

ERASMUS UNIVERSITY ROTTERDAM
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MSc Financial Economics

The Acquisition Premium and Value of Control in BRICS Countries

A Comparison Between Domestic and Cross Border Transactions

Author: Yannick Sinke

Student number: 351328

Thesis supervisor: Dr. Sjoerd van den Hauwe

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Abstract

This thesis aims to explain the acquisition premium determinants in the BRICS countries and specifically focuses on the effect of cross border deals and a shift of control (>50% of shares). This is analyzed for a sample of 1140 transactions in BRICS countries between 1993 and 2017. We find that foreign acquirers pay a higher premium than domestic, but only in deals where a minority stake is acquired. Further we find that the premium determinants differ for cross border and domestic deals. Domestic acquirers seem willing to pay a higher premium for control and variables indicating poor target performance, while foreign acquirers are paying higher premiums for targets in the same industry. Based on the findings we argue that domestic firms are motivated by the value enhancing opportunities related to poor performing targets while foreign acquirers are more interested in creating synergies arising from entering new markets within the same industry. Further, we find strong evidence that the effect of control on the acquisition premium is dependent on performance indicators of the target firm. Acquirers are willing to pay a higher premium for control, but only for target firms that seem to present value enhancing opportunities due to inefficient management. At the same time, acquirers seem only willing to pay for value enhancing opportunities, in case a majority stake in the target company is acquired.

Key words: acquisition premium, value of control, mergers and acquisitions, BRICS

JEL Classification: G32, G34

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1. Introduction

All though there has been extensive research conducted on the acquisition premium in the US and UK market, little attention has been paid to explaining this for emerging markets like the BRICS countries. Until the late 1980s early 1990s, emerging markets used to have very regulated and restricted business environments. Companies were unable to grow due to expansion capacity restrictions and mergers and acquisitions (M&A) were difficult to conduct because of strict regulations. This combined with tariff barriers made these emerging market highly inefficient. Recent liberalization led to huge opportunities for wealth creation. The strong growth of these markets and the emergence of a massive consumer middle class attracted both domestic and foreign investments and boosted the M&A market in emerging countries (Anandan, Kumar, Kumra, & Padhi, 1998; Vijayakumar, Sridharan, & Rao, 2010).

In this thesis we aim to explain the determinants influencing the magnitude of the acquisition premium. These determinants exist of firm- and deal characteristics. The premium is defined as the percentage difference between the trading price of the target's stock before the announcement of the acquisition and the price per share paid by the acquiring firm (Haunschild, 1994). The focus is on examining the effects of cross border deals and a shift of control (acquirer owns >50% after the deal) on the acquisition premium. Previous studies often focus on deals where the bidder acquires 100% of the target's shares. When only looking at deals where full control is acquired, no statements can be made about the specific effect of control on the acquisition premium. In order to be able to test for the control effect, we use a sample of block deals where a minimum of 5% of the target shares is acquired. This method allows for comparing premiums between deals where the bidder either acquirers a majority stake or not. This sample is based on deals conducted in BRICS countries between 1993 and 2017. Due to the liberalization since the early 90's, competition for M&As and deal volume increased over time. This wide time frame enables us to test if this resulted in a positive trend for the acquisition premium over time.

Global market integration expands the investment opportunity set of acquiring firms, which increases the likelihood of realizing synergistic and efficiency gains. Foreign acquisitions are for a large part caused by the same motivations and factors as the domestic. However, through

improved risk management, new technologies and favorable government policies, foreign firms have more opportunities to create value than domestic. The creation of wealth through an acquisition is related to the acquisition premium because the bidder's gains achieved by a takeover can partly be paid out to the target's shareholder in the form of a premium. Hence, higher wealth creation in foreign acquisitions might imply that foreign firms pay a higher acquisition premium than domestic acquirers (Moeller & Schlingemann, 2005). For emerging markets, the expanded wealth creation opportunities that foreign firms have over domestic are caused by better governance systems and intangible assets related to technologies, know-how, brand name etc. (Chari, Ouimet, & Tesar, 2010; Hausmann & Sturzenegger, 2006). Zhu & Jog (2009) find in a study on emerging markets that foreign acquirers indeed pay a higher premium than domestic firms. However, they do not control for other determinants, which is important to be able to determine if the effect remains the same and to exclude alternative explanations. The above introduction about the cross border effect suggests that foreign acquirers are willing to pay a higher premium than domestic bidders in BRICS countries.

The effect of the acquisition of a majority stake in the target company on the acquisition premium has been researched before as well. Damodaran (2005) state that acquirers are willing to pay a higher premium to obtain control over the target firm. The part of the premium that is related to the shift of control is called the control premium. According to him, controlling the target enables the acquirer to improve the target's performance by replacing management and manage the firm more efficiently. This is referred to as the value of control. This suggests that the value of control seems to be higher for poor performing firms since these targets allow more room for improvement.

Previous research testing for the cross border and control effects mainly test for the unique effects of these deal characteristics by inserting dummy variables for cross border deals and deals where a shift of control occurs. In this research, we are also interested in the differences in other premium determinants that are associated with certain levels of control and the location of the acquirer. This will be tested by performing multiple OLS regressions on subsamples which are based on whether or not an acquirer is foreign and subsamples based on deals where different levels of control are acquired. This allows us to observe possible differences in the other drivers

of the acquisition premium for these subgroups. The second method we use is including interaction terms between determinants of the premium, cross border indicators and control indicators. Adding interaction terms can show that the effect of a certain variable is dependent on the value of another variable. In our case, we test if the effect of a certain premium determinant is related to whether an acquirer is foreign and whether a majority stake is acquired. We believe this is the first comprehensive paper which tests for the differences in premium determinants between foreign and domestic acquirers while at the same time testing the differences in determinants between different levels of control, using a large sample of acquisitions conducted in the BRICS countries.

The scope of this research is justified by the previous information provided on the effects of cross border deals and a shift of control. Foreign acquirers seem to have more and different opportunities to create value than domestic firms. The differences in value creation between foreign and domestic bidders might indicate that there are differences in premium drivers as well, since we saw that creation of wealth is related to the acquisition premium (Moeller & Schlingemann, 2005). Damodoran (2005) suggested that the value of control seems to be higher for poor performing firms. This indicates that the effect of a shift of control might be dependent on performance indicators of the target firm.

Next, we will motivate our scope further by showing the specific relevance of the premium effects of cross border acquisitions and a shift of control in emerging markets like the BRICS countries. Emerging markets are characterized by a positive abnormal stock return for the acquirer around the event date of an acquisition, suggesting the acquisition creates wealth for the acquirer (Chari, Ouimet, & Tesar, 2010). Further, the abnormal returns around the event date are higher for foreign bidders than for domestic acquirers located in the emerging country, suggesting that foreign firms are perceived by the market to create more value through acquisitions. The interesting thing about this research related to this thesis is that the positive abnormal return is only observed when the acquirer obtains control over the target firm. This suggests that acquiring control is essential to create value through an acquisition. The findings of these positive abnormal returns around the event date seem to be unique for emerging markets. Numerous previous studies on the US market show negative abnormal returns for both domestic

as foreign acquirers (Andrade, Mitchell & Stafford 2001; Moeller, Schlingeman, & Stulz, 2004). This makes the BRICS countries an interesting market for researching the acquisition premium.

Sonenshine & Reynolds (2014) compared the acquisition premium for exclusively cross-border acquisitions between acquisitions where the targets were located in either a developed or an emerging country. They found that the positive effect of a shift on control on the acquisition premium was higher in deals where the target is located in an emerging country. This suggests that control seems to play a larger role in emerging countries like the BRICS. Zhu & Jog (2009) state this is because the high information asymmetry in emerging countries. The more information asymmetry the more essential obtaining control is in order to be able to clarify property rights. Zhu & Jog (2009) further mention that this information asymmetry is higher for foreign acquirers than for domestic. Sonenshine & Reynolds (2014) focused on cross border deals in their comparison. In this research, we focus on both domestic and cross border deals within emerging countries. This enables us to compare the importance of the control effect on the premium between domestic and foreign acquirers. Due to the higher information asymmetry in cross border deals, we hypothesize that the effect of control is dependent on whether the acquirer is foreign or not. This possible interaction further justifies the scope of our research.

The last reason for focusing on premium differences between foreign and domestic acquirers is motivated by the research of Zhu, Jog, & Ochere (2011) who find that in emerging markets foreign firms tend to takeover well-established, strong performing firms to enter the market while domestic acquirers tend to acquire poorly managed, inefficient firms and restructure them afterwards. The performance of domestic targets seems to improve over the long run, while targets acquired by a foreign firm shows no sign of restructuring or performance improvement. The finding that domestic and foreign acquirers have different motivation for takeovers and prefer different type of targets suggests that their willingness to pay a premium depends on different factors as well. Therefore we will compare the premium determinants between the two groups.

The economic relevance of this study can be explained by the observation that numerous previous studies on the US market find the abnormal returns for the acquirer around the event

date of the acquisition to be negative. An explanation for these negative returns is that acquirers overpay for their targets. When the acquisition premium is perceived as too high, the market will see this transaction as a wealth transfer from the acquirer's to the target's shareholders with negative abnormal returns for the acquirer as a result. These transactions are seen as value destroying by the acquirer's stockholders. The fact that a large part of the wealth effects arising from the transaction for the acquiring firm depends on the price paid for the target, makes it very relevant to research the acquisition premium, especially in a relatively new M&A market like the BRICS countries.

The organization of this thesis is as follows: in the next section, literature review, the acquisition premium will be explained. We will pay attention to what the acquisition premium is and what factors that explain the magnitude have been found in previous literature. Further, we provide background on the M&A market and the value of control specified to emerging countries. In the Hypothesis & Methodology section, we will present the hypotheses substantiated by the literature review and present the methods used to answer them. Next, we explain the sample selection and present the descriptive statistics, followed by the empirical results.

2. Literature review

In the literature review, we will discuss previous literature related to the acquisition premium and M&A in general. First, an explanation for the existence of the acquisition premium will be provided on the basis of key value drivers of M&As. Next, we will focus on factors that, according to previous literature, influence the magnitude of the premium. Further, we provide a summary of the M&A market in emerging markets as background information, focusing on the recent liberalization of the M&A market and the differences in motivation to engage in acquisitions between domestic and foreign acquirers. Finally, we discuss the value and importance of acquiring a controlling stake in a target company in emerging countries. Again, we will address the differences between domestic and foreign deals.

2.1 Acquisition premium

In this section we will provide a definition and explanation of the acquisition premium. Further, the different types of motivations and key drivers for creating value through acquisitions will be explained. Lastly, we will focus on the principles underlying the magnitude of the acquisition premium.

2.1.1 Definition

One of the first papers that reported on the acquisition premium described it as follows: “A merger premium exists when the common stockholders of an acquired company receive cash and/or securities possessing a value greater than the company's (target's) premerger market value” (Nielsen & Melicher, 1973). The definition we use in this research is: “A premium is the percentage difference between the trading price of the target's stock before the announcement of the acquisition and the price per share paid by the acquiring firm” (Haunschild, 1994).

2.1.2 Explanation

Roll (1986) defines the following steps in a takeover. First, the bidding firm identifies a potential target. At second, a valuation of the target firm is made, incorporating all potential value sources like synergies, replacing weak management etc. Third, the valuation is compared to the current market price. If the valuation is higher, a bid is placed. If not, the bid is abandoned. The bid

placed does not represent the acquirer's full valuation since it includes provision for future bargaining with the target, rival bids and possible misvaluation.

Varaiya (1987) presented a theory in which the takeover decision is captured. When the acquirer undertakes a takeover, its estimated gain is the difference between the acquirer's value perception of the target and the market's perception of the target if the target continues as an independent entity. The value perception of the target firm is dependent on the future dividends it will generate and the cost of capital. If the bidder expects to realize higher dividends or a lower cost of capital than the market, the bidder's value perception is higher than the market's and an acquisition is undertaken. The four main sources of the bidder's target value perception to be higher than the market's perception are synergies, under-management gains, undervaluation gains and overestimation (Hubris). These motivations for conducting acquisitions are explained below.

Synergies

Mukherjee et al. (2004) conducted a survey where they asked 75 CFO's of companies that engaged in acquisitions during 1990 and 2001 for the motives behind this M&A activity. The survey results showed that the most important motivation for M&A is to achieve (operating) synergies. The synergy hypothesis states that M&As take place when the combined value of the acquirer and target are higher than the sum of the values of the individual firms (Bradley, Desai, & Kim, 1988). The synergies can be subdivided into operational efficiencies, an increase in market power and financial benefits like for example tax reductions or favorable changes in the cost of capital (Singh & Montgomery, 1987). Devos, Kadapakkam, and Krishnamurthy (2009) found evidence for a sample of 264 large US mergers that operating synergies are the most important source of value creation in mergers. They estimated average synergy gains to be 10.03% of the combined equity value of the merging firms. The added value was split into operational and financial synergies. Operational efficiencies contributed 8.38% while financial synergies only accounted for 1.64%. Sources of these operational efficiencies are economies of scale or scope, combining management resources, greater bargaining power with suppliers, revenue enhancement due to shared marketing and distribution networks, and the avoidance of duplication in R&D, production etc.

Under-Management

Some firms may not be managed efficiently. The 'inefficient management hypothesis' argues that acquiring these poorly managed firms and replacing existing management and/or policies is believed to enhance firm value (Manne, 1965). Targets in acquisitions that are believed to be managed inefficiently are found to be underperforming the industry in terms of shareholder returns, profitability and have lower managerial ownership than comparable firms. Acquisitions where under management gains are the motivation are often hostile of nature. Acquirers buy large amounts of equity in order to control the board after which management can be changed. The threat of a takeover of this nature serves as a governance mechanism that aligns management's and shareholder's interests and puts pressure on management to manage the firm efficiently. This is called the market of corporate control (Bhide, 1989).

Assuming that the cost of capital remains the same, exploiting synergy potential and/or replacing inefficient management will increase cash flow and/or reduce cost resulting in higher future dividends relative to the situation where the target remains an independent entity. Hence, bidder's perception of the target value is higher than the market and an acquisition will be conducted.

Undervaluation

Bidding firms try to take advantage of information asymmetry. They believe they possess better information than the market and that this information isn't incorporated in the price yet (Halpern, 1982). The undervaluation hypothesis states that companies with low market to book ratios compared to their peers are perceived as undervalued and are more likely to be acquired. Once the market realizes that the assets are undervalued, the value will go up (Moyer, McGuigan, & Kretlow, 1994).

Underpricing gains can also lead to a higher target valuation by the bidder when the acquirer thinks the market underestimates the future dividends. The acquirer's forecast of the future dividend from the target firm as an independent entity exceeds the market expectations. After the acquisition, the market could become 'aware' of their forecast error after which their lower target valuation may rise to the bidder's valuation.

Hubris

Roll (1986) explains corporate takeovers with the “Hubris Hypothesis”. This hypothesis states that bidding firm managers overestimate synergy gains and therefore pay too much for targets. In explaining his theory he considers a situation where there are no synergies at all, in which at the same time some bidder firms irrationally believe such gains do exist. The target valuation would then be a random variable where the current market price is the mean. A bid is only made if the bidder values the target higher than the mean. A valuation above the current market is seen as a random error, a mistake by the bidding firm. Roll (1986) supports this with the strong-form market efficiency theory: "Financial markets are assumed to be efficient in that asset prices reflect all information about individual firms. Product and labor markets are assumed efficient in the sense that (a) no industrial reorganization can bring gains in an aggregate output at the same cost or reductions in aggregate costs with the same output and (b) management talent is employed in its best alternative use." (p. 200). The above leaves not much room for synergies to exist. When managers believe the market does not reflect the full economic value of the combined firm and conduct corporate takeovers, they are acting irrational, overestimating the synergies and therefore paying too much for the target. Takeovers depend on the presumption of bidders that their individual valuation is correct. Roll (1986) presents evidence for this theory by showing that in previous empirical results, the combined value after takeovers does not significantly differ from the individual target and bidder values summed up. Further, he states that even when synergies would exist, bidding managers would still make mistakes and overpay for their targets. The valuation would then be a random variable where the combined value (including synergies) is the mean. Irrational overestimation would lead to a valuation above that combined value and represents the random error as described above. This can be extra relevant for cross border mergers since information asymmetry is higher (Seth, Song, & Pettit, 2000). In this case managers are wrong and overestimate the value of the target. In their perception, the target's value is higher than the market's estimates while in reality this isn't the case.

