Scandinavian civil law.

Moreover, although cumulative abnormal return is measured in most studies using an event window of -5 and +5 days around the M&A announcement, some studies also include other event windows. To assure that the results are not depending on the chosen event window, the cumulative abnormal return over a wider event window of -10 days and +10 days is included in the regression analysis. The tables showing the results of these robustness tests can be found in the appendix (table A15–A19). The results with regard to table 1, 2 and 3 are comparable. The findings with regard to the relationship between the different subcategories of blockholders and the acquirer's performance for a wider event window differ from the results from section 4.2.3 (table A6, A7). The results of this section are therefore considered to be not robust. The differences are discussed in the following two paragraphs.

With regard to the relationship between active and passive blockholders and performance, the results of the robustness test differ from the regression of table A6. The active blockholders have a significant positive relationship with cumulative abnormal return of the acquiring company at the 20 percent level for the United States and Europe. These results differ from the regression using the event window of -5 and +5 days, where active blockholders have no significant relationship with the cumulative abnormal return in both samples. The positive relationship is in line with previous findings by Cronqvist and Fahlenbrach (2009), Clifford and Lindsey (2016) and Shleifer and Vishny (1997). The difference in significance can be explained by focusing more on the role of active blockholders. Active blockholders invest more effort in influencing the company's policy, they are often involved in strategic management considerations. Active blockholders at the 20 percent level usually have "superior intelligence gathering ability to demand changes of strategic significance that benefit the firm and its shareholders" (Gehlot, 2015, p. 74). These changes might be difficult to observe at the M&A announcement, leading to a slower information processing. The significant positive relationship between active blockholders and acquirer's performance is therefore only present when using a wider event window. The difference in relationship between active and passive blockholders and acquirer's performance is still only significant at the 20 percent level for the United States.

With regard to the relationship between relational and arm's length blockholders and performance, the results of the robustness test differ from the regression of table A7. The percentage of relational blockholders have a significant negative relationship with cumulative abnormal return of the acquiring company listed in the United States at all three levels in model Y. These results differ from the regression using the event window of -5 and +5 days, where

relational blockholders have no significant relationship with the cumulative abnormal return in both samples. The negative relationship contradicts previous findings by Oosterhout et al. (2013). The difference in significance can be explained by focusing on the role of relational blockholders. Due to the close involvement of relational blockholders in the company, relational investors can generate superior influence on the decision making of the company to demand changes of strategic significance that are only beneficial for the blockholders themselves. Furthermore, relational blockholders can threaten management by criticizing management decisions or blocking management plans. These costs of relational blockholders can result in a negative relationship between relational blockholders and performances. Comparable to strategic changes by active blockholders, these negative changes of strategic significance might be difficult to observe for investors at the M&A announcement, leading to a potentially slower information processing. The significant relationship between relational blockholders and performance is therefore only present when using a wider event window. The difference in relationship between relational and arm's length blockholders and performance is still only significant at the 5 percent level and at the 20 percent level for the United States.

## 5. Conclusion

The central focus of this study is to examine the difference in relationship between the number of blockholders, as a measure of ownership concentration, and the cumulative abnormal return, as a measure of the performance of the acquiring company around the M&A announcement, for the United States and Europe. The central research question of this study is: *To what extent differs the relationship between ownership concentration in an acquiring company and the performance of an acquiring companies around the M&A announcement in the United States and Europe?* A key finding of this study is that the differences between the United States and Europe are considerable enough to justify the need for a distinction in the analysis of the relationship between ownership concentration and the performance of the acquiring company between both regions at the 10 percent level. The results imply that the balance between the benefits and costs of blockholders differs at different threshold levels of ownership concentration (5 percent, 10 percent or 20 percent). The relationship between ownership concentration and the performance of the acquiring company does depend on the on the threshold level used to define ownership concentration.

At the 5 percent level, the number of blockholders is not significant related to the cumulative abnormal return of the acquiring company for the complete sample and for the subsamples of the United States and Europe. The insignificant relationship is the result of low benefits and costs of blockholders. Due to the relative small stake, the capabilities of blockholders to directly intervene, monitor management and improve the decisions making by management concerning M&A transactions is limited. The costs are limited because the blockholders have limited capabilities to induce the company to involve in an M&A transaction which is mainly beneficial for the blockholders themselves. Blockholders are also less concerned about the unsystematic risk at the 5 percent level. Apparently, the low benefits balance out with the low costs of blockholders at the 5 percent level, resulting in an insignificant relationship between ownership concentration and the performance of the acquiring company.

At the 10 percent level, the number of blockholders are significant negative related with the cumulative abnormal return of the acquiring company for the complete sample and for the United States. The number of blockholders at the 10 percent level are not significant related to the performance for Europe. The difference in relationship between both topographical regions is significant and stresses the need for a distinction in the analysis of the relationship between ownership concentration and performance between both regions. The interaction term shows

that a more positive relationship between the number of blockholders and the cumulative abnormal return of the acquiring company at the 10 percent for Europe compared to the United States. The positive interaction cannot be explained by taking into account the blockholder heterogeneity in activism and passivism, and in relational and arm's length investing. However, the result can be explained by focusing on the benefits and costs of blockholders in both regions in combination with the legal system enforced. At the 10 percent level in the United States, the costs of blockholders are high, while the benefits are still limited. Contrary, at the 10 percent level in Europe, the benefits as well as the costs of blockholders are high. The relationship between ownership concentration and acquirer's performance is different in Europe due to the civil-law regime and the lower investor protection. The blockholders in Europe function as an alternative governance mechanism, as a reaction to the poorer shareholder protection to counter expropriation by management, generating more benefits of the blockholder for the acquiring company performance.

At the 20 percent level, the number of blockholders are not significant related to the cumulative abnormal return of the acquiring company for the complete sample and for the subsamples of the United States and Europe. At the 20 percent level the benefits and the costs of blockholders are high. The considerable stake owned by the blockholders incentives them to bear the costs of intervention, to monitor management, and makes the threat of divesting more influential. The costs of blockholders also increase because the stake enables them to induce the company to involve in an M&A transaction which is mainly beneficial for the blockholders themselves. Apparently, the high benefits balance out the high costs of blockholders at the 20 percent level, resulting in an insignificant relationship between ownership concentration and the performance of the acquiring company.

### **Limitations and future research**

The conclusions have to be seen in the light of the limitations of this study. The limitations concern the use of an event study, the causal relationship and the generalization of the results. The limitations are combined with suggestions for future research. These suggestions concern the possible need to make a distinction between private companies and other regions as well, including the dollar stake owned by blockholders and a detailed analysis of the benefits and costs of blockholders.

First, event studies have been widely used in previous studies to examine cumulative abnormal returns (Bruner, 2004; Swannstrom, 2006). However, event studies also involve several noteworthy assumptions with regard to the functioning of the stock market. For instance, event studies rely on assumptions of market efficiency, rationality and the absence of arbitrage restrictions. Following several studies it appears that these assumptions hold in most cases (i.e. Bruner, 2004; Malkiel, 2005; Borges, 2010). However, these assumptions are especially vulnerable to confounding events, and if these assumptions are violated, the findings and conclusions might be biased.

Second, it is hard to establish the causal relationship. This study finds a negative relationship between ownership concentration and the acquirer's performance. There can be two interpretations of this finding with regard to causality. On the one hand, blockholders can exercise substantial influence on the acquirer's management and thereby influence acquirer's performance. This argument is in line with the theoretical basis for predicting the relationship between ownership concentration and acquirer's performance. On the other hand, potential blockholders may predict certain outcomes and acquire a considerable stake accordingly. With the results of this paper, the influence argument is more probable because the selection argument would imply that blockholders predict a negative outcome of an M&A transactions and therefore acquire a stake in the acquiring company. The direction of causal relationship can be established empirically by including lagged variables.

Third, the sample includes only listed companies in the United States and Europe. The effect of blockholders for private companies or for others region might differ. The increased information symmetry between blockholders and management of private companies creates a more stable environment for monitoring and intervention. Both the closer level of monitoring and the cheaper intervention can increase the benefits of blockholders around M&A transactions (OECD, 2006). Future research can look at a sample including private companies. Moreover, future research can look at the difference in blockholders between other regions and assess whether these differences influence the relationship of ownership concentration and the performance of the acquiring company. Since Asian corporations aggressively use M&A transactions last years and accounts for almost 40 percent of total global M&A deal value, research can look into the differences between these blockholders and the American or European blockholders (Desai, 2016). For instance, Asian blockholders show a low level of activism among others due to cultural resistance to activism and a high level of controlling blockholders and state ownership, compared to the United States and Europe (Adebisi, 2016).

Fourth, for constructing the independent variables the focus is on the percentage of shares owned by the blockholders. The underlying reason for using the percentage of shares owned is because shareholders exercise their decision right mainly via voting. A higher percentage of ownership gives the blockholder more votes and therefore more influence on management's decision making. However, further research can also look at the dollar stake of the blockholders as a measure of the monitoring incentives of the blockholders. In a large company, a small percentage of the shares will still imply a large dollar stake in the company, which provides strong monitoring incentives. Both the percentage of shares and the dollar stake owned by the blockholder can be of interest to future research.

Fifth, the argumentation in terms of benefits and costs of blockholders can be strengthened by collecting and analyzing more detailed data on the hypothesized benefits of direct intervention and close monitoring and on the costs of blockholders of minority shareholders expropriation activities. The understanding of activism can for instance be increased by the hand collection of private letters to management or surveys. These results would allow to further explain the balance between the benefits and costs of blockholders at different threshold levels of ownership concentration. Challenges might arise because blockholders can exert governance via the threat of intervention or expropriation activities, instead of actual acts. The threat of intervention or expropriation might be sufficient to affect the acquirer's performance, however is harder for researchers to observe empirically.