A different motivation for M&A activity that is not based on a higher bidder's perception of the target value can be explained by the managerial hypothesis. In the Hubris hypothesis explained above, managers' intentions can still be consistent with honorable stewardship of corporate assets, but their actions are not always right. The managerial hypothesis, however, states that

managers are willingly overpaying for targets and that they participate in M&A's in order to maximize their own wealth at the expense of the company's shareholders (Seth, Song, & Pettit, 2000). Agency theory suggests that when managers are difficult to monitor, they tend to grow the firm beyond the optimal level because managements' payment, power, status and prestige is often linked to total resources under control (Jensen, 1986). Besides increasing base salary, large bonuses are often paid to executives for the completion of M&A deals (Grinstein & Hribar, 2004). The above problem is referred to as managerial 'empire building'. Managers are more likely to engage in empire building when free cash is available in the company. Free cash flow is cash that is in excess of funds necessary to invest in all projects that have positive net present value. Substantial free cash flow can lead to management engaging in low-return or value destroying projects, which are primarily focused on enhancing prestige and status rather than create shareholder value. These are called agency costs of free cash flow (Jensen, 1986).

Besides empire building, managers might also engage in M&A transactions in order to diversify their own portfolio. The company they work for often contains an excessively large part of their personal human capital with the result they hold undiversified portfolios with high firm-specific risk. This high risk exposure to the firm they work for makes managers risk-averse in their company activities. In order to stabilize income and reduce their own risk, they diversify by undertaking (unrelated) acquisitions. Williams, Michael, & Waller (2008) find in a literature study a lot of evidence that the greater the management's wealth is tied to a firm, the more CEO's seek to reduce the variance through mergers. Another finding is that companies with relatively high managerial ownership show higher risk-aversion for the firm as a whole, which is shown in more diversification via mergers. Cross border transactions can also be conducted to stabilize a firm's earnings when correlation between the different markets is low. Diversification by firms is often not value maximizing since shareholders can replicate the portfolio themselves more efficient (Seth, Song, & Pettit, 2000).

2.1.3 Magnitude of the premium

The bid should be higher than the market price and lower than the acquirer's valuation in order to achieve a successful takeover. Otherwise it would not make sense for target shareholders to sell and for bidding firm shareholders to buy. Since an acquisition is not a costless transaction, target's shareholders are signaled that the bidder will receive gains from a combination with the

target. This signal informs them that they can ask for a premium on top of the market price. The bidder will only pay the premium if total costs will not exceed total valuation (Varaiya, 1987).

Varaiya's (1987) theory shows that the acquisition price will be between the target valuation and the current market value. To show where the takeover price will lie between the valuation and market price (MV), Slusky & Caves (1991) created a formula that defines the magnitude of the premium (PR):

$$PR = \left(\frac{BRES[Xi]}{MV} \right) * B(Zi)$$

Where $BRES$ is the reservation price the acquirer is maximum willing to pay. This reservation price depends on Xi , which are factors that influence the cash flow of the target and acquirer combined and the willingness of the acquirer to pay for these cash flows. B is the bargaining function and determines where the price will fall between the reservation price and the current market price. The bargaining function depends on factors Zi which influence the bargaining strength of both acquirer and target. Examples of these factors are the number of bidders and ownership concentration and will be further explained in the next section.

2.2 Factors Influencing the Acquisition Premium

In this section, factors that have been found in previous research to have an influence on the magnitude of the premium are explained. These are mainly focused on value drivers and the bargaining position of either the bidder and/or target related to the premium magnitude formula presented by Slusky & Caves (1991) in the previous section. First, we will describe previous findings of the effects of cross border acquisitions and a shift of control on the acquisition premium. Subsequently other firm- and deal specific factors are explained.

2.2.1 Cross-Border Acquisitions

Global market integration expands the investment opportunity set of acquiring firms, which increases the likelihood of realizing synergistic and efficiency gains. While foreign investments are largely influenced by the same factors and motivations as domestic, the acquisition of a foreign asset can provide the acquirer with other opportunities to create shareholder wealth.

Foreign assets can, for example, provide improved risk management, new technologies and favorable government policies. These expanded investment opportunities imply that acquirers are willing to pay a higher premium in cross-border transactions (Moeller & Schlingemann, 2005).

Harris & Ravenscraft (1991) studied shareholder wealth gains for 1273 U.S. firms acquired during the period 1970-1987. A comparison between domestic and foreign acquirers showed that foreign acquirers pay a premium that is significantly higher. The authors state that this higher premium can be explained by a strong will to enter a new market. Conn, Cosh, Guest, & Hughes (2005) have a different explanation and point to information imperfection. According to them higher premiums in cross-border deals are, especially for overseas and less developed markets, a result of valuation difficulties and could therefore lead to overpayment.

All though most comparisons of the target premium between domestic and cross-border acquisitions or focused on the US and UK, the general view and outcome of these researches is that foreign acquirers pay a higher premium (Danbolt, 2004) (Westendorf, 2006).

2.2.2 Shift of Control

Damodaran (2005) states that acquirers are willing to pay a higher premium to obtain control over the target firm. They call this the control premium. According to them the value associated with controlling the target is associated with the acquiring firm being able to improve the target's performance by managing the firm differently and more efficiently. This is described as the value of control. The value of control is considered to be the difference between the target's value with the status quo management and the company's value under new optimal management. Therefore the value of control is higher for poor performing, mismanaged firms.

Another source of value that is associated with control is that controlling shareholders are able to extract value from the firm at the expense of minority shareholders. These are called the private benefits of control and are more present in less developed capital markets with fewer protections for non-controlling shareholders (Dyck & Zingales, 2004, Hanouna, Sarin, & Shapiro, 2001)

As a minority shareholder you can suffer from the majority owner extracting private benefits from the firm. Agency problems can be overcome by acquiring a majority stake. When acquiring a majority stake in the target you mitigate agency costs through improved governance, suggesting agency problems are a driver of control premiums as well (Dyck & Zingales, 2004).

Peng Zhang, & Jiang (2008) find evidence for the control premium in emerging countries. They argue that acquirers pay a higher premium to obtain majority control in a target firm to have access to private information resources that are not available to public investors and to mitigate information asymmetry.

Hanouna, Sarin, & Shapiro (2001) compared the premiums for comparable minority and majority deals for the G7 countries and found a control premium for all countries. These findings are in line with the general empirical findings that confirm the existence of a control premium.

2.2.3 Firm specific characteristics

Financial distress

According to Dyck & Zingales (2004) firms that are experiencing financial distress are more likely to be forced to sell. The poor financial state of a firm lowers their bargaining power in case of a takeover attempt. In a study of block transactions in 39 countries, they find supporting evidence for this theory. Firms in financial distress seem to receive a premium that is 5.4% lower than in deals where the target is not associated with financial distress. The proxy they use to measure distress is negative earnings per share in the year preceding the acquisition.

In contrary to the above Ang and Mauck (2011) find a 12.09% higher acquisition premiums for distressed than for non-distressed targets. Bruton, Oviatt, & White (1994), Clark & Ofek (1994) and Turetsky (2003) explain this by stating that distressed firms are more attractive to restructure and improve performance by replacing inefficient management. Acquirers seem to be willing to pay a higher premium for these opportunities.

Market to book ratio

A high market-to-book ratio of the target indicates high expectations for future profits. Gondhalekar, Sant, & Ferris (2004) claim that bidders are willing to pay for these higher profits and predict a higher premium for targets with high M/B, but he fails to present significant

evidence for this. In contrary, Marris (1964) states that a low M/B indicates that the firm is not exploiting all growth opportunities due to inefficient management. Value can be increased by improving management and therefore bidders are willing to pay a higher premium for these low M/B firms. Walkling & Edmister (1985) indeed find a negative significant relationship between the acquisition premium and the M/B Ratio. According to them premiums are higher for low ratio's since these assets are most undervalued. Bidders can pay a high premium and still pay less than the intrinsic value of the target.

Sometimes the price-to-earnings (P/E) ratio is used instead. The P/E ratio indicates the time it would take the company to earn its market value. Firms with high P/E ratios are associated with many growth options and high expectations for future profits.

A low M/B for the acquirer is an indicator that the bidder has little internal investment opportunities and is forced to seek external investment opportunities in the form of M&A (Lang, Stulz, & Walkling, 1989). A high M/B ratio means that the bidder has internal investment opportunities and is therefore willing to pay less for a target. Gondhalekar, Sant, & Ferris (2004) find that the acquirer's M/B ratio has indeed a negative relationship with the acquisition premium. This effect is the strongest for low M/B acquirers with high free cash flow. This is in line with the free cash flow theory of Jensen (1986) which states that firms with excess cash can suffer from management engaging in low-return or value destroying projects, primarily focused on enhancing prestige and status rather than create shareholder value.

Target and deal size

Previous research indicates that large acquisitions destroy more value for bidder shareholders. According to Henry & Jespersen (2002), 61% of large US M&A deals worth at least 500 million was value destroying for the acquirer. Compared to their peers, acquirers of large targets performed worse. The acquirers lost particularly because they paid too much, resulting in a wealth transfer from bidder to target shareholders. Cools, Gell, Kengelbach, & Roos (2007) report similar results and find that mega deals of above \$1 billion destroy on average more value than smaller deals. Paying too much for large targets can be explained by overconfident managers, who overestimate their takeover abilities and therefore overpay, and tend to bid for

larger targets (Loderer & Martin, 1990; Roll, 1986). Grinstein and Hribar (2004) present another explanation for why CEO's tend to overpay the most for large targets. CEO's receive lucrative bonuses for acquiring other firms, which are often linked to the size of the deal. Salary is linked to the total size of the firm as well, resulting in a motivation for CEO's to acquire large companies. Summarizing, executives will pay a particularly high premium for large targets since the acquisitions lead to high private benefits.

There are also numerous explanations for why premiums for large targets might be smaller. A large deal has more impact on the performance of the acquirer. The high value at stake could result in a more thorough valuation since managers will be directly responsible for worse performance. In this case, managers and their boards are believed to be more hesitant to pay high premiums. Another reason for a negative price effect is the complexity of integrating a large target. Due to the complexity and the costs accompanied with this, synergies are lower and/or more difficult to exploit, resulting in a lower premium (Alexandridis, Fuller, Terhaar, & Travlos, 2013). The size and complexity of the deal also limit the number of potential buyers and competition for the target. Less competition and bidders have been found in literature to lead to a lower price (Alexandridis, Petmezas, & Travlos, 2010). Furthermore, Demsetz and Lehn (1985) report that managerial ownership concentration is lower for large firms. High managerial ownership is a motivation for executives to negotiate the highest possible bid. Low managerial ownership is for the same reason associated with lower premiums (Bauguess, Moeller, Schlingemann, & Zutter, 2009).

Alexandridis, Fuller, Terhaar, & Travlos (2013) find for a sample of 3691 US public acquisitions between 1990 and 2007 that premiums for large deals are significantly lower than for smaller deals. However, large deals do destroy the most value for their shareholders around the event date. The market seems to anticipate for the complexity costs of these deals.

Acquirer size

Moeller, Schlingemann, & Stulz (2004) find significant evidence that large acquirers pay a higher premium than small acquirers. A possible explanation is that large firms often have fewer internal investment opportunities to grow and are therefore forced to seek external options like acquisitions. Another view is that managers of smaller firms typically have more firm ownership

than managers of large firms. High managerial ownership better aligns the motives for undertaking an acquisition, resulting in lower premiums paid.

Return on assets

The return on assets is an indicator of the profitability of the target firm. Palia (1993) found that the return on assets has a positive influence on the acquisition premium in the banking sector. Acquirers seem willing to pay a higher premium for a more profitable firm. However, Frieder and Petty (1991) did not find any significant evidence for this effect to exist in the banking industry. In a study focused on 20 emerging countries, Zhu & Jog (2009) find a negative relationship between the return on assets and the acquisition premium for domestic deals. For cross border deals this effect does not seem to be present. Zhu & Jog, 2009 state that one of the main functions of the corporate takeover market is to replace inefficient management, referring to Mann's inefficient management theory (1965). Opportunities to enhance the target's value are more present in poor performing deals, explaining the negative relationship between the premium and return on assets. The finding that this effect is only present in case of domestic acquirers is attributed that the market for corporate control might be more dominant in the domestic acquisitions.

Leverage

Walkling and Edmister (1985) find that target's leverage has a negative impact on the premium. The debt-equity ratio is an indicator of the portion of cash flow that is encumbered. Higher debt encumbers the target's free cash flow, making the deal less attractive for acquirers. Besides, raising debt levels can enhance the firm value due to tax shields. Therefore an acquirer is willing to pay a higher premium for a target that has not used its debt capacity yet.

The acquirer's leverage is believed to have a negative effect on the premium as well. High levels of debt discipline the management in the form of stronger monitoring by financial creditors, making it more difficult for managers to (over)pay high premiums (Gondhalekar, Sant, & Ferris, 2004). Further, interest payments decrease the level of free cash flow, leaving less available to engage in expensive acquisitions (Jensen, 1986). In contrast, low debt levels can be increased, which can be used to undertake acquisitions and pay higher premiums.

2.2.4 Deal specific characteristics

Private vs. Public bidder

Bargeron, Schlingemann, Stulz, & Zutter (2007) find in a US-based study that publicly listed acquirers pay a 63% higher acquisition premium than private bidders. They state this difference can partly be explained by a high level of managerial ownership in privately held companies, which reduces agency problems where managers overpay for the target. In line with this, public acquirers with high levels of managerial and/or institutional ownership seem to pay lower premiums than comparable acquirers with lower levels of this form of ownership.

Number of Bidders

The higher the number of bidders, the higher the bargaining power of the target since the target can play bidders against each other. A stronger bargaining position can help the seller to generate a higher premium (Porter, 1980). Another theory that predicts a higher premium for multiple bidders is the winner's curse. The winner's curse arises when multiple bidders are bidding for the same target. Each of the bidders has their own estimate of the target's value. In order to avoid losing the target to another bidder, they will bid as high as possible. The winner will be the one with the highest value estimate and price, leading to a high premium for the seller. Often the highest estimate is an overestimate due to valuation difficulties resulting in overpayment, 'the winner's curse' (Roll, 1986). Varaiya (1988) indeed found that the expected value of the highest bid (and acquisition premium) increases with the number of bidders. Flanagan & O'Shaughnessy (2003) show a positive effect as well. For 285 US tender offers in the manufacturing industry between 1986 and 1995 the presence of multiple bidders pushes the winning bid close to the reservation price of the winning bidder, magnifying the winner's curse and acquisition premium. The effect is the strongest for bidders that are not core-related to the target. These bidders are less able to make a correct value estimation of the target than bidders who are core-related, leading to overestimation and overpayment.

Payment method

The effect of the payment method on the acquisition premium has had substantial attention of researchers. In literature three different payment methods are reviewed: cash, securities and a combination of cash and stock (hybrid).

Wansley, Lane, & Yang (1983) were among the first to research the relationship between the payment method and the acquisition premium. In a study where 203 US deals between 1970 and 1978 are taken into account, a significant difference is found between cash and securities. Seller shareholders in cash acquisitions earned, on average, abnormal returns that are almost twice as high as in stock acquisitions (33.54% vs 17.47%). An explanation is that in case of cash payments, the target capital gain taxes have to be paid immediately while with stock payments, target shareholder capital gains taxes are deferred until the shares received in the deal are sold. Target shareholders want to be compensated for this immediate tax liability through a higher premium.

Erickson and Wang (2000) provide an opposite theory. They state that stock values fluctuate and are therefore more risky than cash. Target shareholders will ask for a higher premium to be compensated for the extra risk associated with receiving stock instead of cash. However, Erickson and Wang (2000) do not find evidence for this theory. For their sample of 200 US subsidiary sales between 1994 and 1998, they do not find a significant effect for the method of payment. Myers and Majluf (1984) give an additional explanation for why stock offers could lead to high premiums based on information asymmetry. Managers of bidding firms will use stock as a means of payment in M&A deals when they believe their stock is overvalued in comparison to the target's shares. Target shareholders anticipate to this and require a higher premium as compensation. Fu, Lin, & Officer (2013) found evidence for this theory. In a sample of US deals between 1985 and 2006, acquirers that were perceived as overvalued and used stock as a payment were found to pay a premium equally high as in cash-offers. Targets required on average equally high compensation for the immediate tax liability in cash offers and overvaluation in stock offers. Acquirers that used stock and were not perceived overvalued, paid a significantly lower premium.

All though overvalued stocks can lead to a higher premium, Eckbo (2009) reports in an extensive literature study that in the majority of the studies a higher premium for cash bids than for stock offers is found.

Relatedness of the acquirer and target

Both positive as negative effects of relatedness on the premium have been found. Flanagan & O'Shaughnessy (2003) report a positive effect of firms being core-related on the acquisition

premium. According to them core-related acquisitions should on average present higher synergy possibilities than in acquisitions where target and acquirer are unrelated. These higher synergies lead to a higher valuation and reservation price. The target stockholders are believed to recognize the synergy potential and will therefore demand a higher premium in a core-related acquisition.

On the contrary, Porrini (2006) find that premiums are higher in non-related acquisitions. This is due to the informational disadvantage bidders have when not core-related to the target, resulting in inaccurate, exaggerated valuations. To overcome this informational disadvantage bidders hire bankers to structure the deal. However, these bankers may use their client's informational disadvantage to advise bidders to pay higher premiums since bankers fees are often based on total deal volume.

Tender Offer

Tender offers are acquisitions where the acquirer makes an offer to buy shares directly from the shareholders instead of negotiating with the target's board. Shareholders decide individually if they want to tender their shares for sale to the bidding firm. Jensen & Ruback (1983) were among the first to research the influence of tender offers on the acquisition premium. They find the acquisition premium is significantly higher in case of a tender offer. Offenberg & Pirinsky (2015) find the same positive significant relationship in their study. According to them a possible explanation is that a tender offer signals to the target higher demand for its shares and raises its reservation price. An advantage of tender offers is the speed of the process, which is important in situations where the acquirer's strategy requires that the target is acquired quickly or when rival bids are expected. To persuade the target shareholders to accept the bid, the deal often contains a higher premium.

Bidder Toehold

A number of studies found that the percentage of target's shares owned by the bidding firm before the takeover has an influence on the acquisition premium. Walkling and Edmister (1985) were among the first to find a negative relationship with the percentage of shares already controlled by the bidder firm and the acquisition premium. They link this finding to four factors that imply stronger bargaining power for the acquirer. Holding target shares may lead to a situation where the acquirer is part of the target's decision making. Owning shares beforehand also could give the acquirer possibilities to gain crucial information to value the target. Third, the

percentage of target stock sought is smaller, which could explain a lower premium as well. The last factor that affects the bargaining power is the perception of the market with respect to the acquirer. Bidders who own shares already are seen as more diligent and this could lead to less resistance of target shareholders.

Goldman and Qian (2005), argue that if owning shares before the bid lowers the acquisition premium, bidders should buy as much toehold as is allowed by regulation before they have to make a bid announcement. Betton, Espen, Eckbo, & Thorburn (2009) however find for a sample of 10000 US bids between 1973–2002 that only 13% have toeholds and that toehold bidding is declining steadily since the 1980's. Bris (2002) explains this by stating that buying toeholds upfront the bid can either signal the takeover intention as the synergies value at the time of the bid, which can induce later costs.

Percentage of the Total Shares Sought

Barclay and Holderness (1989) were among the first that found a positive relationship between the acquisition premium and the percentage of the total shares sought in the deal. A larger block deal could lead to higher private benefits for the acquirer because of more voting power in the target. This effect seems to be the strongest when the fractional ownership of the largest target's shareholder is higher. The presence of a large target shareholder increases their bargaining strength of the target.

Dragota, Lipara, & Ciobanu (2013) found this is true for an emerging country like Romania as well. In a study where Romanian deals between 2000-2011 are reviewed, a positive relationship between the percentage sought and premium was found. Again this effect was stronger when the target's ownership was concentrated.

Industry Specific Premiums

Premiums per industry can differ. Shannon P. Pratt (2009) states that technology sectors have higher premiums than average. He generalizes this by stating that these higher premiums are observed in sectors with rapid change because these sectors offer greater opportunities to buyers trying to enter the market or expand market share and momentum.

2.3 Background M&A Emerging Markets

In the previous section we explained the effect of firm- and deal specific characteristics on the acquisition premium. In this section we will provide background information on the M&A market in emerging countries, which is of influence on the acquisition premium. First, the recent liberalization in these economies will be discussed as well as the opportunities and implications for the M&A market that came along with this policy change. Further, we will pay attention to different sources of value creation through acquisitions for both domestic and foreign acquirers. Lastly, some information is provided on the type of targets domestic and foreign acquirers tend to choose. This will be done based on the market of corporate control theory and the strategic market entry hypothesis.

In the past decades, emerging economies have become increasingly important in the global business landscape, partially caused by the recent regulatory liberalization of the business environment in many of these countries. This enabled companies to leverage their low-cost, high quality production, which created growth and jobs. The strong growth attracted domestic and foreign investments that led to new industries and a massive consumer middle-class. The rapid increase in consumer spending presented huge potential markets for products and services, which attracted many multinational corporations (Vijayakumar, Sridharan, & Rao, 2010).

Until the late 1980s early 1990s, emerging markets used to have very regulated and restricted business environments. These strict rules caused many obstacles in creating value and growth for firms operating in these countries. For example, firms suffered from expansion capacity restrictions, which prevented companies from organically expanding business in order to become more efficient. Also, consolidating through mergers and acquisitions was strictly regulated. This in combination with the tariff barriers that protected domestic companies from foreign competition made these emerging markets very inefficient (Cole, Ohanian, Riascos, & Schmitz Jr, 2005; Smith, 1776).

Since the late 80s early 90s the governments of these emerging markets made the business climate more liberal and removed many of the restrictions mentioned above. This led to a

situation of huge opportunities for growth and value, and more competition in which companies were forced to operate more efficient. The loosening of restrictions concerning corporate takeovers, aggressive privatization of state-owned companies and foreign investments boosted the merger and acquisition activities in these countries (Anandan, Kumar, Kumra, & Padhi, 1998).

Until the liberalization takeovers were generally not allowed. Hence, targets that might have been very attractive could not be acquired. Once the policy relaxed there were a lot of opportunities to consolidate. Since the M&A market just 'opened up', 'low hanging fruit' that was easy to integrate in existing business was available. This 'low hanging fruit' was a relatively easy way to create value (Zollo, 1998).

In developed M&A markets, firms tend to overpay for the target (Sirower, 1997). Overpaying in corporate takeovers can often be explained by a competitive bidder environment. If there are multiple bidders, the winner is often the one that overestimated the target's value the most, which is called 'the winner's curse' (Varaiya & Ferris, 1987). This destroys value for the acquirer. According to Jain (2006), this is lesser the true for emerging countries. He argues that especially the period just after the liberalization creates opportunities for value creation due to the low competitiveness for the M&A market. Like stated before the supply side of targets was high. On the other hand, demand was relatively low since potential acquirers often missed the know-how and a good regulatory framework. This made these companies hesitant to undertake acquisitions. Jain (2006) finds evidence for this by showing that in India acquirers create positive, but less value from acquisitions over time. Value was measured by the acquirer's abnormal stock returns -13 and +4 days around the event date. This is suggesting that firms have to pay more for targets as time goes by due to an increasing competitive bidder environment.

Jain (2006) also finds that multinational corporations (foreign investors) create more shareholder value than domestic acquirers in emerging countries. The abnormal returns for foreign investors around the announcement date are higher than for domestic bidders. Dawar and Frost (1999) state this is because of the advantages multinationals have over domestic firms like experienced acquisition capabilities, advanced technology, access to financial resources, superior products,

strong brands and better marketing and management skills. In order to survive, domestic companies in emerging markets are performing international acquisitions themselves to acquire critical assets, which enables them to better compete with their global competition in their home-market and elsewhere (Luo & Tung, 2007).

Zhu, Jog, & Ochere (2011) researched possible differences in motivation for acquisitions between domestic and foreign firms. They name the market for corporate control and the strategic market entry hypothesis. The market for corporate control hypothesis states that poorly performing firms tend to be takeover targets in a competitive M&A market and the strategic market entry hypothesis contains that acquisitions are used to access a new market. They found that foreign firms tend to takeover well-established, strong performing firms to enter the market. Domestic acquirers tend to acquire poorly managed, inefficient firms and restructure them afterwards. Operating performance of these targets improves over the long run. Targets of foreign investors, that were often already performing well, showed no sign of restructuring or performance improvement. Zhu, Jog, & Ochere (2011) explain this by stating that domestic acquirers already established themselves in the local market and are therefore better capable of identifying and restructuring poorly performing firms. Foreign acquirers would suffer more from the high information asymmetry in emerging markets and are thus more interested in acquiring an established partner with good resources like political ties, network, distribution channels etc. to enter the market.

If established well-performing partners are not feasible or too costly, foreign acquirers will use a different method to enter the market named 'Brownfield acquisitions' (Estrin & Meyer, 2011). A brownfield acquisition is a foreign takeover where only a small part of the target's assets is valuable and used. "The rest of resources and capabilities are primarily provided by the investor, replacing most resources and capabilities of the acquired firm" (Meyer & Estrin, 2001).

Acquirers are interested in acquiring certain institutional resources, which are often necessary to operate in emerging market's business environments (Henisz, 2003). These may include knowledge of how to deal with the local government, the understanding of cultural aspects, consumer taste information and the use of the local distribution system (Peng, Zhang, & Jiang, 2008). Brownfield acquisitions occur when environment specific knowledge is important and

other capabilities from the target are weak. The privatization process in the early 1990's made a lot of these kind of targets available (Estrin & Meyer, 2011).

2.4 Value of Control in Emerging Countries

In section 2.2.2 we introduced the concept of a shift of control, where the acquirer obtains a majority stake in the target company, and the implications this has on the acquisition premium. In this section we will address the importance of acquiring a controlling stake on wealth creation for acquisitions taking place in emerging countries.

As stated in section 2.3, Jain (2006) finds that multinational corporations (foreign investors) create more shareholder value than domestic acquirers in India. In a similar study, Ouimet, & Tesar (2010) compare the acquirer's abnormal returns around the event date of the deal between developed acquirers-emerging targets, emerging acquirers-emerging targets and developed acquirers-developed targets for the time frame 1986-2006. They find that when firms from a developed country acquirers a target in an emerging country, they experience positive and significant abnormal returns over a three-day event window. The positive abnormal returns could not be replicated when acquisitions by the same acquirers with targets in developed countries are examined. This in line with the findings of numerous previous studies of mergers and acquisitions in the US where the acquirer shows significant negative abnormal returns around the event date (Andrade, Mitchell & Stafford 2001; Moeller, Schlingeman, & Stulz, 2004). An explanation for this is overpayment or a lack of value enhancing synergies. When the acquisition premium is perceived as too high, the market will see this transaction as a wealth transfer from the acquirer's to the target's shareholders with negative abnormal returns for the acquirer as a result. On the contrary, a positive acquirer return suggests that the combined firm value of target and acquirer is higher than the sum of the two separate entities and that the acquisition is not simply a wealth transfer. The significant positive abnormal returns for acquirer shareholders seems to be unique for acquisitions in emerging countries. In the same study Chari, Ouimet, & Tesar (2010) find that in M&A deals where both the acquirer as the target are located in emerging countries, the acquirer's shares show a significant positive abnormal return around the

event date as well. However, the magnitude of the returns is significantly higher when the acquirer is foreign. Further, it should be noted that the positive returns are only observed when the acquirer buys a majority stake in the target company. Acquisitions of minority stakes do not lead to positive returns at the event date.

The authors give two main reasons for the higher abnormal returns in majority stake deals for foreign investors based on previous literature. Emerging markets have weaker contract institutions, which makes it more difficult to write enforceable contracts (Dyck & Zingales, 2004). Acquisitions of target firms in emerging markets by firms in more developed business environments can overcome this problem and therefore enhance firm value. These weak institutions go hand in hand with weak corporate governance. Weak governance allows for the extraction of private benefits by management at the expense of the shareholders, which restrains firm value. Using the governance mechanisms of the developed country bidder can prevent this and increases value. Chari, Ouimet, & Tesar, (2010) find evidence for this and show that acquirers from countries with better investor protection have higher abnormal returns when an acquisition of a target in a country with weaker investor protection is announced. Another reason for the positive abnormal return that is given by the authors is the know-how that a foreign acquirer has. After the acquisition, the target in an emerging company can be worth more than before since the foreign investor brings in intangibles such as technology, know-how, and brand name, which are valued by the market (Hausmann and Sturzenegger, 2006).

The above is in line with the results of Harvey (1995) where he provides a risk and return analysis of 20 emerging countries. Foreign acquisitions in emerging countries seem to present new opportunities to create value because these markets exhibit high expected return while having low correlation with developed markets. As a result, foreign investors can lower earnings' volatility and increase expected returns, implying foreign acquirers are willing to pay for this in the form of higher premiums.

Sonenshine & Reynolds (2014) compared the acquisition premium for cross-border acquisitions between takeovers where the targets were located in either a developed or emerging country. They find that the positive effect of shifting ownership (the acquirer owns more than 50% after

the deal) on the deal premium is stronger for targets in emerging countries than for developed countries. A possible explanation they offer is that the value of control over a target firm in an emerging country is higher because contracts are more difficult and costly to enforce in these countries. In non-controlling ownership, the difficulty of enforcing contracts and high information asymmetry lowers motivation of acquirers to transfer new technology or other proprietary/specialized assets to the target firm (Peng, Zhang, & Jiang, 2008). Acquiring a majority stake in an emerging country target can overcome these problems with higher value of control for targets in emerging countries as a result. This reasoning is in line with the arguments of Dyck & Zingales (2004) from above and Zhu & Jog (2009) who state that, under the high information asymmetry existing in emerging countries, it is essential for acquirers to acquire majority control in order to clarify the property rights, explaining higher value and premiums for control in these markets.

3. Hypotheses & Methodology

In the hypothesis & methodology section we will first present the hypothesis substantiated by the findings in the literature review. The hypotheses presented are based on the effects on the acquisition premium of cross border deals, the value of control and the liberalization trend in the BRICS M&A market. In the methodology section we discuss the methods and models to test for these effects per hypothesis. Further, we define the acquisition premium as used in this research.