In spite of the limitations, this study makes some unique contributions to the literature. This study provides clarity with respect to the relationship between ownership concentration and the performance of the acquiring company by focusing at different threshold levels for ownership concentration. This clarity was lacking in academic literature before and thus a gap in literature is now (partially) filled. Furthermore, this study shows the importance of distinguishing different threshold levels for ownership concentration, in contrast to the definition commonly used. The results show that the balance between the costs and benefits of blockholders differs at different threshold levels of ownership concentration. Specifically, it shows that the conclusions concerning the relationship between ownership concentration and the performance of the acquiring company depend on the threshold level used to define ownership concentration. Moreover, this study shows the importance of distinguishing between the United States and Europe. The results show that the differences between the United States and Europe lead to a significant difference in the relationship between ownership concentration and the performance

between the United States and Europe at the 10 percent level. Finally, this study has some limitations which offer potentials for future research in this interesting field.



## Reference list

- Adebiyi, J. (2016). Recent Shareholder Activism in Asia Could Signal Changing Attitudes. Skadden. Retrieved from: <https://www.skadden.com/insights/publications/2016/01/recent-shareholder-activism-in-asia-could-signal-c> . Accessed on 20<sup>th</sup> of June, 2017.
- Admati, A.R. and Pfleiderer, P. (2009). The “Wall Street Walk” and Shareholder Activism: Exit as a Form of Voice. *Review of Financial Studies*, 22(7).
- Adnan, A.T.M., and Hossain, A. (2016). Impact of M&A Announcement on Acquiring and Target Firm’s Stock Price: An Event Analysis Approach. *International Journal of Finance and Accounting*, 5(5), 228-232.
- Ahn, S. and Chung, J. (2015). Cash holdings, corporate governance, and acquirer returns. *Financial Innovation*, 1.
- Al-Matari, E.M., Al-Swidi, A.K. and Fadzil, F.H. (2014). The Measurements of Firm Performance’s Dimensions. *Asian Journal of Finance and Accounting*, 6(1).
- Almeida, L. (2016). How to measure corporate control? Evidence from panel threshold effects of the degree of control on CEO pay monitoring. Working paper, Conservatoire National des Arts et Métiers.
- Andrade, G., Mitchell, M.L. and Stafford, E. (2001). New evidence and perspectives on mergers. *Journal of Economic Perspectives*, 15(2), 103–120.
- Ayres, I. and Cramton, P. (1994). Relational Investing and Agency Theory. *Faculty Scholarship Series*. Paper 1528.
- Ben-Amar, W. and André, P. (2006). Separation of Ownership from Control and Acquiring Firm Performance: The Case of Family Ownership in Canada. *Journal of Business Finance and Accounting*, 33(3), 517-543.
- Berger, P. G., Ofek, E. and Yermack, D. L. (1997). Managerial entrenchment and capital structure decisions. *Journal of Finance*, 52(4), 1411-1438.
- Berle, A. and G. Means, (1932). *The Modern Corporation and Private Property*. New York: Macmillan.

- Berry, W. and Feldman, S. (2011). Multiple regression in practice. In Lewis-Becker, M.S. (Ed.), *Quantitative Applications in the Social Sciences*. Thousand Oaks: Sage Publications
- Bhagat, S, Black, B. and Blair, M. (2001). Relational investing and firm performance. Working paper, Stanford University.
- Black, B. (1990). Shareholder passivity reexamined. *Michigan Law Review*, 89, 520-608.
- Black, B. (1998). Shareholder activism and corporate governance in the United States. In Newman, P. (Ed.), *The new Palgrave dictionary of economics and the law* (459-465). New York: W.W. Norton.
- Bliss, R. and Rosen, R. (2001). CEO compensation and Bank Mergers. *Journal of Financial Economics*, 107-138.
- Bodie, Z., Kane, A. and Marcus, A.J. (2008). *Investments*. New York: McGraw-Hill.
- Borges, M.R. (2010). Efficient Market Hypothesis in European Stock Markets. Working Paper, Technical university of Lisbon.
- Bruner, R.F. (2002). Does M&A Pay? A Survey of Evidence for the Decision-Maker. *Journal of Applied Finance*, 12(1), 48-68.
- Bruner, R.F. (2004). *Applied Mergers and Acquisitions*. Hoboken: John Wiley & Sons, Inc.
- Campbell, J.C., Lo, A.W. and MacKinlay, A.C. (1997). *The Econometrics of Financial Markets*. New Jersey: Princeton University Press.
- Carline, N.F., Linn, S.C. and Yadav, P. K.. (2002). The Influence of Managerial Ownership on the Real Gains in Corporate Mergers and Market Revaluation of Merger Partners: Empirical Evidence. Working Paper, University of Oklahoma.
- Chen, X., Harford, J. and Li, K. (2007). Monitoring: Which institutions matter? *Journal of Financial Economics*, 86, 279-305.
- Clifford, C.P. and Lindsey L.A. (2013). Getting what you pay for: blockholder monitoring, CEO compensation, and firm performance. Working Paper, University of Kentucky.

- Coffee, J. (2000). Privatization and corporate governance: the lessons from securities market failure. Working paper, Columbia Law School.
- Cools, S. (2005). Real Difference in Corporate Law between the United States and Continental Europe: Distribution of Powers. *Harvard Law and Economics Discussion Paper*, 490.
- Cronqvist, H. and Fahlenbrach, R. (2009). Large Shareholders and Corporate Policies. *Review of Financial Studies*, 22(10), 3941-3976.
- Danbolt, J., Siganos, A. and Vagenas-Nanos, E. (2014). Does Mood Impact on Acquirers' Announcement Abnormal Returns?. Working Paper, European Financial Management Association (EFMA).
- Demsetz, H. and Lehn, K. (1985). The structure of corporate ownership: causes and consequences. *Journal of Political Economy*, 93, 1155–1177.
- DePamphilis, D.M. (2015). *Mergers, acquisitions and other restructuring activities, An Integrated Approach to Process, Tools, Cases and Solutions*. Oxford: Elsevier.
- Desai, F. (2016) Asia M&A Activity Grows, Led By Strong China Deal Flow. Forbes. Retrieved from: <https://www.forbes.com/sites/falgunidesai/2016/04/03/asia-ma-activity-grows-led-by-strong-china-deal-flow/#78e34ae63630> . Accessed on 20<sup>th</sup> of June, 2017.
- Edmans, A. (2009). Blockholder trading, market efficiency, and managerial myopia. *Journal of Finance*, 64(6), 2481–2513.
- Edmans, A. (2014). Blockholders and Corporate Governance. *Annual Review of Financial Economics*, 6, 23-50.
- Eisenberg, T., Sundgren, S. and Wells, M. (1998). Larger Board Size and Decreasing Firm Value in Small Firms. *Journal of Financial Economics*, 48, 35-54.
- Engelbrecht, W. and Shah, T. (2017). M&A: A critical tool for growth. Deloitte Development LLC.
- European Commission (2006). Directive 2006/46/EC of the European Parliament and of the Council of 14 June 2006 amending Council Directives 78/660/EEC on the annual accounts of certain types of companies, 83/349/EEC on consolidated accounts, 86/635/EEC on the

annual accounts and consolidated accounts of banks and other financial institutions and 91/674/EEC on the annual accounts and consolidated accounts of insurance undertakings. Official Journal of the European Union.

European Commission (2007). Directive 2007/36/EC of the European Parliament and of the Council of 11 July 2007 on the exercise of certain rights of shareholders in listed companies. Official Journal of the European Union.

Fama, E.F. (1980). Agency Problems and the Theory of the Firm. *Journal of Political Economy*, 88(2), 288-307.

Fama, E.F. and Jensen, M.C. (1983). Separation of ownership and control. *Journal of law and economics*, 26(2), 301-325.

Gehlot, A.S. (2015). Investor Activism and Mergers and Acquisitions (M&A). Working paper, Oklahoma State University.

George, D. and Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*. Boston: Pearson.

Ghosh, A. (2001). Does operating performance really improve following corporate acquisitions?. *Journal of Corporate Finance*, 7, 151-178.

Ghosh, A. and Jain, P.J. (2000). Financial leverage changes associated with corporate mergers. *Journal of Corporate Finance*, 6, 377-402.

Harford, J. (1999). Corporate cash reserves and acquisitions. *Journal of Finance*, 54, 1969-1998.

Hayward, M.L. and Hambrick, D.C. (1997). Explaining the premiums paid for large acquisitions: Evidence of CEO hubris. *Administrative Science Quarterly*, 42(3), 103-127.

Hayward, M.L.A. (2002). When do firms learn from their acquisition experience? Evidence from 1990 to 1995. *Strategic Management Journal*, 23(1), 21-39.

Heron, R. and Lie, E. (2002). Operating performance and the method of payment in takeovers. *Journal of Financial and Quantitative Analysis*, 137-156.

- IMAA (2017). M&A Statistics – Number and Value and Largest M&A Transactions by Region. Retrieved from: <https://imaa-institute.org/mergers-and-acquisitions-statistics/> Accessed on 3<sup>th</sup> of August, 2017.
- Isakov, D. and Weisskopf, J.P. (2009). Family Ownership, Multiple Blockholders and Firm Performance. SSRN Electronic Journal.
- Ishii, J. and Xuan, Y. (2014). Acquirer-target social ties and merger outcomes. *Journal of Financial Economics*, 112(3), 344-363.
- Jansson, A. (2007). Collective Action Among Shareholder Activists. Working paper, Växjö University Press.
- Jensen, M.C. (2002). Value Maximization, Stakeholder Theory, and the Corporate Objective Function. *Business Ethics Quarterly*, 12(2), 235-256.
- Jensen, M.C. and Meckling, W.H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics*, 3(4), 305-360.
- Jindra, J. and Moeller, T. (2013). Learning about target firms and pricing of acquisitions. SSRN Electronic Journal.
- Johnson, S., La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (2000). Tunneling. *American Economic Review*, 90(2), 22-27.
- Kang, J.K., Shivdasani, A. and Yamada, T. (2000). The effect of bank relations on investment decisions: an investigation of Japanese takeover bids. *Journal of Finance*, 55, 2197-2218.
- Krishnan, H.A., Miller, A. and Judge, W.Q. (1997). Diversification and top management team complementarity: Is performance improved by merging similar or dissimilar teams?. *Strategic Management Journal*, 18(5), 361-374.
- La Porta, R., Lopez-de-Silanes, F. and Shleifer, A. (1999). Corporate Ownership around the World. *Journal of Finance*, 54(2), 471–517.
- La Porta, R., Lopez-De-Silanes, F. Shleifer, A. and Vishny, R. (2002). Investor Protection and Corporate Valuation. *Journal of Finance*, 57(3), 1147–1170.

- Lewellen, W., Loderer, C. and Rosenfeld, A. (1985). Merger decisions and executive stock ownership in acquiring firms. *Journal of Accounting and Economics*, 7(1), 209-231.
- Lorenzi, J. and Vioto, D. (2015). Corporate governance in M&A, Global corporate governance. Working paper, Fordham University.
- MacKinlay, A.C. (1997). Event studies in economics and finance. *Journal of economic literature*.
- Malkiel, B.G. (2005) .Reflections on the Efficient Market Hypothesis: 30 Years Later. *The Financial Review*, 40, 1–9.
- Masulis, R.W. and Simsir, S.A. (2013). Deal Initiation in Mergers and Acquisitions. *FIRN Research Paper*.
- Masulis, R.W., Wang, C. and Zie, F. (2007). Corporate Governance and Acquirer Returns. *Journal of Finance*, 62 (4).
- Moeller, S.B. and Schlingemann, F.P. (2005). Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions. *Journal of Banking and Finance*, 29(3): 533-564.
- Moeller, S.B., Schlingemann, F.P. and Stulz, R.M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics*, 73(2), 201-228.
- Morck, R., Shleifer, A. and Vishny, R. (1990). Do Managerial objectives drive bad acquisitions?. *Journal of Finance*, 45 (1), 31-48
- NYSE (2017). General Organization, Introduction to the Listed Company Manual, Section 312.03 and 703.08. Retrieved from [http://wallstreet.cch.com/LCMTTools/PlatformViewer.asp?selectednode=chp\\_1\\_4\\_12\\_3&manual=%2Fflcm%2Fsections%2Fflcm-sections%2F](http://wallstreet.cch.com/LCMTTools/PlatformViewer.asp?selectednode=chp_1_4_12_3&manual=%2Fflcm%2Fsections%2Fflcm-sections%2F) Accessed on 3<sup>th</sup> of August, 2017.
- Oosterhout, H. van, Heugens, P. and Essen, M. van (2013). The effect of blockholders in corporate governance. *RSM Insight*, 13.
- Rademakers, A.H.C. (2011). Mergers and Acquisitions, “The bigger they are, the harder they fall”. Tilburg University.

Reuters (2017). Ownership Glossary. Thomson Reuters.

Roosenboom, P., Schlingemann, F. and Vasconcelos, M. (2014). Does Stock Liquidity Affect the Incentives to Monitor? Evidence from Corporate Takeovers. *Review of Financial Studies*, 27(8), 2392–2433.

Ryu, W. and Brush, T. (2014). The Information Revelation by Diversifying Acquisitions: Empirical Evidence in Announcement Returns. In Dover, P., Hariharan, S. and Cummings, M. (Ed.), *Proceedings of the 2nd International Conference on Management, Leadership and Governance*. Sonning Common: Academic Conferences and Publishing International Limited.

SEC (2012). Securities Exchange Act of 1934. Securities and Exchange Commission

Shah, P. and Arora, P. (2014). M&A Announcements and Their Effect on Return to Shareholders. *Accounting and Finance Research* , 3(2).

Shleifer A. and Vishny, R.W. (1986). Large Shareholders and Corporate Control. *Journal of Political Economy*, 94(3), 461-488.

Shleifer, A. and Vishny, R.W. (1997). A Survey of Corporate Governance. *Journal of Finance*, 52(2), 737–783.

Stata (n.d). summarize — Summary statistics. Retrieved from: <http://www.stata.com/manuals13/rsummarize.pdf> Accessed on July 5, 2017.

Swanstrom, M. (2006) Corporate governance and the abnormal returns to acquisition announcements. *Journal of Business Strategy*, 23(2),115–129

Thomsen, M.R. and McKenzie, A.M. (2001). Market incentives for safe foods: an examination of shareholder losses from meat and poultry recalls. *American Journal of Agricultural Economics*, 83(3), 526-538

Vafeas, N. and Theodorou, E. (1998). The Relationship between Board Structure and Firm Performance in the UK. *British Accounting Review*, 30(4), 383-407.

Williamson, O.E. (1984). Corporate Governance. *Yale Law Journal*, 93, 1197 - 1230.

Yen, T. and André, P. (2010). The Effects of Ownership Structure on Operating, Performance of Acquiring Firms in Emerging Markets. *Journal of Business and Policy Research*, 5(2), 217 – 236.



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Table A1 Overview of variables			
Variable		Description	Source
<i>Dependent variables</i>			
Cumulative Abnormal Return	CAR5	Cumulative Abnormal Return of the acquiring company. The event window used is -5 and +5 trading days relative to the event date. The estimation window used is -250 days relative to the event date	Eikon
<i>Independent variables</i>			
Number of Blockholders (5%, 10% or 20%)	NBLOCK5, NBLOCK10, NBLOCK20	Total number of blockholders at a 5%, 10% or 20% level of the acquiring company. A high total number of blockholders indicates a high ownership concentration.	Eikon
Total percentage of shares owned by blockholders (5%, 10% or 20%)	TOTAL5, TOTAL10, TOTAL20	The sum of the total percentage of shares owned by the blockholders at a 5%, 10% or 20% level of the acquiring company. A high sum of the shares owned by all the blockholders indicates a high ownership concentration (robustness).	Eikon
Percentage of relational blockholders (5%, 10% or 20%)	PERCREL5, PERCREL10, PERCREL20	The total number of relational blockholders at a 5%, 10% or 20% level of the acquiring company as a percentage of the total number of blockholders at a 5%, 10% or 20% level of the acquiring company. Relational blockholders include: Bank and Trust, Research Firm, Holding Company, Corporation, Other Insider Investor, Foundation, Individual Investor, Government agency	Eikon
Percentage of arm's length blockholders (5%, 10% or 20%)	PERCARM5, PERCARM10, PERCARM20	The total number of arm's length blockholders at a 5%, 10% or 20% level of the acquiring company as a percentage of the total number of blockholders at a 5%, 10% or 20% level of the acquiring company. Arm's length blockholders include: Investment Advisor/Hedge Fund, Investment Advisor, Hedge Fund, Pension Fund, Sovereign Wealth Fund, Private Equity, Venture capital, Insurance company.	Eikon
Percentage of active blockholders (5%, 10% or 20%)	PERCACT5, PERCACT10, PERCACT20	The total number of active blockholders at a 5%, 10% or 20% level of the acquiring company as a percentage of the total number of blockholders at a 5%, 10% or 20% level of the acquiring company. Active blockholder is a group or an individual who uses an equity stake in a corporation to put pressure on the corporation's management and change the behavior of corporations with a view to increase shareholder value.	Eikon
Percentage of passive blockholders (5%, 10% or 20%)	PERCPAS5, PERCPAS10, PERCPAS20	The total number of passive blockholders at a 5%, 10% or 20% level of the acquiring company as a percentage of the total number of blockholders at a 5%, 10% or 20% level of the acquiring company.	Eikon

Interaction term: Number of blockholders (5%, 10% or 20%) * Europe	NBLOCK5*EU, NBLOCK10*EU, NBLOCK20*EU	Interaction term, created by multiplying the total number of blockholders at a 5%, 10% or 20% level of the acquiring company, by a region variable. Region is 0 for the United States and 1 for Europe. If the interaction term is significant, the relationship between ownership concentration and the performance of the acquiring company differs per topographical region. If the interaction term is positive, the effect of ownership concentration on performances is more positive for Europe, compared to the United States.	Eikon
Interaction term: Total percentage of shares owned (5%, 10% or 20%) * Europe	TOTAL5*EU, TOTAL10*EU, TOTAL20*EU	Interaction term, created by multiplying the sum of the total percentage of shares owned by the blockholders at a 5%, 10% or 20% level of the acquiring company by the region variable (robustness)	Eikon
<i>Control variables</i>			
Prior performance of acquiring company	PERFACQ	Past performance is measured by the Return on Assets (ROA) of the acquiring company The ROA is calculated by: $(\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) * (1 - \text{Tax Rate}))) / \text{Average of Last Year's and Current Year's Total Assets} * 100$	Eikon
Company size	SIZE	The company size is measured by the acquirer's book value of total assets. Total assets represent the sum of total current assets, long term receivables, investment in unconsolidated subsidiaries, other investments, net property plant and equipment and other assets.	Eikon
Leverage	LEV	Leverage of the acquiring company. The leverage is calculated by taking the total debt as percentage of common Equity: $(\text{Long Term Debt} + \text{Short Term Debt} \& \text{Current Portion of Long Term Debt}) / \text{Common Equity} * 100$	Eikon
Relative deal value	DEALV	Value of the M&A transaction. The value of Transaction (\$ mil) is the total value of consideration paid by the acquiring company, excluding fees and expenses.	ThomsonOne
Relatedness of the acquiring and target company	RELAT	Relatedness of acquiring and target company, implying that the acquirer and the target are in related industries, based on the Reuters "TF Macro Code". Dummy: 0 means no relatedness, 1 means relatedness	ThomsonOne
Payment Method	PAYM	Dummy: 0 means other than all-cash transaction, 1 means all-cash transaction	ThomsonOne
Prior performance of target company	PERFTARG	Past performance of the target company is measured by the Return on Assets (ROA) of the acquiring company The ROA is calculated by: $(\text{Net Income} - \text{Bottom Line} + ((\text{Interest Expense on Debt-Interest Capitalized}) * (1 - \text{Tax Rate}))) / \text{Average of Last Year's and Current Year's Total Assets} * 100$	Eikon