3.1 Hypotheses

Under section 2.2.1 we discussed the research results of studies where the acquisition premium between foreign and domestic is compared. All though most of these studies are focused on the US and UK merger and acquisition markets, the general view is that foreign acquirers pay a higher premium (Danbolt, 2004; Westendorf, 2006). In addition, in section 2.4 we found that foreign firms experience larger positive abnormal returns around the event date than domestic firms when they acquire a target in an emerging market, which was explained by institutional/governance improvement and foreign know-how that increases the target's value (Chari, Ouimet, & Tesar, 2010). In the same section, Harvey (1995) states that by undertaking acquisitions in emerging countries foreign investors can lower earnings volatility and increase expected returns due to low correlation with developed markets and new opportunities to create value. The formula of Slusky & Caves (1991) that captures the magnitude of the premium shows us that the premium is positively related to the value that the target offers to the acquirer. For these reasons we expected to see a higher premium when the acquirer is a foreign firm. The hypothesis that follows:

Hypothesis 1: "Foreign acquirers pay a higher premium than the domestic acquirers for targets in emerging markets"

We saw that the premium determinants can differ in their direction and significance in different researches/samples. Besides, acquisitions in emerging countries seem to create different and more opportunities to create value for foreign than for domestic acquirers (Chari, Ouimet, &

Tesar, 2010). We therefore expect that there will be differences in the direction, significance and magnitude of the premium determinants. For this reason, we test our second hypothesis:

Hypothesis 2: “Premium determinants differ for foreign and domestic acquirers”

The importance of acquiring majority control to create value is stated in multiple studies discussed in this thesis. To enhance the target’s value by changing inefficient management or governance systems a majority stake is needed. The difference between the target’s value with the status quo management and the company’s value under new optimal management is considered the value of control (Damodaran, 2005). Chari, Ouimet, & Tesar, 2010 provide evidence for this in emerging markets by showing that only deals where a majority stake is acquired show positive abnormal returns for the acquirer. We therefore expect a shift of control to have a positive effect on the deal premium:

Hypothesis 3: “A shift of control has a positive effect on the acquisition premium”

Pengm Zhang, & Jiang (2008) argue that acquirers pay a high premium to obtain majority control to mitigate information asymmetry. Information asymmetry lowers motivation for non-controlling shareholders to transfer technology and other proprietary assets. Since Seth, Song, & Pettit (2000) claim that information asymmetry is higher for foreign acquirers we expect the value of control to be higher in cross border acquisitions. We therefore expect that the effect of a shift in control on the deal premium is stronger for cross border deals.

Hypothesis 4: “The effect of a shift of control is stronger for cross border deals”

Like stated in the substantiation of hypothesis 3, Damodaran’s theory (2005) states that the value of control is the difference between the target’s value with the status quo management and the company’s value under new optimal management. Poor performing companies leave more room for improvement to create value and therefore we expect that the effect of a shift of control on the acquisition premium is stronger for poor performing targets.

Hypothesis 5: “The effect of a shift of control is stronger for poor performing targets”

Since the late 80’s early 90’s the governments emerging markets made the business climate more liberal and removed many of the restrictions, which boosted M&A activity (Anandan, Kumar, Kumra, & Padhi, 1998). Since the M&A market just ‘opened up’, ‘low hanging fruit’ that was easy to integrate in existing business was available (Zollo, 1998). Supply of deals was high and demand was relatively low due to the lack of know-how of potential acquirers and a good regulatory framework. Jain (2006) shows that in India acquirer returns around the event date remain positive, but decline over time, which can be explained by the increasing competition for M&As in emerging countries. A high premium in corporate takeovers can often (partially) be explained by a competitive bidder environment (Varaiya & Ferris, 1987). We therefore expected that the acquisition premium in emerging countries will increase over time:

Hypothesis 6: “The acquisition premium will increase over time”

3.2 Methodology

The dependent variable, the acquisition premium, will be defined as the difference between the offer price and the target’s closing stock price 28 days before the announcement, which is consistent with existing literature and will be calculated as follows:

$$\text{Takeover premium \%} = \left(\frac{\text{share price paid for target} - \text{market share price for target 28 days}}{\text{market share price for target 28 days}} \right) * 100$$

Returns will be cumulated 28 days before the announcements since previous research has shown that a part of the returns occurs before the announcement date due to trading by insiders (Borges & Gairifo, 2012). To test if this pre-bid run up effect exists in the BRICS countries, we will compare the 28 days before announcement premium with the 1 day before announcement premium. Further, 28 days are chosen because it is close enough to the event date to avoid contamination effects from other events on the premium (Flanagan & O’Shaughnessy, 2003).

T-test and F-test

To test for hypothesis 1: “*Foreign acquirers pay a higher premium than the domestic acquirers for targets in emerging markets*” we first use an independent samples t-test to test whether the average premium for foreign and domestic bidders differs significantly. For hypothesis 3: “*A shift of control has a positive effect on the acquisition premium*” We will use an independent t-test as well to compare the average premium paid in case of a majority stake acquisition with the premium paid in deals where a shift of control does not occur. The t-test looks like:

$$T = \frac{(\bar{x}_1 - \bar{x}_2)}{\sqrt{\left(\frac{(n_1 - 1)s_1^2 + (n_2 - 1)s_2^2}{n_1 + n_2 - 2}\right) * \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}}$$

Where, for hypothesis 1, \bar{x}_1 means the average acquisition premium in cross border deals and \bar{x}_2 means the acquisition premium in domestic deals. For hypothesis 3, \bar{x}_1 represents the average acquisition premium in deals where the bidder acquires a majority stake in the target company and \bar{x}_2 represents the acquisition premium in deals where a shift of control does not happen. The number of observations for sample 1 and 2 are respectively indicated by n_1 and n_2 , and s_1^2 and s_2^2 stand for the variance of the subsamples (formula below).

$$s^2 = \frac{\sum(x_1 - \bar{x}_1)^2}{n_1}$$

The t-test assumes that the dependent variable is approximately normally distributed for each group, which is less important when the sample is sufficiently large due to the central limit theorem. It also assumes the subgroup variances are homogeneous. If the subgroup variances are heterogeneous, we use the probability following from the modified f-statistic of Welch (1951), which allows for unequal cell variances.

For hypothesis 5: “*The acquisition premium will increase over time*” we will compare the average premiums (PR) per year. The yearly premiums will be tested on the equality of the

means with help of an ANOVA F-test with the following null hypothesis:

$$H_0: PR_{1993} = PR_{1994} = PR_{1995} = \dots = PR_{2015} = PR_{2016} = PR_{2017}$$

In this test we have 24 degrees of freedom (DF) for the numerator and 1115 DF for the denominator. If our test statistic is larger than the critical f-value 1.39 (10%), 1.53 (5%), 1.81 (1%), we can reject the null hypothesis and state that the average premium is not equal over time. As well as for the t-test, the f-test assumes that the dependent variable is approximately normally distributed and that the variances are equal. If, after testing, variances are not equal we use the probability following from the modified f-statistic of Welch (1951). If means are not equal, the average premiums per year are plotted in a graph to see if there exists a positive trend over time.

Multiple Linear Regression Model

To test which variables have explanatory power for the acquisition premium we use the multiple linear regression model. We estimate this model with the Ordinary Least Squares (OLS) method. In the multiple linear regression model we assume a linear relation between the dependent variable γ_i and the parameters β_i , that is

$$\gamma_i = \beta_0 + \beta_1 x_{1,i} + \beta_2 x_{2,i} + \dots + \beta_k x_{k,i} + \varepsilon_i, \quad \text{for all } i = 1, \dots, n$$

The β coefficient measures the effect of a change in x on the dependent, γ . A change of 1 in the x variable, results in a β change in γ . β_0 is the constant and ε represents the error term, which accounts for the variation that is not captured by the explanatory variables in the model. For explaining the acquisition premium the multiple linear regression model is:

$$\text{Premium} = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \varepsilon$$

where x_1 and x_2 are respectively the firm- and deal related variables and ε the error term indicating the variance in the acquisition premium that cannot be explained by the model. The independent variables used are earlier introduced in the literature review above and will be further defined in section 4.2. In order to measure if the coefficients of explanatory variables differ significantly from 0, we use the significance levels 1%, 5% and 10%. A variable showing

a positive significant coefficient means that an increase in the variable leads to an increase in the acquisition premium while a negative coefficient leads to a negative effect on the premium. In our models we will also use log-transformed variables. The interpretation of these variables is as follows: a one percent increase in the independent variable increases (or decreases) the dependent variable by $\beta / 100$ units.

In all regressions we test for heteroscedasticity in the residuals. Heteroscedasticity can lead to a bias in the standard errors of the coefficients with wrong conclusions about the significance of the coefficient as a result. If present, we compute the regression using heteroscedasticity- and autocorrelation consistent (HAC) Newey West standard errors. We also test for multicollinearity in the variables using the Variance Inflation Factors (VIF) measurement (rule of thumb: VIF should be less than 10) and the correlation matrix from section 4.1. Another assumption of OLS is called the exogeneity condition. This holds if the error term and the explanatory variable are uncorrelated. If this is not the case, endogeneity is present in the model, and the estimated coefficients of the explanatory variables are overestimated. In an exogenous model the dependent variable is explained by the explanatory variables and not the other way around. Generally we speak of endogeneity in the model if the dependent variable has an effect on the explanatory variables as well. In our research, endogeneity in the models seems less likely. In previous literature we find that the acquisition premium can partly be explained by firm- and deal characteristics. The acquisition premium itself cannot determine the firm characteristics since all these factors are measured 28 days to a year before the event date. Deal characteristics are mainly affected by other factors than the acquisition premium as well. However, two deal related characteristics could be endogenous. The first is the payment method and second is the percentage of shares acquired. The acquirer must simultaneously consider the acquisition premium it is willing to pay, the payment method and the amount of shares it wants to acquire. Intuitively, a higher premium could lead to a different payment consideration structure. A higher premium requires more cash. If this is not available or not desirable, the acquirer can propose a payment containing more stock. The higher premium could possibly also result in the acquirer demanding fewer shares. However, Zhu & Jog, 2009 analyzed this interdependent relation in emerging markets and found no evidence for explanatory power of the acquisition premium on the payment structure and the amount of shares acquired.

The model used to test for hypothesis 1 and 3 looks as follows:

$$(1) \text{ Premium} = \beta_0 + \beta_1 CB_a + \beta_2 SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \varepsilon$$

CB and SOC indicate if the deal is cross border and if a shift of control occurs. F and D are the control variables based on firm- and deal characteristics. i and j represent the variables within F and D and a is the specific acquisition. Lastly, β_0 represents the constant.

In this regression cross border deals and deals where a shift of control occurs, will be indicated with a dummy variable. A positive coefficient for these dummies means that foreign acquirers pay a higher premium and that acquirers are willing to pay a higher premium to obtain control. The other firm- and deal related variables will act as control variables to test if the effects of foreign deals and shift of control remain after controlling for other variables.

To test for hypothesis 4: “*The effect of a shift of control is stronger for cross border deals*” we add to model 1 an interaction variable between the cross border and shift of control variable. In model form this looks like:

$$(2) \text{ Premium} = \beta_0 + \beta_1 CB_a + \beta_2 SOC_a + \beta_3 CB * SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \varepsilon$$

By adding an interaction term for the two variables, indicated by $CB * SOC$, we can test if the effect of a shift of control on the acquisition premium is dependent on the origin of the acquirer and vice versa. A positive coefficient for this variable indicates that acquiring firms pay a higher premium to obtain control when they are not located in the same country as the target.

Subsequently, we will add interaction terms between the shift of control dummy variable and the other firm- and deal characteristics. This enables us to test if the effect of control is dependent on performance indicators of the target firm and provide an answer for hypothesis 5: “*The effect of a shift of control is stronger for poor performing targets*”. In the same way we will test if the effect of cross border deals is dependent on firm- and deal characteristics as well, by including interaction terms for the cross border variable.

$$(3) \text{ Premium} = \beta_0 + \beta_1 CB_a + \beta_2 SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \beta_k SOC * F_{k,a} + \beta_l SOC * D_{l,a} + \varepsilon$$

Where $SOC * F$ and $SOC * D$ stand for interaction terms between a shift of control and firm characteristics, and a shift of control and deal characteristics. k and l stand for the variables within the interaction terms.

$$(4) \text{ Premium} = \beta_0 + \beta_1 CB_a + \beta_2 SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \beta_m CB * F_{m,a} + \beta_n CB * D_{n,a} + \varepsilon$$

Where $CB * F$ and $CB * D$ stand for interaction terms between the cross border variable and firm characteristics, and the cross border variable and deal characteristics. m and n stand for the variables within the interaction terms.

To test for hypothesis 2: “*Premium determinants differ for foreign and domestic acquirers*”, a regression will be estimated for the subsamples where the acquirer is either foreign or domestic. By comparing the coefficients in the regressions and their significance we are able to make statements about the differences in determinants. The models look as follows:

$$(5) \text{ Premium Domestic Deals} = \beta_0 + \beta_1 SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \varepsilon$$

$$(6) \text{ Premium Cross border Deals} = \beta_0 + \beta_1 SOC_a + \beta_i F_{i,a} + \beta_j D_{j,a} + \varepsilon$$

4. Data

In the data section we first explain the data collection and the criteria used to select the final sample. Next, we will explain how the firm- and deal characteristics from section 2.2 are computed into variables. Lastly, the descriptive statistics of both the acquisition premium and the independent variables are presented.

4.1 Sample Selection

The sample used in this research is extracted from Thomson One Banker. Our sample is based on transactions in BRICS countries involving deals where targets are public firms, acquirers are either public or private firms and where the acquirer acquires at least 5% of the target's stock over the period of 1993-2017. In previous literature 5% block trades are analyzed and found to be generally priced at a premium to the stock price before the takeover (Barclay & Holderness, 1989; Zhu, Jog, & Otchere, 2014). For block trades below 5%, public disclosure is often not required and are therefore not taken into account in this research.

The target firm needs to be a public firm since we need the firms' financials as explanatory variables. For the acquirer, we use both public as private firms to increase the number of observations to work with, which is in accordance with Zhu, Jog, & Otchere (2014). In the past decades emerging economies have become increasingly important in the global business landscape, partially caused by the recent regulatory liberalization of the business environment in many of these countries. Since the late 80's early 90's the governments of these emerging markets made the business climate more liberal and removed many of the restrictions. Competition and deal volume increased over time. To test if the acquisition premium varies due to changes in the business environment over time we use a time frame of 1993-2017¹.

In the analysis we will exclude the extreme premium values in accordance with previous literature. The dataset is truncated at a minimum premium of 0% and the maximum of 200% (Officer, 2003; Roll, 1986; Zhu & Jog, 2009). The reasoning for truncation of negative premium

¹ It seems that the first usable observation is in 1993. Therefore the sample is based on the timeframe 1993-2017.

observations is explained by Roll (1986). The initial bidder for a public company is the market, and the initial bid is the observable market price before the takeover. The target company's shareholders thus have a lower bound for which they can sell their stocks to the market. An acquirer knows for certain that the shareholder will not sell shares below this lower bound and will only place a bid if their valuation exceeds the current market price. Negative observations can either be erroneous entries in the dataset or individual cases involving for example stock illiquidity or hidden earn-outs, which are beyond the scope of this research. Following the above criteria the sample consists of 1140 observations.

4.2 Variable Description

In this section we define all explanatory variables that are taken into account in this research. These include the cross border and the shift of control variables, and the control variables based on firm- and deal characteristics. Most of the variables are already introduced earlier in the literature review section. However, in this section we will summarize the key effects and explain how the characteristics are computed into variables. Further, we provide an overview of the variables in table 1.

4.2.1 Cross Border and Shift of Control

In hypothesis 1 we want to examine the effect of a cross border transaction on the acquisition premium. We measure the cross border effect with a dummy variable. If the acquirer is not located in the same country as the target firm, the dummy variable takes the value 1, indicating that the acquisition is a cross border deal. The acquisition is a domestic deal if the acquirer and target are located in the same country. In this case we code the dummy variable as 0. A significant positive coefficient for this variable means that a foreign acquirer pays a higher premium than a domestic bidder.

For hypothesis 3 we want to test the effect of a shift of control on the acquisition premium. In situations with high ownership dispersion control can be obtained by buying a block of only 5% of the shares (Barclay & Holderness (1989) use this as a proxy of control in their research) while in other cases where a large shareholder owns a little more than 50%, acquiring 49% is not enough to obtain control. To be sure of control we define a shift of control as when the acquirer

owns 50% or more after the acquisition, which is in line with Dragota, Lipara, & Ciobanu (2013). To measure this effect we use a dummy variable which we code 1 in case of a shift of control and 0 otherwise. When a majority stake is acquired, the acquirer is able to replace existing management and improve the target's performance. This is called the value of control (Damodaran, 2005). We therefore expect to find a positive coefficient, which indicates that acquirers are willing to pay a higher premium to obtain control.

4.2.2 Other Control Variables

In the literature review we explained other factors that have been found to have an effect on the acquisition premium. These factors are mainly focused on value drivers and the bargaining position of either the bidder and/or target. The control variables we use to account for these factors are presented below.