<b>Table A2</b> <b>Descriptive Statistics complete sample</b>					
	N	Mean	Std. Dev.	Min.	Max.
<i>Panel A: Dependent variables</i>					
CAR5 (% , Winsorized)	539	-0.10054	9.445267	-27.4506	24.65454
<i>Panel B: Independent variables</i>					
NBLOCK5	539	2.424861	1.807516	0	9
NBLOCK10	539	0.604824	0.8144	0	5
NBLOCK20	539	0.204082	0.434461	0	2
PERCACT5	539	0.480402	0.390216	0	1
PERCACT10	539	0.224026	0.402864	0	1
PERCACT20	539	0.032468	0.176088	0	1
PERCPAS5	539	0.26964	0.33648	0	1
PERCPAS10	539	0.124892	0.317088	0	1
PERCPAS20	539	0.090909	0.286127	0	1
PERCREL5	539	0.217803	0.347738	0	1
PERCREL10	539	0.206401	0.391371	0	1
PERCREL20	539	0.153061	0.359736	0	1
PERCARM5	539	0.640162	0.423497	0	1
PERCARM10	539	0.225881	0.405279	0	1
PERCARM20	539	0.032468	0.176088	0	1
<i>Panel C: Control variables</i>					
PERFACQ (Winsorized)	526	2.557776	13.60659	-71.43	25.58
LEV	532	6.006558	95.16919	-17.8266	2183.59
SIZE (Winsorized)	533	2.31E+07	4.60E+07	9786	2.72E+08
SIZE (Winsorized, ln)	533	15.15175	2.290983	9.188708	19.42247
PAYM	539	0.454546	0.498392	0	1
DEALV (Winsorized)	525	2633.887	5979.787	2.337	40298.14
DEALV (Winsorized, ln)	525	6.204143	2.079093	0.848868	10.60406
RELATG	539	0.777366	0.416401	0	1
PERFTARG (Winsorized)	459	-4.43261	24.00654	-138.57	32.4
Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise.					

**Table A3**  
**Descriptive Statistics United States**

	N	Mean	Std. Dev.	Min.	Max.
<i>Panel A: Dependent variables</i>					
CAR5 (% , Winsorized)	434	-0.08587	9.558315	-27.4506	24.65454
<i>Panel B: Independent variables</i>					
NBLOCK5	434	2.352535	1.774246	0	8
NBLOCK10	434	0.493088	0.72322	0	3
NBLOCK20	434	0.126728	0.339916	0	2
PERCACT5	434	0.481339	0.386659	0	1
PERCACT10	434	0.228495	0.412102	0	1
PERCACT20	434	0.024194	0.151939	0	1
PERCPAS5	434	0.256597	0.318022	0	1
PERCPAS10	434	0.083333	0.26739	0	1
PERCPAS20	434	0.052995	0.224283	0	1
PERCREL5	434	0.152392	0.29595	0	1
PERCREL10	434	0.135561	0.332551	0	1
PERCREL20	434	0.093318	0.29022	0	1
PERCARM5	434	0.675488	0.419113	0	1
PERCARM10	434	0.233103	0.415108	0	1
PERCARM20	434	0.024194	0.151939	0	1
<i>Panel C: Control variables</i>					
PERFACQ (Winsorized)	429	2.684056	13.9953	-71.43	25.58
LEV	431	7.236526	105.7174	-17.8266	2183.59
SIZE (Winsorized)	432	2.27E+07	4.43E+07	9786	2.72E+08
SIZE (Winsorized, ln)	432	15.30194	2.145389	9.188708	19.42247
PAYM	434	0.511521	0.500444	0	1
DEALV (Winsorized)	429	2808.597	5984.53	2.337	40298.14
DEALV (Winsorized, ln)	429	6.364148	2.022478	0.848868	10.60406
RELAT	434	0.774194	0.418595	0	1
PERFTARG (Winsorized)	376	-4.72181	24.56992	-138.57	32.4
Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise.					

<b>Table A4</b> <b>Descriptive Statistics Europe</b>					
	N	Mean	Std. Dev.	Min.	Max.
<i>Panel A: Dependent variables</i>					
CAR5 (% , Winsorized)	105	-0.1612	9.006769	-27.4471	24.65454
<i>Panel B: Independent variables</i>					
NBLOCK5	105	2.72381	1.91901	0	9
NBLOCK10	105	1.066667	0.992924	0	5
NBLOCK20	105	0.52381	0.605984	0	2
PERCACT5	105	0.476527	0.406473	0	1
PERCACT10	105	0.205556	0.363438	0	1
PERCACT20	105	0.066667	0.25064	0	1
PERCPAS5	105	0.323553	0.401201	0	1
PERCPAS10	105	0.296667	0.43064	0	1
PERCPAS20	105	0.247619	0.428121	0	1
PERCREL5	105	0.488167	0.411364	0	1
PERCREL10	105	0.499206	0.473735	0	1
PERCREL20	105	0.4	0.492248	0	1
PERCARM5	105	0.494146	0.41197	0	1
PERCARM10	105	0.196032	0.362133	0	1
PERCARM20	105	0.066667	0.25064	0	1
<i>Panel C: Control variables</i>					
PERFACQ (Winsorized)	97	1.999278	11.78335	-57.15	25.58
LEV	101	0.7578861	1.308816	-1.1213	8.0848
SIZE (Winsorized)	101	2.51E+07	5.27E+07	9786	2.72E+08
SIZE (Winsorized, ln)	101	14.50937	2.751496	9.188708	19.42247
PAYM	105	0.219048	0.415585	0	1
DEALV (Winsorized)	96	1853.153	5926.62	2.337	40298.14
DEALV (Winsorized, ln)	96	5.489123	2.186788	0.848868	10.60406
RELAT	105	0.790476	0.408921	0	1
PERFTARG (Winsorized)	83	-3.12253	21.3557	-92.9	32.4
Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise.					

**Table A5 Correlation matrix**

	CAR5	NBLOCK5	NBLOCK10	NBLOCK20	PERCACT5	PERCACT10	PERCACT20	PERCPAS5	PERCPAS10	PERCPAS20	PERCREL5	PERCREL10	PERCREL20	PERCARM5
CAR5	1													
NBLOCK5	0.0413	1												
NBLOCK10	-0.164***	0.3805***	1											
NBLOCK20	-0.0411	0.042	0.5229***	1										
PERCACT5	0.0629	0.3765***	0.0614	-0.1736***	1									
PERCACT10	-0.0966*	0.2925***	0.5328***	0.0109	0.3644***	1								
PERCACT20	0.0708	0.0418	0.1964***	0.3751***	0.1160*	0.2853***	1							
PERCPAS5	0.0308	0.0653	0.0258	0.1768***	-0.4167***	-0.1323**	-0.0607	1						
PERCPAS10	-0.0356	0.0808	0.3465***	0.4886***	-0.1985***	-0.1691***	-0.0593	0.4468***	1					
PERCPAS20	-0.1032*	-0.0355	0.3307***	0.6397***	-0.1823***	-0.0983*	-0.0473	0.3916***	0.7537***	1				
PERCREL5	-0.0899	0.0491	0.4067***	0.5743***	-0.3796***	-0.1376**	0.002	0.2058***	0.5097***	0.4778***	1			
PERCREL10	-0.0496	0.0968*	0.5221***	0.6604***	-0.2742***	-0.1862***	-0.0495	0.2363***	0.7252***	0.5715***	0.7405***	1		
PERCREL20	-0.0678	-0.0008	0.4451***	0.8629***	0.2485***	-0.1309**	-0.0531	0.2125***	0.5554***	0.7439***	0.6366***	0.7529***	1	
PERCARM5	0.1018*	0.4073***	-0.1033*	-0.3125***	0.7292***	0.2822***	0.0528	0.1092*	-0.2855***	-0.2824***	-0.5885***	-0.4281***	-0.3743***	1
PERCARM10	-0.1117*	0.3066***	0.5319***	0.0083	0.3588***	0.9751***	0.2822***	-0.1225**	-0.1336**	-0.0992*	-0.1608***	-0.2098***	-0.1322**	0.3016***
PERCARM20	0.0708	0.0418	0.1964***	0.3751***	0.1160*	0.2853***	1.0000***	-0.0607	-0.0593	-0.0473	0.002	-0.0495	-0.0531	0.0528
PERFACQ	0.1345**	-0.1127*	-0.1444**	-0.0587	0.0319	-0.0499	-0.026	0.0624	-0.0651	-0.0940*	-0.1583***	-0.1260**	-0.0572	0.0936*
LEV	-0.0659	-0.0049	0.0377	0.1048*	0.0008	-0.0284	-0.0019	0.0297	0.1349**	0.1555**	0.0476	0.1063*	0.1255**	-0.0198
SIZE	0.1194*	-0.4738***	-0.3105***	-0.0719	-0.1477**	-0.1767***	-0.0676	0.0113	-0.0721	0.0003	-0.1380*	-0.1720***	-0.0496	-0.1315**
PAYM	0.1400**	-0.1043*	-0.2224***	-0.1468**	-0.0303	-0.1282**	-0.0434	-0.0501	-0.1529**	-0.1514**	-0.1880***	-0.2129***	-0.1680***	0.0522
DEALV	0.1130*	-0.3037***	-0.2248***	-0.0682	-0.0818	-0.1534**	-0.1256**	0.0741	-0.0453	-0.0022	-0.1227**	-0.0935*	-0.0277	-0.0056
RELAT	0.0715	0.0459	0.0626	0.08	0.0257	0.0224	0.009	0.0228	0.0107	0.0564	0.0351	0.053	0.0692	0.0175
PERFTARG	0.2270***	-0.1280**	-0.1872***	-0.0486	0.0115	-0.1569***	-0.0569	0.1154*	0.0505	-0.0003	-0.1200*	-0.0382	-0.0284	0.0871

	PERCARM5	PERCARM10	PERCARM20	PERFACQ	LEV	SIZE	PAYM	DEALV	RELAT	PERFTARG
PERCARM5	1									
PERCARM10	0.3016***	1								
PERCARM20	0.0528	0.2822***	1							
PERFACQ	0.0936*	-0.0469	-0.026	1						
LEV	-0.0198	-0.0285	-0.0019	-0.0126	1					
SIZE	-0.1315**	-0.1813***	-0.0676	0.4230***	0.0222	1				
PAYM	0.0522	-0.1212*	-0.0434	0.2653***	0.0468	0.2339***	1			
DEALV	-0.0056	-0.1614***	-0.1256**	0.3157***	0.0573	0.7115***	-0.0302	1		
RELAT	0.0175	0.0251	0.009	-0.0013	0.0268	0.0441	-0.0471	0.0817	1	
PERFTARG	0.0871	-0.1547**	-0.0569	0.2974***	0.0272	0.3636***	0.0957*	0.4357***	-0.0537	1