Firm characteristics

Four variables used in this research are based on possible inefficiencies in the target's management. Acquirers might be willing to pay for underperforming targets since these targets provide opportunities to enhance performance. The first we discuss is *financial distress*. As a proxy for financial distress we follow Dyck & Zingales (2004) and use a dummy variable which indicates 1 if the target experienced negative earnings per share in the year preceding the takeover and 0 otherwise. A positive coefficient means that the acquirer is willing to pay a higher premium for target firms with negative earnings per share. The target *market to book ratio* can be an indicator of underperformance as well. A lower market to book is often associated with a company that does not fully exploit growth due to inefficient management (Marris, 1964). A market to book ratio below one is often used as an indicator of undervaluation/underperformance. To test this we use a dummy variable that takes the value 1 if the market to book ratio is above 1 and 0 otherwise. The *price to earnings* (PE) ratio is sometimes used instead of the market to book ratio. A lower PE usually means fewer growth options and could possibly be an indicator of under management. Another variable used involving the firm performance is the *return on assets* (ROA). The return is measured as the percentage of dividing net income by the total assets over the year preceding the takeover. Higher ROA indicates better performance and lower ROA might indicate underperformance and inefficient management.

Two firm characteristics are used as a proxy for the size of the target. The first is the *target market value* 4 weeks prior to the announcement. Both positive as negative effects are reported. The higher value at stake, higher complexity and less competition could have a negative effect on the premium while overconfidence (Hubris) and compensation based on total assets under management could lead to higher premiums for larger targets. The *target sales* one year preceding the takeover serves as a proxy for firm size as well.

The last firm characteristic is the target's leverage which is measured with the *debt to equity* (DE) ratio. A lower DE ratio might indicate that the target firm did not use its full debt capacity yet. The acquirer might be able to enhance firm value by raising debt levels to increase tax shields. Lower DE also indicates that less cash flow is encumbered, making the firm more attractive.

Deal Characteristics

Three deal characteristics mentioned in the literature review can be linked to the bargaining position of either the acquirer or the target. The *number of bidders* is an indicator of the competition for the target. When multiple bidders are present the bargaining position of the target is stronger, which can lead to a higher acquisition premium. We therefore use a dummy variable that takes the value 1 in case of multiple bidders are present. The *% of shares held* by the bidding firm before the takeover has been found to have a negative effect on the acquisition premium, which is linked to a stronger bargaining position for the acquirer (Walkling and Edmister, 1985). On the contrary, Bris (2002) states that buying shares upfront the takeover might signal takeover intentions, which can induce later costs for the acquirer. The *% of shares sought* in a deal is related to bargaining strength as well. The higher the percentage of shares sought, the better the bargaining position for the target, leading to a higher acquisition premium.

Further we use a dummy variable for the *acquirer's status*. We code the variable 1 if the acquirer is a public firm and 0 if the acquirer is privately held. Due to a high level of managerial ownership, privately held companies tend to pay a lower premium. Two variables related to the method of payment are used. A dummy variable that shows 1 in case of a *100% cash payment*

and a dummy variable that shows 1 in case of a *100% stock payment*. The payment method has an effect on the way taxes are paid, which could influence the premium demanded by the target's shareholders. The relatedness of the acquirer and target is measured by a dummy variable that equals 1 if the acquirer and target are active in the *same industry*. The firms are classified to be in the same industry if the acquiring firm industry has the same 4-digit SIC code as the target firm industry, which is in line with, among others, Zhu & Jog (2009). This variable is related to the synergy hypothesis. Flanagan & O'Shaughnessy (2003) state that synergy opportunities are the highest in case the firms are core-related. The last two deal characteristics computed into variables are a dummy that takes the value 1 if the deal is conducted with a *tender offer* and the *deal value*. The latter is associated with the same effects of the target's market value 4 weeks prior to the announcement. However, since the deal value represents what is actually paid and the market value only shows the value of 100% of the company, we believe it might provide extra explanatory power.

Table 1. Variable Description

Indicator	Explanation
Acquisition Premium	The difference between the offer price and the target's closing stock price 28 days before the announcement
Cross Border	Cross-border dummy (1 if the buyer is a foreign company, 0 if the buyer is a domestic company)
Shift of Control	Dummy that indicates if the acquirer acquires a majority stake (1 if shift of control, 0 otherwise)
<i>Target Firm Characteristics</i>	
Financial Distress	Dummy that indicates if the target firm has negative earnings per share the year preceding the acquisition (1 if financial distress, 0 otherwise)
Market to Book	Target market to book ratio
MB >1	Dummy that indicates if the market to book ratio is higher than 1. Lower than 1 indicates possible undervaluation. (1 if smaller than 1, 0 otherwise)
MB>3	Dummy that indicates if the market to book ratio is higher than 3. Lower than 3 indicates possible undervaluation. (1 if smaller than 1, 0 otherwise)
(LN) Market Value	The (logarithm of the) market value of the target 28 days preceding the acquisition
PE	Price to earnings ratio target firm
Target sales	Target sales of the year preceding the acquisition
Target ROA	Target return on assets of the year preceding the acquisition
DE	Debt to equity ratio target firm
<i>Deal Characteristics</i>	
Acquirer Status	Dummy that indicates if the acquirer is a public firm (1 if the acquirer is a public company, 0 if a private company)
Number of Bidders	The number of bidders involved in the deal
Multiple Bidders	Dummy that indicates if multiple bidders are present in the deal (1 if multiple bidders, 0 if only 1 bidder)

All Cash	All cash payment method dummy (1 if all cash, 0 otherwise)
All stock	All stock payment method dummy (1 if all stock, 0 otherwise)
Same Industry	Relatedness of the acquirer and target dummy (1 if target and acquirer are related based on SIC code, 0 otherwise)
Tender Offer	Dummy that indicates if the acquisition is conducted with a tender offer (1 if tender offer, 0 is otherwise)
Held Prior	Bidder Toehold, initial acquirer's level of ownership % in the target before the deal announcement
Shares Acquired	Percentage of shares acquired
(LN) Transaction Value	The (logarithm of the) transaction value

4.3 Descriptive Statistics

In the previous section we explained the determinants that will be used in this research. In this section the descriptive statistics for the acquisition premium and independent variables will be presented. We will show these statistics for both the sample as a whole as for the subsamples foreign/domestic deals and shift of control/no shift of control deals. Further, we also show the premium per country, industry and year.

Table 2 shows the 28 and 1 day premium for the BRICS countries. The 28 day premium, 29.5%, is significantly higher than the 1 day premium, 19.2%, at a 1% level, which suggests a pre-bid run up due to possible insider trading like Borges & Gairifo (2012) find for the European market. Further analysis will be based on the 28 days premium.

Table 2. Comparison of the 28 and 1 day Premium

	28 Days	1 Day	T-value	
Acquisition premium	29.5%	19.2%	-8.095	***
N	1140	1135		

The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5%, * = significant at 10%. The presence of asterisks means that the average premium between groups differs significantly from each other.

Table 3 shows the descriptive statistics of the acquisition premium and the deal and firm characteristics for cross border and domestic acquisitions in the BRICS countries. The premium paid in cross border transactions differs significantly from the premium involved with domestic acquisitions at a 5% level. It seems that foreign acquirers pay on average a higher premium

Table 3. Descriptive Statistics of the variables

Sample Discriptive Statistics	Whole Sample			Domestic M&As			Cross-border M&As			Cross-border vs. Domestic
	N	Mean	Std. Deviation	N	Mean	Std. Deviation	N	Mean	Std. Deviation	t-value
Acquisition premium	1140	29.527	31.971	906	28.582	31.990	234	33.187	31.698	1.96 **
Shift of control	1140	0.278	0.448	906	0.276	0.447	234	0.286	0.453	0.316
Acquirer status	1140	0.426	0.495	906	0.394	0.489	234	0.551	0.498	4.368 ***
Number of bidders	1140	0.006	0.078	906	0.004	0.066	234	0.013	0.113	1.467
If all cash	1140	0.593	0.492	906	0.585	0.493	234	0.624	0.485	1.081
Dummy is shares	1140	0.097	0.295	906	0.115	0.319	234	0.026	0.158	-4.145 ***
Same industry	1140	0.242	0.429	906	0.224	0.417	234	0.312	0.464	2.806 ***
Tender	1140	0.254	0.436	906	0.230	0.421	234	0.350	0.478	3.805 ***
Held prior	1140	17.641	25.710	906	16.783	25.192	234	20.966	27.428	2.223 **
% Shares acquired	1140	30.729	28.788	906	30.506	29.168	234	31.594	27.312	0.515
Deal value	1140	326.966	1094.894	906	261.033	742.042	234	582.245	1907.653	4.027 ***
Financial distress	1014	0.218	0.413	803	0.234	0.424	211	0.156	0.364	-2.438 **
Mb	1011	5.437	30.828	801	6.211	30.829	210	2.485	30.719	-1.560
Dummy mb1	1011	0.699	0.459	801	0.689	0.463	210	0.738	0.441	1.377
Dummy mb3	1011	0.343	0.475	801	0.350	0.477	210	0.319	0.467	-0.829
Target market value	1139	1003.599	3180.619	905	873.706	2681.244	234	1505.963	4604.136	2.718 ***
PE	1014	85.341	686.062	803	98.336	741.531	211	35.885	309.142	-1.177
Sales target	1032	861.451	2970.458	818	795.495	2707.560	214	1113.563	3809.221	1.395
ROA	1021	2.898	15.974	810	2.634	15.389	211	3.912	18.048	1.035
D E	880	1.256	2.990	690	1.277	3.133	190	1.181	2.403	-0.391

This table provides the number of observations, the average premium and the standard deviation for the sample as a whole as well as for the subsamples domestic deals and cross-border deals. In the last column the t-statistic from the test on equality for the two subsamples is shown. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks mean that the average premium between groups differ significantly from each other.

□

(33.2%) than domestic acquirers (28.6%). Further, we see that foreign acquirers have a higher level of ownership prior to the deal is announced, while the average percentage of shares sought in the acquisition is the same. A shift of control occurs in 28.6% of the foreign deals and in 27.6% of the domestic deals. Hence, there doesn't seem to be a significant difference in seeking control. We find that foreign acquirers are more involved with acquisitions in related industries and that the deal value is on average higher. The target's market value 4 weeks prior to the announcement is higher in foreign deals as well, while we do not see a significant difference in the sales of the target for the subsamples. The transactions are paid fully in cash in 59.3% of the deals for the whole sample and do not differ. 11.5% of the deals conducted by domestic acquirers are financed with 100% stock, while foreign acquirers use this means of payment in only 2.5% of the observations. We find no difference in the target's leverage, operating performance (ROA) and the presence of multiple bidders. For the latter, it must be mentioned that in only 7 deals of the total sample (which equals around 0.06%), multiple bidders were present. Comparing our ratio with the ratio of a similar sample retrieved from ThomsonOne for the US market (0.3%), this seems low. Either the presence of multiple bidders is less common in BRICS countries or the presence is not well documented. The market to book ratio is reviewed in different ways. We can see that the mean is not significantly different. However, this might be due to some (unrealistic) high observations leading to standard deviations that are intuitively too high. To account for these possible outliers we look at a dummy variable that indicates if the ratio is higher than 1. (below 1 could potentially be an undervalued/mismanaged stock). This shows that foreign and domestic acquirers do not differ in their choice of selecting targets based on the market to book ratio. Some value investors claim that a market to book ratio below three might still indicate undervaluation. Looking at this variable we see there is, again, no difference and we can confirm that the subsamples do not differ in their acquisitions based on the market to book ratio of the target. Further, domestic acquirers tend to take over relatively more financial distressed targets (21.6%) than foreign acquirers (14.7%). This is in line with Zhu, Jog, & Ochere (2011) who find that domestic acquirers tend to acquire poorly managed, inefficient firms to restructure them afterwards. There are more public bidders in cross-border transactions and foreign firms seem to use tender offers more often than domestic acquirers.

Since we are interested in the value of control, we split the sample in transactions where there occurs either a shift or no shift in control. In table 4.1 we see that a transaction where a shift control occurs, shows on average a premium of 34.2% while a transaction where a shift does not occur, has an average premium of 27.7%. This difference is significant at the 1% level which provides evidence that acquirers pay a higher premium for control. We do the same for cross border and domestic acquisitions in order to see if the effect is the same for the two type of deals. Contrary to what we expected, only domestic acquirers seem to pay a higher premium to obtain control. All tough cross border deals do show a slightly higher premium for control (1.35%), this difference is not significant.

Table 4.1. Premium Shift of Control vs no Shift of Control

	Whole Sample		Domestic		Cross-border	
	Shift	No Shift	Shift	No shift	Shift	No shift
Acquisition premium	34.221	27.719	34.243	26.424	34.141	32.804
N	317	823	250	656	67	167
T-value equality	3.088 ***		3.306 ***		0.291	

This table provides a comparison of the premium between deals where a shift of control occurs (shift) and deals where this is not the case (no shift). This is shown for the sample as a whole and the subsamples domestic deals and cross-border deals. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the average premium between groups differs significantly from each other.

To be able to explain where the higher premium for cross border deals comes from, we want to compare the premiums paid between foreign and domestic acquirers in acquisitions associated with the same level of control. In table 4.2 we see that there does not seem to be a difference in the premium paid in deals when there is a shift of control. In deals where there is no shift of control, foreign acquirers do seem to pay a significant higher premium than domestic (32.8% vs 26.4%). Two types of transactions fall under these deals where a shift of control does not occur. The first is a deal where the acquirer owns less than 50% before and less than 50% after the transaction, which is called an acquisition of minority interest. The second is a deal where the acquirer already owns more than 50% of the target before the deal. In these transactions ‘remaining interest’ is acquired. In table 4.3 we see that while both types of deals show higher premiums when a bidder is foreign, the difference with domestic acquisitions is only significant in case of a minority interest acquisition. From this we can conclude that higher premiums for cross border transactions only seem to be present in minority interest deals.

Table 4.2. Premium Domestic vs Cross-border for the Same Level of Control

	Shift of Control		No Shift of Control	
	Domestic	Cross-border	Domestic	Cross-border
Acquisition premium	34.243	34.141	26.424	32.804
N	250	67	656	167
T-value equality	-0.022		2.390**	

This table provides a comparison of the premium between domestic and foreign deals in which the same level of ownership is acquired. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the average premium between groups differs significantly from each other.

Table 4.3. Premium Held > 50% Prior vs Minority Interest

	Held Prior >50%		Minority Stake	
	Domestic	Cross-border	Domestic	Cross-border
Acquisition premium	30.347	35.122	25.408	31.855
N	138	56	517	110
T-value equality	0.894		2.058**	

This table provides a comparison of the premium between domestic and foreign deals in which a shift of control does not occur. Deals where a shift of control does not occur are subdivided in deals where the acquirer held 50% or more before the acquisition and deals where a minority interest is acquired. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the average premium between groups differs significantly from each other.

Further we see in table 5 that the average premium between the BRICS countries differs with Brazil showing the highest premium and China the lowest. This confirms that we should use dummy variables for the separate countries as control variables.

Table 5. Premium per Country

Target nation	N	Mean	Std. Deviation
Brazil	70	38.102	42.882
China	382	25.414	26.778
India	492	31.932	33.714
Russian fed.	61	30.289	38.750
South Africa	135	27.608	27.453
All	1140	29.527	31.971
F-test on equality means	3.701 ***		

This table provides the number of observations, the average premium and the standard deviation per country. Further the F-statistic of the test on equality is shown. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the average premium is not equal for all countries.

When looking at industries (table 6), there does not seem to be a difference in premium between them. All though Shannon P. Pratt (2009) claims that technology and other rapid changing sectors have higher premiums due to the greater opportunities for buyers entering the market, we do not find this to be true for the BRICS countries.

Table 6. Premium per Industry

Target Macro Industry	N	Mean	Std. Deviation
Consumer products and services	43	29.966	27.403
Consumer staples	118	27.265	27.563
Energy and power	81	27.871	36.677
Financials	121	26.619	33.536
Healthcare	86	26.632	27.658
High technology	114	32.231	31.043
Industrials	160	32.181	35.706
Materials	226	31.283	34.321
Media and entertainment	53	24.689	19.851
Real estate	61	28.663	27.959
Retail	32	22.620	20.495
Telecommunications	45	38.045	39.260
All	1140	29.527	31.971
F-test on equality means		1.006	

This table provides the number of observations, the average premium and the standard deviation per Industry. Further the F-statistic of the test on equality is shown. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisk means that the average premium is not equal for all industries.

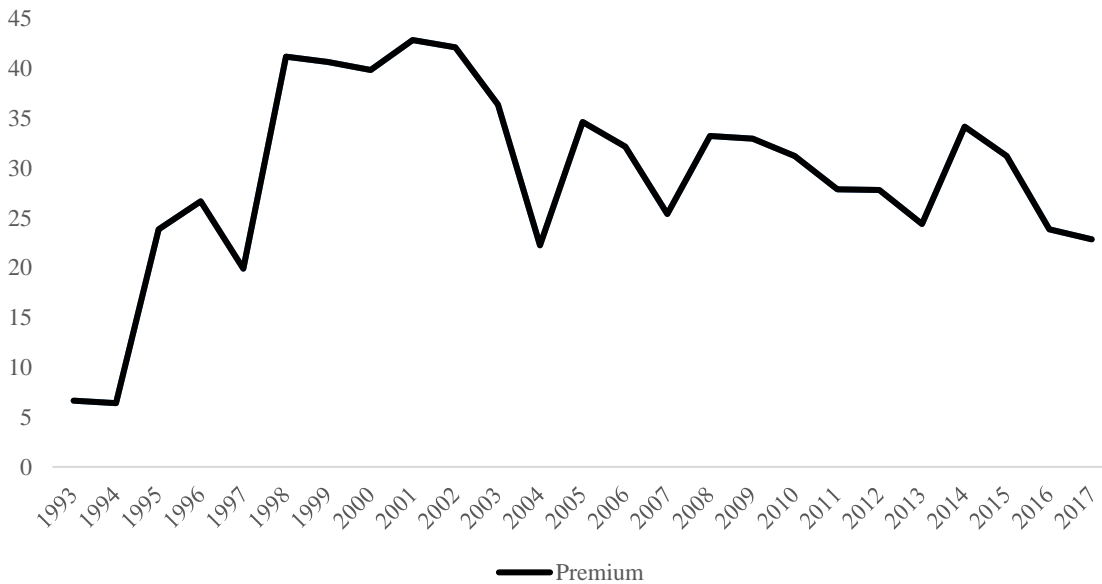
Last, we will look at the premium over time. In table 7 and figure 1 we cannot find a rising trend of the premium like we expected due to increasing competition for targets over time. However, the f-test does indicate that the average premium is not equal over time. When the very low premiums in 1993 and 1994 are omitted, the premium keeps significantly different. We do find a clear positive trend in the number of deals per year, which indicates a more competitive bidding environment.

Table 7. Premium per Year

Year	N	Mean	Std. Deviation
1993	1	6.670	-
1994	3	6.393	7.649
1995	1	23.810	-
1996	6	26.662	22.444
1997	6	19.863	19.605
1998	11	41.176	26.439
1999	19	40.600	26.835
2000	14	39.844	34.996
2001	35	42.821	36.371
2002	18	42.122	45.231
2003	23	36.368	43.018
2004	27	22.219	18.182
2005	39	34.567	28.397
2006	53	32.149	39.511
2007	66	25,364	27.697
2008	69	33.174	34.627
2009	66	32.941	42.931
2010	52	31.203	37.457
2011	62	27.838	31.954
2012	57	27.799	30.726
2013	91	24.370	30.458
2014	98	34.130	30730
2015	81	31.195	31.810
2016	118	23.820	24.620
2017	124	22.856	25.444
All	1140	29.527	31.971

F-test on equality mean 1.585**

This table provides the number of observations, the average premium and the standard deviation per year. Further the F-statistic of the test on equality is shown. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisk means that the average premium is not equal for all year.

Figure 1. Premium % per Year

4. Results

In the results section we first look at the Pearson correlation between the dependent and independent variables in order to be able to find possible bivariate relationships. These correlations are at the same time used to detect possible multicollinearity between the control variables. Next we analyze the results of multivariate regressions used to find the determinants of the acquisition premium. First on the sample as a whole and subsequently on samples for acquisitions of different levels of ownership. Lastly we discuss the regression results of the sub samples where the acquirer is either a domestic or foreign firm.

4.1 Correlation Analysis

In this section we will look at the correlation between the premium and the deal/firm specific characteristics. First, we will look at the sample as a whole to see if we can find a bivariate relationship between the dependent and explanatory variables for the BRICS transaction market. Following that, we will split the sample in domestic and cross border transactions to examine if the premium is correlated with different variables for these deals. The correlation matrix can be found in table 8. Panel A, B and C, show the correlations for the sample as a whole, the cross border deals and the domestic deals, respectively.

In the full sample, we find that the premium is positively correlated with cross border transactions. This is in line with what we expected and also found in the descriptive statistics section where premiums seem to be higher in transactions where the acquirer is foreign.

We also find that a shift of control is positively related to the transaction premium, which can be explained by the value of control. In addition, the percentage of shares sought in the deal has a positive relationship with the premium as well. An effect that is linked to more voting power for the acquirer and a better bargaining position for the target. This relationship was also found by Dragota, Lipara, & Ciobanu (2013) in another emerging country, Romania. The correlation of the shares held prior to the acquisition is close to being significant at the 10% level and shows, contrary to what is often found in literature, a positive relationship with the premium. This might be due to Bris's theory (2012) in which he states that holding/buying toeholds upfront might

**Table 8. Correlation analysis
Panel A Full Sample**

Correlation Matrix	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	
[1] Acquisition premium	1																							
[2] Cross border	0.065*	1																						
[3] Shift of control	0.083**	0.001	1																					
[4] Financial distress	0.080**	-0.051	-0.009	1																				
[5] Market to book	-0.052	-0.047	-0.042	-0.009	1																			
[6] MB > 1	-0.138***	0.025	-0.068**	-0.093***	0.132***	1																		
[7] MB > 3	-0.133***	-0.039	-0.095***	0.029	0.212***	0.450***	1																	
[8] Market value	-0.053	0.087**	-0.039	-0.111***	0.051	0.108***	0.061*	1																
[9] LN Market value	-0.159***	0.051	-0.051	-0.205***	0.083**	0.344***	0.234***	0.520***	1															
[10] PE	0.043	-0.061*	-0.025	-0.123***	0.121***	0.070**	0.036	-0.013	0.046	1														
[11] Target sales	-0.018	0.040	-0.011	-0.051	0.014	-0.026	-0.043	0.762***	0.382***	-0.015	1													
[12] Target ROA	-0.027	0.044	0.009	-0.574***	0.031	0.041	-0.041	0.079**	0.146***	0.046	0.012	1												
[13] DE	0.011	-0.014	-0.014	0.199***	-0.057*	0.037	0.078**	0.003	-0.030	-0.038	0.091***	-0.200***	1											
[14] Acquirer status	0.148***	0.096***	0.222***	-0.083**	-0.028	-0.096***	-0.162***	0.051	0.047	-0.077**	0.045	0.118***	0.028	1										
[15] Multiple bidders	0.048	0.046	0.005	-0.045	-0.008	0.028	-0.011	0.015	0.054	-0.008	-0.012	0.045	-0.021	0.052	1									
[16] All cash	0.036	0.038	-0.030	-0.045	-0.084**	-0.060*	-0.105***	-0.037	-0.189***	0.036	-0.031	0.027	-0.063*	-0.104***	-0.002	1								
[17] All stock	0.034	-0.121***	0.293***	0.006	0.076**	-0.011	-0.022	0.023	0.109***	-0.021	0.115***	0.032	0.125***	0.347***	-0.029	-0.379***	1							
[18] Same industry	0.082**	0.100***	0.089***	-0.070**	-0.007	-0.090***	-0.106***	0.047	0.058*	-0.021	0.056*	0.063*	0.002	0.457***	0.009	-0.025	0.217***	1						
[19] Tender offer	0.065*	0.131***	0.051	-0.063*	-0.039	-0.146***	-0.216***	-0.013	-0.113***	-0.010	0.024	0.110***	-0.076**	0.167***	0.127***	0.230***	-0.074**	0.131***	1					
[20] Held prior	0.053	0.071**	-0.025	-0.041	0.021	-0.143***	-0.176***	-0.033	-0.018	0.012	0.038	0.080**	-0.008	0.091***	-0.032	0.108***	0.058*	0.010	0.369***	1				
[21] Shares acquired	0.125***	0.017	0.747***	0.009	-0.039	-0.087**	-0.130***	-0.058*	-0.046	-0.042	0.015	0.005	-0.005	0.303***	0.084**	-0.104***	0.465***	0.125***	-0.003	0.127***	1			
[22] Transaction value	0.011	0.132***	0.207***	-0.092***	0.021	0.110***	0.047	0.609***	0.428***	-0.011	0.470***	0.063*	0.032	0.105***	0.034	-0.107***	0.195***	0.091***	-0.030	-0.042	0.275***	1		
[23] LN Transaction value	-0.001	0.082**	0.241***	-0.168***	0.055	0.265***	0.146***	0.456***	0.890***	0.036	0.363***	0.130***	-0.004	0.170***	0.098***	-0.203***	0.256***	0.098***	-0.085**	-0.013	0.349***	0.516***	1	

*** = 1%, ** = 5%, * = 10%

Panel B Cross-border

<i>Correlation Matrix</i>	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]	
[1] Acquisition premium	1																							
[2] Cross border	-	-																						
[3] Shift of control	-0,016	-	1																					
[4] Financial distress	0,054	-	0,026	1																				
[5] Market to book	-0,101	-	0,014	-0,176**	1																			
[6] MB > 1	-0,117	-	-0,138*	-0,097	0,183***	1																		
[7] MB > 3	-0,185**	-	0,017	-0,109	0,192***	0,394***	1																	
[8] Market value	-0,043	-	0,023	-0,109	0,041	0,127*	0,120	1																
[9] LN Market value	-0,226***	-	0,051	-0,356***	0,062	0,214***	0,178**	0,584***	1															
[10] PE	0,007	-	0,089	-0,346***	0,262***	-0,010	0,157**	-0,083	-0,131**	1														
[11] Target sales	-0,010	-	-0,005	-0,061	0,010	-0,017	0,045	0,848***	0,410***	0,008	1													
[12] Target ROA	0,014	-	-0,070	-0,666***	0,109	0,087	0,094	0,095	0,334***	0,076	0,003	1												
[13] DE	0,077	-	-0,090	0,234***	-0,521***	0,001	0,035	0,021	-0,099	-0,083	0,054	-0,180**	1											
[14] Acquirer status	0,186**	-	0,074	-0,231***	-0,104	0,034	-0,002	0,012	0,160**	0,035	-0,017	0,156**	0,037	1										
[15] Multiple bidders	0,083	-	0,020	-0,056	0,003	-0,021	0,007	0,022	0,082	0,026	-0,011	-0,001	-0,028	0,122*	1									
[16] All cash	0,062	-	0,075	-0,006	-0,119	-0,091	-0,069	-0,041	-0,149**	0,018	0,002	0,009	-0,034	0,073	-0,075	1								
[17] All stock	0,030	-	0,125	0,016	0,001	-0,053	0,033	0,177**	0,124*	0,000	0,259***	-0,074	0,086	0,093	-0,021	-0,210***	1							
[18] Same industry	0,166**	-	0,099	-0,092	-0,131*	0,073	0,056	0,016	0,095	-0,004	0,020	-0,007	0,130*	0,416***	0,093	-0,018	0,098	1						
[19] Tender offer	0,062	-	0,132*	-0,030	0,001	-0,092	-0,157**	-0,052	-0,024	-0,023	0,019	-0,023	-0,119	0,161**	0,171**	0,262***	-0,053	0,104	1					
[20] Held prior	0,029	-	-0,131*	-0,013	0,008	-0,004	-0,117	-0,019	0,035	-0,068	0,050	0,139*	-0,020	0,050	-0,088	0,194***	-0,032	-0,012	0,460***	1				
[21] Shares acquired	0,061	-	0,738***	0,018	-0,018	-0,144**	-0,054	-0,005	0,007	0,059	0,006	-0,080	-0,065	0,127*	0,108	0,049	0,213***	0,100	0,140*	0,185**	1			
[22] Transaction value	-0,021	-	0,238***	-0,123*	0,018	0,144**	0,030	0,671***	0,510***	-0,003	0,513***	0,107	-0,027	0,038	0,024	-0,151**	0,376***	0,162**	-0,055	-0,053	0,318***	1		
[23] LN Transaction value	-0,079	-	0,307***	-0,321**	0,029	0,143**	0,149**	0,541***	0,911***	-0,097	0,394***	0,297***	-0,094	0,232***	0,126*	-0,109	0,196***	0,148**	0,050	0,010	0,370***	0,591*	1	

*** = 1%, ** = 5%, * = 10%

Panel C Domestic

<i>Correlation Matrix</i>	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]	[21]	[22]	[23]
[1] Acquisition premium	1																						
[2] Cross border	-	-																					
[3] Shift of control	0,111***	-	1																				
[4] Financial distress	0,092**	-	-0,018	1																			
[5] Market to book	-0,033	-	-0,059	0,034	1																		
[6] MB > 1	0,146***	-	-0,049	-0,091**	0,119***	1																	
[7] MB > 3	0,117***	-	0,125***	0,060	0,216***	0,467***	1																
[8] Market value	-0,069*	-	-0,069*	0,113***	0,064*	0,101***	0,043	1															
[9] LN Market value	0,145***	-	-0,080**	0,164***	0,093**	0,379***	0,253***	0,507***	1														
[10] PE	0,053	-	-0,034	0,124***	0,122***	0,082**	0,029	-0,002	0,063*	1													
[11] Target sales	-0,025	-	-0,014	-0,046	0,019	-0,031	-0,078**	0,702***	0,377***	-0,017	1												
[12] Target ROA	-0,042	-	0,032	0,550***	0,009	0,027	-0,076**	0,070*	0,089**	0,051	0,014	1											
[13] DE	-0,001	-	0,002	0,193***	0,050	0,046	0,086**	-0,002	-0,014	-0,039	0,109***	-0,205***	1										
[14] Acquirer status	0,131***	-	0,265***	-0,040	0,002	-0,135***	-0,203***	0,059	0,008	-0,084**	0,068*	0,102***	0,029	1									
[15] Number of bidders	0,031	-	-0,002	-0,040	-0,010	0,049	-0,016	0,003	0,040	-0,009	-0,016	0,066*	-0,019	0,015	1								
[16] All cash	0,025	-	-0,058	-0,052	-0,072*	-0,054	-0,113***	-0,042	-0,203***	0,043	-0,048	0,030	-0,068*	-0,159***	0,027	1							
[17] All stock	0,045	-	0,328***	-0,002	0,085**	-0,002	-0,036	0,005	0,119***	-0,030	0,105***	0,055	0,129***	0,413***	-0,027	-0,411***	1						
[18] Same industry	0,048	-	0,087**	-0,059	0,043	-0,144***	-0,152***	0,052	0,040	-0,018	0,069*	0,080**	-0,027	0,464***	-0,041	-0,032	0,263***	1					
[19] Tender offer	0,056	-	0,025	-0,066*	-0,046	-0,170***	-0,232***	-0,010	-0,152***	0,000	0,018	0,148***	-0,065*	0,155***	0,099***	0,217***	-0,063	0,126***	1				
[20] Held prior	0,055	-	0,007	-0,044	0,030	-0,187***	-0,190***	-0,052	-0,039	0,023	0,030	0,059	-0,004	0,095**	-0,010	0,079**	0,085**	0,008	0,330***	1			
[21] Shares acquired	0,140***	-	0,750***	0,008	-0,044	-0,073*	-0,148***	-0,086**	-0,062	-0,049	0,019	0,027	0,008	0,349***	0,077**	-0,144***	0,514***	0,131***	-0,048	0,113***	1		
[22] Transaction value	0,019	-	0,227***	-0,082**	0,040	0,105***	0,079**	0,556***	0,440***	-0,004	0,455***	0,031	0,077**	0,151***	0,035	-0,110***	0,236***	0,024	-0,049	-0,060	0,304***	1	
[23] LN Transaction value	0,014	-	0,224***	0,125***	0,069*	0,297***	0,150***	0,428***	0,883***	0,053	0,356***	0,077**	0,017	0,144***	0,083**	-0,234***	0,288***	0,072*	0,145***	-0,028	0,343***	0,546***	1

*** = 1%, ** = 5%, * = 10%

signal the takeover intention and/or synergies value, with a better bargaining position of the target's shareholders as a result. The positive effect of industry relatedness can be explained by the synergy gains hypothesis. According to O'Shaughnessy (2003), core-related acquisitions should on average present higher synergy possibilities and thus more value than in acquisitions where target and acquirer are unrelated. The last deal characteristic that shows a significant correlation is the use of a tender offer. Deals that are conducted with tender offers are associated with higher premiums for the target's shareholders.