\*p<0.05, \*\*p<0.01, \*\*\*p<0.001



Table A6 Relationship between percentage of active and passive blockholders and cumulative abnormal return (-5, +5)													
Variable	Predicted sign	Active blockholders						Passive blockholders					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCACT5	+	1.493 (1.24)	1.085 (0.37)										
PERCACT10	+			-1.478 (-1.26)	1.871 (0.56)								
PERCACT20	+					6.333 (1.76)	6.368 (1.33)						
PERCPAS5	-							0.514 (0.34)	-3.666 (-1.13)				
PERCPAS10	-									-0.0772 (-0.04)	-1.601 (-0.53)		
PERCPAS20	-											-4.226 (-1.94)	-2.404 (-0.75)
PERFACQ	+	0.0236 (0.57)	-0.0197 (-0.13)	0.0312 (0.76)	-0.0281 (-0.19)	0.0233 (0.57)	-0.0089 (-0.06)	0.0257 (0.62)	-0.0304 (-0.21)	0.0282 (0.68)	-0.0204 (-0.14)	0.0243 (0.59)	-0.023 (-0.16)
LEV	+	-0.0078 (-1.93)	-0.0749 (-0.07)	-0.00784 (-1.94)	0.0973 (0.09)	-0.00792 (-1.96)	0.288 (0.28)	-0.00783 (-1.93)	-0.038 (-0.04)	-0.00775 (-1.87)	0.0291 (0.03)	-0.00584 (-1.41)	0.0779 (0.08)
lnSIZE	-	0.191 (0.53)	-0.917 (-1.51)	0.0806 (-0.22)	-0.998 (-1.63)	0.15 (0.42)	-1.136 (-1.85)	0.154 (0.42)	-0.728 (-1.16)	0.124 (0.34)	-0.851 (-1.36)	0.0359 (0.1)	-0.773 (-1.21)
PAYM	+	2.174* (2.07)	1.811 (0.63)	1.994 (-1.89)	2.07 (0.71)	2.306* (2.2)	1.271 (0.45)	2.155* (2.05)	2.161 (0.76)	2.144* (2.03)	1.864 (0.65)	2.015 (1.92)	1.609 (0.56)
lnDEALV	+	-0.138 (-0.36)	1.08 (1.44)	-0.126 (-0.33)	1.239 (1.51)	-0.0886 (-0.23)	1.278 (1.69)	-0.139 (-0.36)	1.125 (1.51)	-0.13 (-0.34)	1.044 (1.4)	-0.0926 (-0.24)	1.041 (1.4)
RELAT	+	2.214* (1.97)	-1.804 (-0.63)	2.405* (2.14)	-1.539 (-0.52)	2.245* (2)	-1.571 (-0.56)	2.323* (2.07)	-1.298 (-0.45)	2.318* (2.06)	-1.404 (-0.47)	2.263* (2.02)	-1.063 (-0.35)
PERFTARG	+	0.0797*** (3.62)	0.0962 (1.38)	0.0778*** (3.52)	0.101 (1.49)	0.0809*** (3.68)	0.1 (1.51)	0.0798*** (3.61)	0.0978 (1.46)	0.0805*** (3.64)	0.103 (1.54)	0.0794*** (3.62)	0.101 (1.5)
Constant		-8.855 (-1.96)	11.84 (1.35)	-6.258 (-1.41)	12.01 (1.44)	-8.001 (-1.84)	14.26 (1.76)	-7.735 (-1.70)	9.785 (1.14)	-7.241 (-1.59)	11.72 (1.37)	-5.709 (-1.29)	10.54 (1.2)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74	370	74	370	74	370	74
R-squared		0.1302	0.1905	0.1303	0.1928	0.134	0.2121	0.1267	0.2057	0.1264	0.1925	0.1356	0.1963
Adjusted R-squared		0.0959	0.0016	0.096	0.0013	0.0999	0.0251	0.0923	0.0172	0.092	0.0009	0.1015	0.0056

Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables. t statistics in parentheses, \*p<0.05, \*\*p<0.01, \*\*\*p<0.001

**Table A7 Relationship between percentage of relational and arm's length blockholders and cumulative abnormal return (-5, +5)**

Variable	Predicted sign	Relational blockholders						Arm's length blockholders					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCREL5	+	-2.988 (-1.84)	0.0273 (0.01)										
PERCREL10	+			-1.492 (-0.99)	1.797 (0.78)								
PERCREL20	+					-2.77 (-1.69)	0.658 (0.28)						
PERCARM5	-							2.208 (1.9)	-0.529 (-0.19)				
PERCARM10	-									-1.578 (-1.36)	-0.028 (-0.01)		
PERCARM20	-											6.333 (1.76)	6.368 (1.33)
lnPERFACQ	+	0.0217 (0.53)	-0.018 (-0.12)	0.0272 (0.66)	0.002 (0.01)	0.0285 (0.7)	-0.0148 (-0.10)	0.0131 (0.31)	-0.018 (-0.12)	0.0318 (0.77)	-0.018 (-0.12)	0.0233 (0.57)	-0.0089 (-0.06)
LEV	+	-0.00709 (-1.75)	-0.014 (-0.01)	-0.00708 (-1.72)	0.0508 (0.05)	-0.00643 (-1.56)	0.0050 (0)	-0.00743 (-1.84)	0.0117 (0.01)	-0.00785 (-1.94)	-0.017 (-0.02)	-0.00792 (-1.96)	0.288 (0.28)
lnSIZE	-	0.0638 (0.18)	-0.939 (-1.55)	0.0547 (0.15)	-0.941 (-1.57)	0.0689 (0.19)	-0.952 (-1.57)	0.302 (0.81)	-0.949 (-1.56)	0.0792 (0.22)	-0.938 (-1.54)	0.15 (0.42)	-1.136 (-1.85)
PAYM	+	2.033 (1.94)	1.822 (0.63)	2.077* (1.98)	2.023 (-0.71)	2.018 (1.92)	1.943 (0.67)	2.057 (1.97)	1.898 (0.65)	1.979 (1.88)	1.814 (0.63)	2.306* (2.2)	1.271 (0.45)
lnDEALV	+	-0.101 (-0.27)	1.048 (1.4)	-0.0978 (-0.26)	1.039 (-1.4)	-0.0947 (-0.25)	1.05 (1.4)	-0.174 (-0.46)	1.048 (1.4)	-0.136 (-0.36)	1.045 (1.3)	-0.0886 (-0.23)	1.278 (1.69)
RELAT	+	2.349* (2.1)	-1.934 (-0.68)	2.348* (2.09)	-2.084 (-0.73)	2.379* (2.12)	-2.038 (-0.71)	2.183 (1.95)	-1.945 (-0.68)	2.400* (2.14)	-1.937 (-0.68)	2.245* (2)	-1.571 (-0.56)
PERFTARG	+	0.0762*** (3.45)	0.103 (1.53)	0.0798*** (3.62)	0.0938 (1.38)	0.0777*** (3.52)	0.101 (1.48)	0.0762*** (3.45)	0.105 (1.54)	0.0780*** (3.53)	0.103 (1.53)	0.0809*** (3.68)	0.1 (1.51)
Constant		-6.085 (-1.39)	13.08 (1.59)	-6.1 (-1.35)	12.28 (-1.5)	-6.33 (-1.45)	13.14 (1.61)	-10.79* (-2.29)	13.45 (1.61)	-6.113 (-1.38)	13.09 (1.59)	-8.001 (-1.84)	14.26 (1.76)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74	370	74	370	74	370	74
R-squared		0.1347	0.1886	0.1289	0.1969	0.1334	0.1896	0.1352	0.1891	0.131	0.1886	0.134	0.2121
Adjusted R-squared		0.1006	0.004	0.0945	0.0064	0.0993	0.0027	0.1011	0.0034	0.0967	0.004	0.0999	0.0251

Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables. t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

<b>Table A8</b> <b>Relationship between number of blockholders and cumulative abnormal return (-5, +5)</b> <b>for United States and Europe, excluding United Kingdom (robustness)</b>							
	Predicted sign	Panel A: 5% level		Panel B: 10% level		Panel C: 20% level	
		United States	Europe	United States	Europe	United States	Europe
NBLOCK5	+/-	0.625* (2.05)	-1.927 (-1.52)				
NBLOCK10	+/-			-2.065** (-2.85)	-1.383 (-0.73)		
NBLOCK20	+/-					-1.722 (-1.19)	2.994 (-0.72)
PERFACQ	+	0.0172 (0.42)	-0.089 (-0.35)	0.0287 (0.71)	-0.219 (-0.86)	0.0302 (-0.74)	-0.16 (-0.61)
LEV	+	-0.00779 (-1.93)	1.377 (0.54)	-0.00672 (-1.67)	1.768 (0.66)	-0.00694 (-1.69)	2.23 (0.83)
lnSIZE	-	0.423 (1.09)	-6.67** (-3.16)	-0.0985 (-0.27)	-6.210* (-2.82)	0.0741 (-0.2)	-5.800* (-2.71)
PAYM	+	2.177* (2.08)	6.464 (0.99)	1.683 (1.6)	8.293 (1.11)	2.041 (-1.94)	5.378 (0.77)
lnDEALV	+	-0.144 (-0.38)	5.471* (2.46)	-0.0834 (-0.22)	6.034* (2.54)	-0.108 (-0.28)	5.725* (2.45)
RELAT	+	2.138 (1.91)	-3.692 (-0.68)	2.560* (2.3)	-5.007 (-0.85)	2.392* (-2.13)	-4.246 (-0.74)
PERFTARG	+	0.0805*** (3.67)	0.13 (0.83)	0.0737*** (3.36)	0.125 (0.75)	0.0782*** (-3.54)	0.123 (-0.74)
Constant		-12.73* (-2.51)	76.13** (3.56)	-3.085 (-0.68)	65.07** (3.14)	-6.438 (-1.46)	59.0** (-3)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	31	370	31	370	31
R-squared		0.1367	0.5529	0.146	0.5044	0.1299	0.5039
Adjusted R-squared		0.1027	0.1616	0.1123	0.0708	0.0956	0.0699