The acquirer's company status has a significant relationship. Being a public acquirer is positively correlated with the premium. This is in line with what Bargeron, Schlingemann, Stulz, & Zutter (2007) find in their research "Why do private acquirers pay so little compared to public acquirers?".

For target firm characteristics we find the target being in financial distress to have a positive correlation with the premium. The positive effect of financial distress goes against the findings of Dyck & Zingales (2004), who report a negative effect on the premium due to a weaker bargaining position. A possible reason for a positive correlation found in the BRICS market might be undermanagement gains for targets with negative earnings. Turetsky (2003) states that distressed firms are more attractive to restructure and improve performance.

A market to book ratio above 1 and the logarithm of the target value 4 weeks prior to the announcement both have a negative relationship with the premium. A market to book ratio below 1 might indicate under-management and/or undervaluation of the target firm. As an effect acquirers might be willing to pay a higher premium for these undervalued/under-managed assets. The negative correlation for the logarithm target's size² could be explained by complexity, impact, less competition and low managerial ownership, and are explained in section 2.2.3. Both negative as positive relationships have been found in previous literature.

² We take the logarithm of the target's market value 4 weeks prior to the takeover because in previous literature it is shown that the logarithmic scale seems to have better explanation power for the acquisition premium. The target's value, without taking the logarithm, shows the same negative relationship, but is just above the 10% significance level.

We can see that cross border deals are associated with relatively more public acquirers, tender offers, deals in the same industry, shares held prior to the announcement, larger targets, higher deal value, fewer 100% stock deals and a lower PE ratio for the target.

In deals where a shift of control occurs we find relatively more public acquirers, industry related deals, 100% stock deals, higher deal values and lower market to book ratios.

Next, we will split the sample in foreign and domestic acquisitions. For both samples, the acquirer's as well as the target's size remains correlated with the premium. While a tender offer deal shows significant correlation for the whole sample, this effect is not found for each of the sub samples. Earnings below zero are associated with higher premiums only in deals where domestic acquirers are involved. It is also interesting to see that the shift of control is only significantly correlated with higher premiums for the domestic deals. This is the opposite of what we expected. The negative correlation of the market to book ratio on premium seems, again, only significant for the domestic sample. However, it should be mentioned that for the cross border sample the effect is only just above the 10% level. Also, the percentage of shares acquired in the deal only seems to have a bivariate relationship with the premium for the domestic sample. Further we see that the positive correlation that exists if both acquirer and target are active in the same industry is only present in cross border deals.

We see different variables being correlated for the two subsamples, which indicates that the premium is dependent on different factors for cross border and domestic deals. For cross border deals we only find the acquirer's status, target's size and industry relatedness to have a relationship. It is interesting that the industry relatedness variable, which is a proxy for synergy gain deal motivation, is only of influence on the premium for the foreign acquisitions. This might suggest that foreign acquirers focus on, and are willing to pay for, these synergistic gains. At the same time we see that the premium in domestic deals is correlated with target statistics that indicate under management and/or undervaluation, which indicates a different willingness to pay a premium. This, again, is in line with Zhu, Jog, & Ochere (2011). According to them foreign acquirers' motivation for takeovers in emerging countries is based on acquiring well established

firms to enter new markets, while the motivation for domestic acquirers is linked to the market for corporate control and improving the target's performance.

4.2 Multivariate Analysis

The Effect of Cross Border Deals and a Shift of Control

To answer hypothesis 1, 3 and 4 we use OLS regressions to estimate the coefficients of the variables. In the regressions, the dummy variables "Cross Border", "Shift of Control" and interaction term "Cross Border*Shift of Control" are taken into account as well as the other control variables specified earlier.

For hypothesis 1 and 3 we expect the coefficients of the cross border and shift of control dummies to be and remain significantly positive after controlling for other variables. For hypothesis 4 we expect the interaction variable of cross border and shift of control to have a significant positive effect as well, indicating the effect on the premium of a shift of control is stronger for foreign acquisitions. Model 1 contains the cross border and the shift of control variable to test if the effect is present without controlling for any other factors. In the second model we control only for deal characteristics. In this model "shares acquired" seems to be highly correlated with the effect we want to test for, "shift of control". This correlation is easy to explain since the size of a block of shares acquired in a deal can be linked to a shift of control. Therefore we remove the percentage of shares acquired as a control variable in model 3. In model 4 we only use target characteristics to control for. In this model "DE" limits the number of observations with 139. Since it doesn't seem to have a significant effect on the deal premium and the adjusted R-squared is lower within this model, we leave that variable out of the regression in model 5. In model 6 we take both deal as target characteristics into account and in model 7 we add dummy variables for year, country and industry in order to control for the effect these variables could have on the acquisition premium. For this model should be noted that all though the adjusted r-squared is slightly higher than model 6, only Brazil shows to have a significant (lower) effect on the premium. All other country, year and industry dummies seem to have no effect. In models 6 and 7 the deal size is left out since it showed a high correlation with the target's value 4 weeks prior to the announcement. In model 8 we will add the interaction term

“Cross Border*Shift of Control” to model 1 to test for hypothesis 4. The results can be found in table 9.

In model 1 we see that the effect of the involvement of a foreign acquirer and a shift of control in the deal both have a significant positive effect on the premium. This is in line with what we expected in our hypothesis. In the second model, when controlling for deal characteristics, these effects are not observed. After removing the variable that represents the percentage of shares acquired, we see that a positive coefficient for a shift of control remains, but we don't find any significant effect for cross border deals. In model 4 and 5 we see that both cross border and a shift of control show a significant positive effect on the dependent variable. What should be noted is that the models that include target firm characteristics have an explanatory power (adjusted R-squared) that is slightly higher than the models only incorporating firm characteristics. The last two models control for both deal- as well as firm characteristics. These models seem to have the best fit for explaining the acquisition premium. All though at the 10% significance level, foreign acquirers seem to pay a higher premium than domestic bidders after taking all control variables into account. The significance of the positive coefficient associated with the shift of control variable is stronger (significant at 5% and 1% level). This provides evidence that for the total sample of acquisitions conducted in the BRICS countries between 1992 and 2017 an acquirer pays a higher premium to obtain control. This finding is in line with Damodaran (2005) who state that acquirers are willing to pay a higher premium to obtain control over the target firm in order to be able to improve the target's performance by managing the firm different and more efficiently.

When comparing the models and its outcomes we see that the regression coefficient for the cross border dummy is always positive, but not consistently significant. When merely controlling for deal characteristics, there doesn't seem to be a significant effect associated with cross border deals, while in models with only firm characteristics the effect is significantly present. However, when adding the firm specific variables to the model with only deal variables, a significant positive effect for cross border is found. This indicates that, at least for the full model, the cross border variable has a significant positive effect on the acquisition premium

Table 9.1 Premium Regression Results

OLS Regression Dependent variable: Acquisition Premium	Model 1			Model 2			Model 3			Model 4		
	B	t value		B	t value		B	t value		B	t value	
Cross border	4.538	2.021	**	2.332	1.004		2.725	1.173		6.212	2.366	**
Shift of control	6.464	2.926	***	-1.811	-0.635		5.831	2.681	***	5.369	2.187	**
Cross-border*Shift of control												
Financial distress										6.377	1.900	*
MB > 1										-6.313	-2.415	**
LN Market value										-2.107	-3.371	***
PE										0.003	2.100	**
Target sales										0.000	0.904	
Target ROA										0.100	0.844	
DE										0.039	0.106	
Acquirer status				8.263	3.494	***	9.081	3.779	***			
Multiple bidders				11.748	0.812		15.671	1.076				
All cash				0.860	0.428		1.587	0.794				
All stock				-8.751	-1.867	*	-3.521	-0.742				
Same industry				2.409	0.878		1.949	0.717				
Tender offer				-1.101	-0.420		-1.155	-0.438				
Held prior				0.065	1.444		0.036	0.806				
Shares acquired				0.193	3.941	***						
LN Transaction value				-0.845	-1.898	*	-0.526	-1.188				
Dummy country												
Dummy industry												
Dummy year												
Constant	26.798	20.648	***	21.963	9.583	***	23.866	10.520	***	39.595	10.949	***
F	6.672	***		4.817	***		4.049	***		5.279	***	
Adjusted R Squared	0.010			0.036			0.026			0.042		
N	1140			1140			1140			869		

□

Table 9.2 Premium Regression Results

OLS Regression Dependent variable: Acquisition Premium	Model 5			Model 6			Model 7			Model 8		
	B	t value		B	t value		B	t value		B	t value	
Cross border	5.845	2.398	**	4.325	1.854	*	4.638	1.796	*	6.380	2.314	**
Shift of control	6.319	2.799	***	4.942	-2.234	**	6.790	2.689	***	7.818	3.307	***
Cross-border*Dummy Control										-6.482	-1.253	
Financial distress	5.630	1.956	*	6.513	1.864	*	6.068	2.072	**			
MB > 1	-6.264	-2.632	***	-5.090	-1.693	*	-4.728	-1.869	*			
LN Market value	-2.118	-3.702	***	-2.326	-3.819	***	-2.750	-3.837	***			
PE	0.003	1.882	*	0.003	1.165		0.003	1.709	*			
Target sales	0.000	0.886		0.000	1.471		0.000	0.918				
Target ROA	0.042	0.580		0.025	0.363		0.037	0.492				
DE												
Acquirer status				7.982	3.121	***	6.739	2.565	**			
Multiple bidders				19.458	1.385		23.743	1.955	*			
All cash				0.197	0.099		0.421	0.178				
All stock				-2.316	-0.449		-3.366	-0.781				
Same industry				2.411	0.872		2.494	0.928				
Tender offer				-0.627	-0.221		0.210	0.077				
Held prior				0.023	0.492		-0.007	-0.163				
Shares acquired												
LN Transaction value												
Dummy country							Yes	-				
Dummy industry							Yes	-				
Dummy year							Yes	-				
Constant	40.906	12.557	***	36.593	8.995	***	33.037	1.022		26.424	21.279	***
F	7.400	***		5.427	***		2.480	***		4.974	***	
Adjusted R Squared	0.049			0.062			0.073			0.010		
N	1003			1003			1003			1040		

This table provides the multivariate regression results of the full sample with the acquisition premium as dependent variable. In all models the independent variables cross border and shift of control variable are incorporated. In models 2 and 3 variables based on deal characteristics are added and in model 4 and 5 we control for the effects of target characteristics. Model 6 takes both firm- as deal characteristics into account, while model 7 also incorporates dummy variables based on country, industry and year. In model 8 we test for the interaction effect between the cross border and shift of control variable. The first number behind the variable is the coefficient and the second is the corresponding t-value. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the corresponding variable differs significantly from zero. If heteroscedasticity is present we computed the regression using heteroscedasticity- and autocorrelation consistent (HAC) Newey West standard errors.

□

The regression coefficient for the shift of control effect is consistently positive and significant throughout the different models with exception of model 2. This is due to the high correlation with the percentage of shares acquired in a deal. Due to the consistency in the models, we expect a shift of control to have a positive effect on the premium. However, the effect of the percentage of shares acquired is partly incorporated in this coefficient. Therefore we cannot precisely assign the exact effect of a shift in control on the dependent variable.

Further, we find other variables that seem to have a consistently significant effect on the dependent variable. Negative earnings per share in the year preceding the takeover indicate financial distress. According to Dyck & Zingales (2004), financial distress has a negative influence on the acquisition premium since private costs of ownership after the takeover can increase with financial difficulty and the seller's bargaining position is less strong in case of negative earnings. The latter is an important factor in the formula that defines the magnitude of the premium created by Slusky & Caves (1991) which was discussed in section 2.1.3. For block trades in BRICS countries we find the opposite effect. Target firms with negative earnings have a 6.1% higher premium according to our model. We argue that negative earnings are a proxy for inefficient management by the target firm. When the bidder firm believes it has the competencies to manage the target firm more efficient and enhance firm value, they might be willing to pay a higher premium for this opportunity. This reasoning is in line with the theory of Bruton, Oviatt, & White (1994), Clark and Ofek (1994) and Turetsky (2003) and the "inefficient management hypothesis" of Manne (1965). We find further evidence for the under management gain motivation for takeovers in the presence of a significant negative effect of the Market to Book ratio. This ratio is can be an indication for undervaluation, either as a result of misperception by the market or due to inefficient management failing to exploit all growth opportunities (Damodaran, 2010; Marris, 1964; McGuigan, & Kretlow, 1994). Bidders might believe they can enhance firm value of these undervalued companies and are therefore paying a higher premium for firms with a low market to book ratio.

Another variable that has a significant effect throughout the models is the size of the target. Both positive as negative price effects have been found for the target's size in literature. In our models we observe a negative effect on the premium paid. Large targets are more complex to integrate in

existing business. Due to this complexity, synergies are more difficult to exploit, which lowers the premium the bidding firm is willing to pay (Alexandridis, Fuller, Terhaar, & Travlos, 2013). Large deals are also associated with less potential buyers and thus less competition. As a result of less competition, shareholders from large targets receive a lower premium.

The last variable we find to have a significant effect on the premium is the acquirer's status. A public acquirer pays a higher premium than a private. Bargeron, Schlingemann, Stulz, & Zutter (2007) claim this is due to the ownership structure of private firms characterized by a high level of managerial ownership, which prevents overpaying.

Further, we find no significant effect for the interaction term "Cross Border*Shift of Control", suggesting that the effect of a shift of control is not stronger for cross border transactions. This is in line with what we found in the correlation section where the acquisition premium for cross border did not seem to be correlated with a shift of control.

When looking at the r-squared of these model we notice that we are only able to explain a small part of the premium variation. The variation explained by our models ranges from 1.0% to 7.3%. This is observed in many other papers concerning acquisition premium determinants. Intuitively, this can be explained the extensive dynamics of the M&A market. Every deal is different and is motivated by numerous factors, which makes it more difficult to predict the premium associated with these deals. Despite the relatively low explanatory power, we find statistically significant predictors which allow us to draw important conclusions about how changes in the determinants are associated with changes in the deal premium.

For the sample as a whole, we find evidence for hypotheses 1 and 3. Foreign acquirers seem to pay a higher premium than domestic bidders after controlling for other factors and acquirers are also willing to pay a higher premium to obtain control over the target. We don't find any evidence for hypothesis 4. The effect of a shift of control does not seem to be stronger in cross border transaction because the interaction term coefficient is negative and not significant. In the descriptive statistics, on the contrary we expected, we found that foreign acquirers only seem to pay more in block trades where a minority interest is acquired. We test for this effect later to be

able to explain the cross border effect more precise. First we test for the effect of possible interaction terms to see if the effects of the premium determinants are dependent on whether a deal is cross border and for different levels of control

Other Interaction Effects

In this section we test for the presence of other interaction effects related to both the cross border and shift of control dummy. The multivariate regression results are found in table 10. In panel A you find the multivariate regression results for the interaction effects regarding firm specific control variables. In panel B the results regarding deal specific characteristics are shown. Model 1 shows the interaction effects for the cross border dummy and model 2 shows the interaction effect with the shift of control dummy. In Panel C we estimate a model with both firm- and deal specific control variables and incorporate all interaction variables that were found to be significant in Panel A and B.