Notes: Panel A includes the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return for the United States and Europe, panel (B) for the 10 percent level and panel (C) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-C show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013).

t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

<b>Table A9</b> <b>Relationship between number of blockholders and cumulative abnormal return (-5, +5)</b> <b>including interaction terms, excluding United Kingdom (robustness)</b>				
CAR5	Predicted sign	(1)	(2)	(3)
NBLOCK5	+/-	0.413 (1.45)		
NBLOCK5*EU	+	0.141 (0.57)		
NBLOCK10	+/-		-2.055** (-3.04)	
NBLOCK10*EU	+		1.191* (2.14)	
NBLOCK20	+/-			-1.559 (-1.12)
NBLOCK20*EU	+			1.41 (1.31)
PERFACQ	+	0.0286 (0.73)	0.0354 (0.92)	0.0411 (1.07)
LEV	+	-0.0075 (-1.85)	-0.00651 (-1.62)	-0.00678 (-1.65)
lnSIZE	-	0.121 (0.37)	-0.261 (-0.85)	-0.141 (-0.46)
PAYM	+	2.056* (2.15)	1.792 (1.88)	2.025* (2.1)
lnDEALV	+	0.0983 (0.29)	0.142 (0.42)	0.122 (0.36)
RELAT	+	1.784 (1.72)	2.080* (2.03)	1.946 (1.88)
PERFTARG	+	0.0760*** (3.67)	0.0706*** (3.43)	0.0748*** (3.6)
Constant		-7.712 (-1.78)	-0.644 (-0.17)	-3.09 (-0.83)
Fixed year effects		Yes	Yes	Yes
Observations		444	444	444
R-squared		0.1028	0.1168	0.1007
Adjusted R-squared		0.0713	0.0859	0.0692
Notes: Model (1) is the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEAL VALUE) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1-3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

Table A10 Relationship between percentage of active and passive blockholders and cumulative abnormal return (-5, +5), excluding United Kingdom (robustness)													
Variable	Predicted sign	Active blockholders						Passive blockholders					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCACT5	+	1.493 (1.24)	-1.114 (-0.17)										
PERCACT10	+			-1.478 (-1.26)	0.362 (0.06)								
PERCACT20	+					6.333 (1.76)	17.56 (1.07)						
PERCPAS5								0.514 (0.34)	5.178 (0.57)				
PERCPAS10										-0.0772 (-0.04)	2.163 (0.32)		
PERCPAS20												-4.226 (-1.94)	-6.233 (-0.75)
PERFACQ	+	0.0236 (0.57)	-0.212 (-0.82)	0.0312 (0.76)	-0.209 (-0.81)	0.0233 (0.57)	-0.16 (-0.63)	0.0257 (0.62)	-0.215 (-0.84)	0.0282 (0.68)	-0.22 (-0.85)	0.0243 (0.59)	-0.217 (-0.86)
LEV	+	-0.0078 (-1.93)	2.073 (0.75)	-0.00784 (-1.94)	1.936 (0.7)	-0.00792 (-1.96)	0.954 (0.34)	-0.00783 (-1.93)	2.433 (0.87)	-0.00775 (-1.87)	2.126 (0.77)	-0.00584 (-1.41)	1.693 (0.63)
lnSIZE	-	0.191 (0.53)	-5.741* (-2.59)	0.0806 (0.22)	-5.825* (-2.67)	0.15 (0.42)	-6.053* (-2.86)	0.154 (0.42)	-6.101* (-2.76)	0.124 (0.34)	-5.686* (-2.58)	0.0359 (0.1)	-5.743* (-2.68)
PAYM	+	2.174* (2.07)	5.762 (0.79)	1.994 (1.89)	6.217 (0.87)	2.306* (2.2)	6.091 (0.9)	2.155* (2.05)	4.75 (0.65)	2.144* (2.03)	5.312 (0.72)	2.015 (1.92)	6.997 (1.01)
lnDEALSZ	+	-0.138 (-0.36)	5.563* (2.16)	-0.126 (-0.33)	5.769* (-2.32)	-0.0886 (-0.23)	6.182* (2.65)	-0.139 (-0.36)	5.557* (2.34)	-0.13 (-0.34)	5.484* (2.2)	-0.0926 (-0.24)	5.975* (2.53)
RELAT	+	2.214* (1.97)	-4.131 (-0.70)	2.405* (2.14)	-3.982 (-0.69)	2.245* (2)	-6.655 (-1.08)	2.323* (2.07)	-4.719 (-0.80)	2.318* (2.06)	-3.875 (-0.67)	2.263* (2.02)	-3.549 (-0.62)
PERFTARG	+	0.0797*** (3.62)	0.159 (0.9)	0.0778*** (3.52)	0.151 (0.89)	0.0809*** (3.68)	0.178 (1.09)	0.0798*** (3.61)	0.171 (1.01)	0.0805*** (3.64)	0.156 (0.93)	0.0794*** (3.62)	0.147 (0.9)
Constant		-8.855 (-1.96)	60.94** (2.98)	-6.258 (-1.41)	59.98** (2.99)	-8.001 (-1.84)	64.62** (3.28)	-7.735 (-1.70)	66.03** (2.96)	-7.241 (-1.59)	59.77** (3.01)	-5.709 (-1.29)	58.53** (2.97)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	31	370	31	370	31	370	31	370	31	370	31
R-squared		0.1302	0.4888	0.1303	0.488	0.134	0.5219	0.1267	0.4981	0.1264	0.4911	0.1356	0.5051
Adjusted R-squared		0.0959	0.0415	0.096	0.04	0.0999	0.1035	0.0923	0.0589	0.092	0.0458	0.1015	0.0721

Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables.

t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

Table A11 Relationship between percentage of relational and arm's length blockholders and cumulative abnormal return (-5, +5), excluding United Kingdom (robustness)													
Variable	Predicted sign	Relational blockholders						Arm's length blockholders					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCREL5	+	-2.988 (-1.84)	-1.737 (-0.28)										
PERCREL10	+			-1.492 (-0.99)	2.436 (0.43)								
PERCREL20	+					-2.77 (-1.69)	1.415 -0.26						
PERCARM5	-							2.208 (1.9)	2.259 (0.36)				
PERCARM10	-									-1.578 (-1.36)	0.362 (0.06)		
PERCARM20	-											6.333 (1.76)	17.56 (1.07)
PERFACQ	+	0.0217 (0.53)	-0.199 (-0.77)	0.0272 (0.66)	-0.181 (-0.69)	0.0285 (0.7)	-0.193 (-0.73)	0.0131 (0.31)	-0.197 (-0.76)	0.0318 (0.77)	-0.21 (-0.81)	0.0233 (0.57)	-0.16 (-0.63)
LEV	+	-0.00709 (-1.75)	1.78 (0.64)	-0.00708 (-1.72)	2.488 (0.84)	-0.00643 (-1.56)	2.253 (0.77)	-0.00743 (-1.84)	1.734 (0.63)	-0.00785 (-1.94)	1.936 (0.7)	-0.00792 (-1.96)	0.954 (0.34)
lnSIZE	-	0.0638 (0.18)	-5.982* (-2.66)	0.0547 (0.15)	-5.407* (-2.29)	0.0689 (0.19)	-5.77* (-2.65)	0.302 (0.81)	-6.047* (-2.68)	0.0792 (0.22)	-5.825* (-2.67)	0.15 (0.42)	-6.053* (-2.86)
PAYM	+	2.033 (1.94)	6.309 (0.9)	2.077* (1.98)	4.412 (0.55)	2.018 (1.92)	5.778 (0.81)	2.057 (1.97)	6.401 (0.92)	1.979 (1.88)	6.217 (0.87)	2.306* (2.2)	6.091 (0.9)
lnDEALV	+	-0.101 (-0.27)	5.943* (2.39)	-0.0978 (-0.26)	5.161 (1.9)	-0.0947 (-0.25)	5.653* (2.37)	-0.174 (-0.46)	6.029* (2.4)	-0.136 (-0.36)	5.769* (2.32)	-0.0886 (-0.23)	6.182* (2.65)
RELAT	+	2.349* (2.1)	-3.955 (-0.68)	2.348* (2.09)	-3.189 (-0.53)	2.379* (2.12)	-3.679 (-0.62)	2.183 (1.95)	-3.962 (-0.68)	2.400* (2.14)	-3.98 (-0.69)	2.245* (-2)	-6.66 (-1.08)
PERFTARG	+	0.0762*** (3.45)	0.145 (0.87)	0.0798*** (3.62)	0.142 (0.86)	0.0777*** (3.52)	0.132 (0.74)	0.0762*** (3.45)	0.143 (0.86)	0.0780*** (3.53)	0.151 (0.89)	0.0809*** (3.68)	0.178 (1.09)
Constant		-6.085 (-1.39)	62.02** (2.96)	-6.1 (-1.35)	56.44* (2.62)	-6.33 (-1.45)	58.87* (2.87)	-10.79* (-2.29)	60.62** (3.04)	-6.113 (-1.38)	59.98** (2.99)	-8.001 (-1.84)	64.6** (3.28)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	31	370	31	370	31	370	31	370	31	370	31
R-squared		0.1347	0.4904	0.1289	0.4938	0.1334	0.49	0.1352	0.4921	0.131	0.488	0.134	0.522
Adjusted R-squared		0.1006	0.0446	0.0945	0.051	0.0993	0.0438	0.1011	0.0476	0.0967	0.04	0.0999	0.104
Notes: For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal size (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables. t statistics in parentheses, * p<0.05, ** p<0.01, ***p<0.001													

<b>Table A12</b> <b>Relationship between the total percentage of shares owned by blockholders and cumulative abnormal return (-5, +5) (robustness)</b>				
CAR5	Predicted sign	(1)	(2)	(3)
TOTAL5	+/-	-0.0171 (-0.68)		
TOTAL10	+/-		-0.0593* (-2.26)	
TOTAL20	+/-			-0.0325 (-1.10)
PERFACQ	+	0.0411 (1.06)	0.0394 (1.03)	0.038 (0.98)
LEV	+	-0.00729 (-1.79)	-0.00655 (-1.61)	-0.00701 (-1.72)
lnSIZE	-	-0.118 (-0.38)	-0.128 (-0.42)	-0.0605 (-0.20)
PAYM	+	1.791 (1.88)	1.444 (1.51)	1.719 (1.79)
lnDEALV	+	0.0452 (0.14)	0.0268 (0.08)	0.0391 (0.12)
RELAT	+	2.029 (1.96)	2.195* (2.12)	2.064* (1.99)
PERFTARG	+	0.0786*** (3.81)	0.0778*** (3.79)	0.0787*** (3.81)
Constant		-2.713 (-0.66)	-2.127 (-0.57)	-3.729 (-1.01)
Fixed year effects		Yes	Yes	Yes
Observations		444	443	443
R-squared		0.0978	0.1075	0.0994
Adjusted R-squared		0.0683	0.0783	0.07
Notes: Model (1) is the regression for the relationship between the total percentage of shares owned by blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1- 3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

<b>Table A13</b> <b>Relationship between the total percentage of shares owned by blockholders and cumulative abnormal return (-5, +5) for United States and Europe (robustness)</b>							
	Predicted sign	Panel A: 5% level		Panel B: 10% level		Panel C: 20% level	
		United States	Europe	United States	Europe	United States	Europe
TOTAL5	+/-	-0.0128 (-0.41)	-0.042 (-0.81)				
TOTAL10	+/-			-0.0922** (-2.75)	-0.040 (-0.78)		
TOTAL20	+/-					-0.0605 (-1.60)	-0.005 (-0.09)
PERFACQ	+	0.0299 (0.72)	-0.018 (-0.12)	0.031 (0.76)	-0.0255 (-0.17)	0.0297 (0.72)	-0.021 (-0.14)
LEV	+	-0.00761 (-1.87)	-0.105 (-0.10)	-0.00631 (-1.56)	-0.112 (-0.11)	-0.00685 (-1.67)	-0.023 (-0.02)
lnSIZE	-	0.0638 (0.16)	-0.981 (-1.63)	-0.104 (-0.28)	-0.901 (-1.50)	0.0383 (0.11)	-0.929 (-1.52)
PAYM	+	2.100* (1.99)	1.811 (0.63)	1.748 (1.66)	1.79 (0.63)	2.016 (1.91)	1.802 (0.63)
lnDEALV	+	-0.122 (-0.32)	0.972 (1.3)	-0.0528 (-0.14)	0.979 (1.31)	-0.0919 (-0.24)	1.043 (1.39)
RELAT	+	2.356* (2.09)	-1.44 (-0.50)	2.563* (2.28)	-1.607 (-0.56)	2.433* (2.15)	-1.889 (-0.65)
PERFTARG	+	0.0800*** (3.62)	0.112 (1.65)	0.0754*** (3.43)	0.107 (1.6)	0.0787*** (3.57)	0.104 (1.53)
Constant		-6.164 (-1.20)	15.03 (1.78)	-3.426 (-0.75)	13.62 (1.67)	-5.978 (-1.35)	13.02 (1.59)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	369	74	369	74
R-squared		0.1269	0.1974	0.145	0.1969	0.133	0.1887
Adjusted R-squared		0.0924	0.007	0.1112	0.0063	0.0987	0.0038
Notes: Panel A includes the regression for the relationship between the total percentage of shares owned by blockholders at the 5 percent level and cumulative abnormal return for the United States and Europe, panel (B) for the 10 percent level and panel (C) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-C show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001							



<b>Table A14</b> <b>Relationship between the total percentage of shares owned by blockholders and cumulative abnormal return (-5, +5) including interaction terms (robustness)</b>				
CAR5	Predicted sign	(1)	(2)	(3)
TOTAL5	+/-	-0.0274 (-0.97)		
TOTAL5*EU	+	0.0243 (0.03)		
TOTAL10	+/-		-0.0983** (-3.05)	
TOTAL10*EU	+		0.0898* (2.07)	
TOTAL20	+/-			-0.0666 (-1.79)
TOTAL20*EU	+			0.0817 (1.49)
PERFACQ	+	0.0399 (1.03)	0.0379 (0.99)	0.0401 (1.04)
LEV	+	-0.00714 (-1.75)	-0.00595 (-1.47)	-0.00649 (-1.59)
lnSIZE	-	-0.156 (-0.49)	-0.232 (-0.76)	-0.144 (-0.47)
PAYM	+	1.900* (1.97)	1.621 (1.69)	1.886 (1.96)
lnDEALV	+	0.0843 (0.25)	0.142 (0.42)	0.117 (0.35)
RELAT	+	1.983 (1.91)	2.111* (2.04)	1.986 (1.91)
PERFTARG	+	0.0769*** (3.7)	0.0728*** (3.54)	0.0753*** (3.63)
Constant		-2.308 (-0.55)	-1.173 (-0.31)	-2.927 (-0.79)
Fixed year effects		Yes	Yes	Yes
Observations		444	443	443
R-squared		0.099	0.1164	0.1041
Adjusted R-squared		0.0675	0.0853	0.0726
Notes: Model (1) is the regression for the relationship between the total percentage of shares owned by blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR5), an event window of -5 till +5 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1- 3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

<b>Table A15</b> <b>Relationship between number of blockholders and</b> <b>cumulative abnormal return (-10, +10) (robustness)</b>				
CAR10	Predicted sign	(1)	(2)	(3)
NBLOCK5	+/-	-0.196 (-0.59)		
NBLOCK10	+/-		-2.081** (-3.02)	
NBLOCK20	+/-			-1.537 (-1.21)
PERFACQ	+	0.0151 (0.33)	0.0148 (0.32)	0.0113 (0.25)
LEV	+	0.00277 (0.57)	0.00388 (0.81)	0.00355 (0.73)
lnSIZE	-	-0.0401 (-0.10)	-0.123 (-0.34)	0.0497 (0.14)
PAYM	+	2.131 (1.9)	1.517 (1.34)	1.904 (1.68)
lnDEALV	+	-0.148 (-0.37)	-0.189 (-0.48)	-0.173 (-0.43)
RELAT	+	1.958 (1.59)	2.179 (1.79)	2.021 (1.64)
PERFTARG	+	0.0471 (1.91)	0.0424 (1.74)	0.0468 (1.91)
Constant		-2.023 (-0.39)	0.388 (0.09)	-3.338 (-0.76)
Fixed year effects		Yes	Yes	Yes
Observations		444	444	444
R-squared		0.0376	0.0568	0.0401
Adjusted R-squared		0.0062	0.026	0.0088
Notes: For the cumulative abnormal return (CAR10), an event window of -10 till +10 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1-3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

<b>Table A16</b> <b>Relationship between number of blockholders and cumulative abnormal return (-10, +10)</b> <b>for United States and Europe (robustness)</b>							
Variable	Predicted sign	Panel A: 5% level		Panel B: 10% level		Panel C: 20% level	
		United States	Europe	United States	Europe	United States	Europe
NBLOCK5	+/-	-0.0829 (-0.22)	-0.405 (-0.52)				
NBLOCK10	+/-			-2.970*** (-3.39)	-0.16 (-0.14)		
NBLOCK20	+/-					-3.02 (-1.73)	2.719 (1.27)
PERFACQ	+	0.00383 (0.08)	0.182 (1.15)	0.0032 (0.07)	0.171 (1.09)	0.00596 (0.12)	0.201 (1.29)
LEV	+	0.00265 (0.54)	-0.17 (-0.16)	0.00418 (0.86)	-0.154 (-0.14)	0.00414 (0.83)	0.0137 (0.01)
lnSIZE	-	0.157 (0.33)	-0.695 (-1.02)	-0.128 (-0.29)	-0.582 (-0.90)	0.104 (0.24)	-0.704 (-1.10)
PAYM	+	1.858 (1.46)	0.93 (0.3)	1.193 (0.94)	0.773 (0.25)	1.674 (1.31)	0.547 (0.18)
lnDEALV	+	-0.624 (-1.35)	1.636* (2.02)	-0.559 (-1.23)	1.705* (2.12)	-0.587 (-1.28)	1.814* (2.3)
RELAT	+	2.601 (1.9)	-1.261 (-0.41)	2.922* (2.17)	-1.392 (-0.46)	2.702* (1.98)	-1.854 (-0.61)
PERFTARG	+	0.0561* (2.1)	0.0226 (0.31)	0.0465 (1.75)	0.0179 (0.25)	0.0523 (1.95)	0.00818 (0.11)
Constant		-3.662 (-0.59)	5.99 (0.59)	1.672 (0.3)	3.481 (0.39)	-2.878 (-0.54)	4.096 (0.48)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74
R-squared		0.0516	0.2351	0.0812	0.2318	0.0594	0.2521
Adjusted R-squared		0.0142	0.0536	0.045	0.0496	0.0223	0.0746
Notes: Panel A includes the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return for the United States and Europe, panel (B) for the 10 percent level and panel (C) for the 20 percent level. For the cumulative abnormal return (CAR10), an event window of -10 till +10 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-C show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001							

<b>Table A17</b> <b>Relationship between number of blockholders and cumulative abnormal return</b> <b>(-10, +10), including interaction terms (robustness)</b>				
CAR5	Predicted sign	(1)	(2)	(3)
NBLOCK5	+/-	-0.109 (-0.32)		
NBLOCK5*EU	+	-0.546 (-1.25)		
NBLOCK10	+/-		-2.621** (-3.18)	
NBLOCK10*EU	+		1.902* (2.01)	
NBLOCK20	+/-			-2.751 (-1.62)
NBLOCK20*EU	+			2.557 (1.09)
PERFACQ	+	0.0215 (0.46)	0.0108 (0.24)	0.013 (0.28)
LEV	+	0.00272 (0.56)	0.00414 (0.86)	0.00414 (0.84)
lnSIZE	-	-0.046 (-0.12)	-0.165 (-0.46)	-0.0123 (-0.03)
PAYM	+	1.899 (1.67)	1.599 (1.42)	2.02 (1.77)
lnDEALV	+	-0.216 (-0.54)	-0.123 (-0.31)	-0.109 (-0.27)
RELAT	+	2.052 (1.66)	2.156 (1.77)	1.986 (1.61)
PERFTARG	+	0.0499* (2.02)	0.0396 (1.61)	0.0435 (1.76)
Constant		-1.482 (-0.29)	0.702 (0.15)	-2.748 (-0.62)
Fixed year effects		Yes	Yes	Yes
Observations		444	444	444
R-squared		0.0411	0.06	0.0427
Adjusted R-squared		0.0075	0.027	0.0092
Notes: Model (1) is the regression for the relationship between the number of blockholders at the 5 percent level and cumulative abnormal return, model (2) for the 10 percent level and model (3) for the 20 percent level. For the cumulative abnormal return (CAR10), an event window of -10 till +10 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. Model 1- 3 show no multicollinearity among the variables. A VIF larger than 5 or a TOL smaller than 0.2 is used as an indication for multicollinearity (Berry and Feldman, 2013). t statistics in parentheses, * p<0.05, ** p<0.01, *** p<0.001				

**Table A18 Relationship between percentage of active and passive blockholders and cumulative abnormal return (-10, +10) (robustness)**

Variable	Predicted sign	<i>Active blockholders</i>						<i>Passive blockholders</i>					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCACT5	+	1.76 (1.2)	0.43 (0.14)										
PERCACT10	+			-0.241 (-0.17)	4.807 (1.36)								
PERCACT20	+					11.97** (2.76)	11.58* (2.33)						
PERCPAS5	-							-0.701 (-0.38)	-2.01 (-0.58)				
PERCPAS10	-									-2.418 (-1.09)	-0.399 (-0.12)		
PERCPAS20	-											-5.399 (-1.95)	-1.109 (-0.32)
PERFACQ	+	-0.00303 (-0.06)	0.168 (1.08)	0.00287 (0.06)	0.144 (0.93)	-0.00674 (-0.14)	0.186 (1.24)	0.00568 (-0.11)	0.162 (1.04)	0.00283 (0.06)	0.168 (1.08)	-0.0025 (-0.05)	0.167 (1.07)
LEV	+	0.00264 (0.54)	-0.158 (-0.14)	0.00264 (0.54)	0.156 (0.14)	0.00239 (0.49)	0.418 (0.39)	0.0027 (0.55)	-0.147 (-0.13)	0.00377 (0.75)	-0.123 (-0.11)	0.00513 (1.02)	-0.091 (-0.08)
lnSIZE	-	0.272 (0.62)	-0.571 (-0.88)	0.188 (0.43)	-0.734 (-1.14)	0.24 (0.55)	-0.939 (-1.48)	0.159 (0.35)	-0.464 (-0.69)	0.107 (-0.24)	-0.557 (-0.84)	0.0802 (0.18)	-0.503 (-0.73)
PAYM	+	1.892 (1.49)	0.73 (0.24)	1.837 (1.43)	1.382 (0.45)	2.16 (1.71)	-0.261 (-0.09)	1.852 (1.45)	0.921 (0.3)	1.736 (1.36)	0.744 (0.24)	1.692 (1.33)	0.636 (0.21)
lnDEALV	+	-0.636 (-1.38)	1.732* (2.16)	-0.625 (-1.35)	2.212* (2.56)	-0.547 (-1.19)	2.14** (2.73)	-0.614 (-1.33)	1.762* (2.21)	-0.61 (-1.32)	1.719* (2.16)	-0.578 (-1.26)	1.717* (2.15)
RELAT	+	2.452 (1.79)	-1.35 (-0.44)	2.591 (1.89)	-0.385 (-0.12)	2.435 (1.8)	-0.74 (-0.25)	2.574 (1.89)	-1.053 (-0.34)	2.49 (1.82)	-1.269 (-0.39)	2.503 (1.84)	-1 (-0.30)
PERFTARG	+	0.0553* (2.07)	0.0157 (0.21)	0.0557* (2.07)	0.0118 (0.17)	0.0571* (2.15)	0.0133 (0.19)	0.057* (2.12)	0.0155 (0.22)	0.0579* (2.16)	0.0186 (0.26)	0.0548* (2.06)	0.0175 (0.24)
Constant		-6.221 (-1.13)	2.73 (0.29)	-4.214 (-0.78)	0.456 (0.05)	-5.715 (-1.09)	5.357 (0.64)	-3.785 (-0.69)	1.415 (0.15)	-2.666 (-0.48)	2.884 (0.32)	-2.355 (-0.44)	2.049 (0.22)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74	370	74	370	74	370	74
R-squared		0.0553	0.2318	0.0515	0.2548	0.0714	0.2964	0.0518	0.2359	0.0546	0.2318	0.0624	0.233
Adjusted R-squared		0.018	0.0496	0.0141	0.078	0.0347	0.1294	0.0144	0.0546	0.0173	0.0495	0.0254	0.0509

Notes: For the cumulative abnormal return (CAR5), an event window of -10 till +10 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables.

t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

**Table A19 Relationship between percentage of relational and arm's length blockholders and cumulative abnormal return (-10, +10) (robustness)**

Variable	Predicted sign	Relational blockholders						Arm's length blockholders					
		Panel A: 5% level		Panel B: 10% level		Panel C: 20% level		Panel D: 5% level		Panel E: 5% level		Panel F: 5% level	
		United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe	United States	Europe
PERCREL5	+	-5.504** (-2.81)	0.645 (0.22)										
PERCREL10	+			-4.168* (-2.30)	0.82 (0.33)								
PERCREL20	+					-5.038* (-2.55)	0.915 (0.36)						
PERCARM5	-							2.175 (1.54)	-0.166 (-0.05)				
PERCARM10	-									-0.498 (-0.35)	4.124 (1.19)		
PERCARM20	-											11.97** (2.76)	11.58* (2.33)
PERFACQ	+	-0.00953 (-0.19)	0.17 (1.09)	-0.00018 (-0.00)	0.178 (1.12)	0.00299 (0.06)	0.174 (1.11)	-0.0124 (-0.25)	0.169 (1.08)	0.00352 (0.07)	0.136 (0.87)	-0.00674 (-0.14)	0.186 (1.24)
LEV	+	0.00393 (0.8)	-0.0947 (-0.09)	0.00463 (0.93)	-0.104 (-0.09)	0.00511 (1.03)	-0.106 (-0.10)	0.003 (0.61)	-0.126 (-0.11)	0.00263 (0.53)	0.0919 (0.08)	0.00239 (0.49)	0.418 (0.39)
lnSIZE	-	0.0805 (0.19)	-0.593 (-0.92)	-0.0046 (-0.01)	-0.58 (-0.90)	0.0913 (0.21)	-0.598 (-0.93)	0.369 (0.82)	-0.582 (-0.90)	0.181 (0.41)	-0.681 (-1.06)	0.24 (0.55)	-0.939 (-1.48)
PAYM	+	1.651 (1.31)	0.839 (0.27)	1.663 (1.31)	0.826 (0.27)	1.626 (1.28)	0.907 (0.29)	1.772 (1.39)	0.758 (0.25)	1.808 (1.41)	1.191 (0.39)	2.16 (1.71)	-0.261 (-0.09)
lnDEALV	+	-0.572 (-1.25)	1.727* (2.16)	-0.536 (-1.16)	1.716* (2.15)	-0.561 (-1.22)	1.723* (2.16)	-0.669 (-1.45)	1.720* (2.16)	-0.628 (-1.36)	2.092* (2.47)	-0.547 (-1.19)	2.139** (2.73)
RELAT	+	2.63 (1.95)	-1.393 (-0.46)	2.655 (1.96)	-1.47 (-0.48)	2.683* (1.98)	-1.545 (-0.50)	2.441 (1.79)	-1.405 (-0.46)	2.602 (1.9)	-1.006 (-0.33)	2.435 (1.8)	-0.74 (-0.25)
PERFTARG	+	0.0482 (1.81)	0.0181 (0.25)	0.0544* (2.05)	0.0142 (0.19)	0.0511 (1.92)	0.0149 (0.21)	0.052 (1.94)	0.0189 (0.26)	0.0554* (2.06)	0.0233 (0.33)	0.0571* (2.15)	0.0133 (0.19)
Constant		-2.153 (-0.41)	2.998 (0.34)	-1.043 (-0.19)	2.857 (0.33)	-2.627 (-0.50)	3.297 (0.38)	-7.823 (-1.37)	3.339 (0.37)	-4.01 (-0.74)	1.926 (0.22)	-5.715 (-1.09)	5.357 (0.64)
Fixed year effects		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations		370	74	370	74	370	74	370	74	370	74	370	74
R-squared		0.0721	0.2322	0.0654	0.233	0.0685	0.2333	0.0577	0.2316	0.0518	0.2495	0.0714	0.2964
Adjusted R-squared		0.0355	0.05	0.0285	0.051	0.0317	0.0513	0.0205	0.0493	0.0144	0.0714	0.0347	0.1294

Notes: For the cumulative abnormal return (CAR5), an event window of -10 till +10 trading days relative to the event date is used as the estimation period for each transaction in the sample. Natural logarithm is taken of independent variables representing the size of the acquiring company (SIZE) and the deal value (DEALV). The size of the acquiring company (SIZE) is measured by the acquirer's book value of total assets. The leverage (LEV) is measured by the debt-to-common equity ratio. The deal value (DEALV) is the total value of consideration paid by the acquiring company, excluding fees and expenses. Past performance (PERFACQ, PERFTARG) is measured by the Return on Assets (ROA) of the company. The variable relatedness of target and acquiring company (RELAT) is a dummy variable: 1 if acquirer and target have the same Reuters "TF Macro Code", 0 otherwise. The variable payment method (PAYM) is a dummy variable: 1 for all-cash transaction, 0 otherwise. The models of panel A-F show no multicollinearity among the variables.

t statistics in parentheses, \* p<0.05, \*\* p<0.01, \*\*\* p<0.001