In model 1 and 2, panel A, we find the interaction term between the cross border and shift of control dummy to have a significant negative effect on the acquisition premium. This means that the effect of a cross border deal is different for different categories of control. How different the effect is, is indicated by the interaction variable's coefficient. The effect of a cross border deal on the premium now looks like $19.81\% - 10.82\% * \text{shift-of-control}$. If a shift of control occurs the shift of control dummy takes value 1. In this case we expect the premium of cross border deals to be 8.99% ($19.81 - 10.82 * 1$) higher. If no shift of control occurs the effect of a cross border deal on the premium is expected to be 19.81% higher. Another significant interaction variable related to firm specific control is the interaction term between the shift of control dummy and the dummy that indicates financial distress. This indicates that the effect of a shift of control is different in case of target financial distress. When financial distress is present, a shift of control leads to an expected premium of 25.74% higher ($2.3 + 23.44 * 1$), while in the absence of financial distress, a shift of control only leads to a 2.30% higher premium. It is interesting to see that when controlling for this interaction term, the unique effect for the separate variables shift of control and financial distress are no longer significant. Our findings suggest that acquirers are

Table 10. Premium Regression Results

Panel A. Firm Characteristics						
	Model 1			Model 2		
	B	t-value		B	t-value	
Cross border	19.809	2,275	**	8.373	3,018	***
Shift of control	8.913	3,496	***	2.304	0,318	
Financial distress	5.900	1,873	*	0.081	0,022	
MB > 1	-7.087	-2,620	***	-7.875	-2,249	**
LN Market value	-1.649	-2,515	**	-1.829	-2,445	**
PE	0.003	1,924	*	0.002	0,606	
Target sales	0.000	0,362		0.000	1,001	
Target ROA	-0.009	-0,101		0.026	0,458	
Cross border*Shift of control	-10.822	-1,951	*	-9.269	-1,904	*
Cross border*Financial distress	-6.226	-0,725				
Cross border*MB > 1	1.372	0,236				
Cross border*LN Market value	-2.221	-1,532				
Cross border*PE	-0.007	-0,466				
Cross border*Target sales	0.001	0,693				
Cross border*Target ROA	0.163	0,981				
Shift of control*Financial distress				23.442	2,655	***
Shift of control*MB > 1				5.255	0,871	
Shift of control*LN Market value				-0.487	-0,367	
Shift of control*PE				0.004	1,188	
Shift of control*Target sales				-0.001	-1,214	
Shift of control*Target ROA				0.095	0,471	
C	37.707	10,792	***	40.555	9,926	***
F	4.512***			5.411***		
Adjusted R Squared	0.064			0.062		
N	1003			1003		
Panel B. Deal Characteristics						
	Model 1			Model 2		
	B	t-value		B	t-value	
Cross border	6.964	1,108		3.507	1,240	
Shift of control	6.906	2,723	***	13.310	1,966	**
Acquirer status	8.779	3,252	***	7.706	2,777	***
Multiple bidders	11.740	0,733		17.843	1,238	
All cash	1.313	0,539		0.563	0,231	
All stock	-4.087	-0,971		-11.296	-1,803	*
Same industry	-0.011	-0,004		5.840	1,915	*
Tender offer	-0.490	-0,173		-1.660	-0,550	
Held prior	0.041	0,905		0.078	1,684	*
LN Transaction status	-0.231	-0,491		-0.174	-0,335	
Cross border*Shift of control	-5.231	-0,914		-1.968	-0,359	
Cross border*Acquirer status	1.278	0,243				
Cross border*Multiple bidders	7.305	0,292				
Cross border*All cash	1.901	0,361				
Cross border*All stock	4.808	0,334				
Cross border*Same industry	8.895	1,582				
Cross border*Tender offer	-0.460	-0,077				
Cross border*Held prior	-0.045	-0,445				
Cross border*LN Transaction value	-1.627	-1,453				
Shift of control*Acquirer status				1.868	0,363	
Shift of control*Multiple bidders				-6.470	-0,240	
Shift of control*All cash				2.797	0,528	
Shift of control*All stock				12.894	1,497	
Shift of control*Same industry				-10.469	-1,991	**
Shift of control*Tender offer				0.286	0,054	
Shift of control*Held prior				-0.188	-1,592	
Shift of control*LN Transaction value				-1.280	-1,398	
C	23.107	8.529	***	22.461	8,246	***
F	2.464***			2.731***		
Adjusted R Squared	0.024			0.028		
N	1140			1140		

Panel C. Significant Interaction Terms

Terms	Full Model		
	B	t-value	
Cross border	6.404	0,363	**
Shift of control	4.115	-0,240	
Financial distress	1.730	0,528	
MB > 1	-5.233	1,497	**
LN Market value	-2.125	-1,991	***
PE	0.004	0,054	**
Target sales	0.000	-1,592	
Target ROA	0.029	-1,398	
Acquirer status	7.323	8,246	***
Number of bidders	19.397	0,363	
All cash	-0.124	-0,240	
All stock	-3.231	0,528	
Same industry	4.155	1,497	
Tender offer	-0.003	-1,991	
Held prior	0.020	0,054	
Cross border*Shift of control	-8.270	-1,592	
Shift of control*Financial distress	19.933	-1,398	***
Shift of control*Same industry	-4.748	8,246	
C	36.319	0,363	***
F	5.587***		
Adjusted R Squared	0.093		
N	1003		

This table provides the multivariate regression results of the full sample with the acquisition premium as dependent variable. In all models the independent variables cross border and shift of control variable are incorporated. In Panel A and B the effect of interaction terms for firm- and deal specific variables is tested, respectively. In model 1 the interaction terms are based on the cross border dummy and in model 2 the interaction terms are based on the shift of control dummy. In Panel C both firm- and deal characteristics are incorporated as well as the interaction terms that were found to be significant in Panel A and B. The first number behind the variable is the coefficient and the second is the corresponding t-value. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the corresponding variable differs significantly from zero. If heteroscedasticity is present we computed the regression using heteroscedasticity- and autocorrelation consistent (HAC) Newey West standard errors.

only willing to pay a higher premium for control in case of financial distressed target firms and at the same time are only willing to pay a higher premium for financial distressed targets when a majority stake is acquired. This could be explained by the value of control hypothesis and the theory of Damodaran (2005). He states that the value of control is considered to be the difference between the target's value with the status quo management and the company's value under new optimal management. Therefore the value of control is higher for poor performing (in this case measured by the financial distress dummy), mismanaged firms. Further, for deals where the target does suffer from financial distress, but no majority stake is acquired, the acquirer is not able to replace management and improve efficiency. For this reason, the acquirer is only willing to pay a higher premium for distressed target when it acquirers control over the firm.

For model 1 and 2 panel B we find a negative significant effect for the interaction variable between the shift of control dummy and the dummy which indicates that the target and acquirer are active in the same industry. When a shift of control occurs, a deal within the same industry is expected to increase the premium by 2.84% ($13.31 - 10.47*1$), while if the deal is not in the same industry a shift of control would lead to an increase of the premium by 13.31%. The negative coefficient of the interaction variable seems counterintuitive. When looking at the unique effect of the same industry, we see the coefficient is significantly positive. This is in line with Flanagan & O'Shaughnessy (2003) who state that core-related acquisitions should on average present higher synergy possibilities than acquisitions where target and acquirer are unrelated. Intuitively you would expect that obtaining control makes it easier to realize these synergistic gains, with a positive interaction effect between the two variables as a result. A possible explanation for the negative effect is that when control is obtained a more thorough and realistic estimate of the target firm value and synergies takes place and hence leaves less room for overestimation/Hubris (Roll, 1986). This effect would especially be strong for deals taking place in the same industry due the informational advantage bidders have when core-related to the target explaining the negative interaction term (Porrini, 2006).

In Panel C the full model is shown. In this model both firm- and deal characteristics are incorporated as well as the three interaction variables that were found to have a significant effect in one of the previous models. After controlling for all firm- and deal characteristics only the interaction variable between the shift of control and financial distress dummy remains to have a significant positive effect. Like in model 2 panel A, adding this interaction term leads to the unique effect of the shift of control and financial distress dummy being insignificant. These findings provide extra evidence and robustness for the value of control hypothesis and the relation it has with poor performance of the target firm (Damodaran, 2005). This provides evidence for hypothesis 5 to be true .

Further Analysis on the Cross Border Effect

In the descriptive statistics, the premiums paid in cross border and domestic deals were compared for the subsamples minority interest deals and deals where the acquirer owns more than 50 percent afterwards. This indicated that the higher premium foreign acquires seem to pay,

is only present in minority interest deals. To be better able to explain the cross border effect we perform OLS regressions on the subsamples minority interest deals and deals where the acquirer owns more than 50 percent afterwards. The goal is to find where the cross border effect is present and if this effect remains when controlling for other factors. This analysis will also serve as a robustness check of the regression results on the effect of cross border deals and a shift of control (table 9).

In panel A of table 11, the regression results of the minority acquisition sample are shown, in panel B you find the results for the sample involving deals where the acquirer owns more than 50 percent after the deal. In model 1 and 3, only the cross border dummy variable is incorporated. We see that a foreign acquirer pays a higher premium than domestic bidders in minority block acquisitions, but not in deals where the acquirer owns more than 50 percent after the transaction. The cross border effect remains the same in the models 2 and 4 where we control for both deal as firm characteristics. With these findings, we are able to answer hypothesis 1 more specific. Foreign acquirers indeed pay a higher premium, but this effect is only found in deals where a minority block is acquired.

Further, we find more evidence for the undervaluation and under management gains hypothesis. For minority deals, financial distress has an insignificant negative coefficient while for deals where the acquirer owns more than 50% after the deal the coefficient is positive and significant at the 1% level. In minority deals the acquirer is not able to replace management and manage the firm more efficient since it has no control over the target. Therefore, in minority deals, target firms with negative earnings per share are not associated with these under management gains where acquirers are willing to pay for. When the acquirer owns more than 50 percent they are able to realize these gains, explaining the difference in coefficients.

A market to book ratio higher than one has a significant negative effect on the premium for minority deals, while this effect is not found in the other subsample. A market to book ratio of below one is often associated with undervaluation by the market. We argue that in minority blocks, acquirers are willing to pay a higher premium for undervaluation, since they believe the

Table 11. Premium Regression Results

Panel A.						
Minority Interest						
OLS Regression						
Dependent variable:	Model 1			Model 2		
Acquisition Premium	B	t-value		B	t-value	
Cross border	6.447	2.058	**	6.256	1.916	*
Shift of control						
Financial distress				-0,600	-0,173	
MB > 1				-5,727	-1,802	*
LN Market value				-1,431	-1,979	**
PE				0,005	2,279	**
Target sales				0,000	0,376	
Target ROA				-0,004	-0,042	
DE						
Acquirer status				5,551	1,712	*
Multiple bidders				-3,567	-0,233	
All cash				-3,892	-1,480	
All stock				-4,432	-0,387	
Same industry				3,505	0,952	
Tender offer				2,504	0,641	
Held prior				0,096	0,638	
Shares acquired				0,193	1,524	
LN Transaction value						
Constant	25.408	20.648	***	21.963	6.234	***
F	4.234	**		2.790	***	
Adjusted R Squared	0.005			0.045		
N	627			574		

Panel B.						
>50% deals						
OLS Regression						
Dependent variable:	Model 1			Model 2		
Acquisition Premium	B	t value		B	t value	
Cross border	1.763	0.501		1.535	0.407	
Shift of control						
Financial distress				18,412	2,903	***
MB > 1				-4,207	-0,938	
LN Market value				-2,758	-2,909	***
PE				0,002	0,799	
Target sales				0,000	0,745	
Target ROA				0,125	0,781	
DE						
Acquirer status				11,002	2,872	***
Multiple bidders				36,206	1,552	
All cash				7,310	2,274	**
All stock				-2,836	-0,507	
Same industry				2,973	0,711	
Tender offer				-1,387	-0,362	
Held prior				0,066	0,666	
Shares acquired				0,130	1,528	
LN Transaction value						
Constant	32.799	19.008	***	25.790	2.645	***
F	0.251			3.689	***	
Adjusted R Squared	-0.001			0.086		
N	512			429		

This table provides the multivariate regression results with the acquisition premium as dependent variable. The sample is divided in deals where a minority interest is acquired (Panel A.) and deals where the acquirer held 50% or more before the acquisition (panel B.). In model 1 only the cross border variable is taken into account while model is extended with all firm- and deal characteristics serving as control variables to test if the cross border effect remains the same. The first number behind the variable is the coefficient and the second is the corresponding t-value. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the corresponding variable differs significantly from zero. If heteroscedasticity is present we computed the regression using heteroscedasticity- and autocorrelation consistent (HAC) Newey West standard errors.

market will realize the undervaluation sooner or later. No change of control is necessary for this strategy. In deals where the acquirer owns more than 50 percent, the focus seems to be more on improving firm performance as we explained above.

In minority deals, acquirers also tend to pay a higher premium for target firms with higher PE ratios. This suggests they are willing to pay more for targets which have higher growth opportunities. In deals where the acquirer owns more than 50% after the deal, we do not find this effect. This could again be explained by the market of corporate control hypothesis. The value of control is considered to be the difference between the target's value with the status quo management and the company's value under new optimal management (Damodaran, 2005). If a target has high future growth opportunities the value of acquiring a control might be lower. This could possibly explain why acquirers are not willing to pay a higher premium for targets with a higher PE ratio in majority stake deals.

Comparison of acquisition premium determinants between foreign and domestic deals

In the descriptive statistics section we found that foreign and domestic acquirers are associated with different deal and firm characteristics. In this section, OLS regressions will be performed on the subsamples cross border and domestic deals to be able to compare the coefficients and the significance of the acquisition premium determinants.

In table 11 the results of the OLS regressions are shown. Panel A shows the results for domestic deals and Panel B shows the results for cross border deals. For both type of deals we find a public acquirer to have a significant positive effect on the acquisition premium. The same result is found for the sample as a whole in table 8 and is explained by higher managerial ownership in private companies which prevents agency problems like empire building (Bargeron, Schlingemann, Stulz, & Zutter, 2007).

The market value prior to the takeover announcement seems to have a significant effect on the premium for both samples as well. A larger target is more difficult to integrate in existing business and is associated with greater value at stake. Therefore a larger target has a negative effect on the premium.

Table 12. Premium Regression Results

Panel A. Domestic									
OLS Regression									
Dependent variable:	Model 1			Model 2			Model 3		
Acquisition Premium	B	t value		B	t value		B	t value	
Shift of control	6.905	2.761	***				7.680	2.978	***
Financial distress				5,719	1,504		6,199	1,670	*
MB > 1				-7,342	-2,075	**	-6,095	-1,740	*
LN Market value				-1,792	-2,480	**	-1,741	-2,599	***
PE				0,003	0,961		0,003	1,157	
Target sales				0,000	0,658		0,000	0,504	
Target ROA				0,000	-0,004		-0,030	-0,369	
Acquirer status	8,779	2,904	***				7,220	2,272	**
Multiple bidders	11,740	0,473					17,419	0,716	
All cash	1,313	0,583					-0,050	-0,022	
All stock	-4,087	-0,799					-2,820	-0,517	
Same industry	-0,011	-0,003					0,050	0,015	
Tender offer	-0,490	-0,169					0,112	0,036	
Held prior	0,041	0,793					0,017	0,318	
LN Transaction value	-0.231	-0.473							
Constant	23.107	9.008	***	40.952	10.157	***	34.891	7.658	***
F	2.904	***		6.249	***		4.312	***	
Adjusted R Squared	0.019			0.038			0.055		
N	906			793			793		

Panel B. Cross Border									
OLS Regression									
Dependent variable:	Model 1			Model 2			Model 3		
Acquisition Premium	B	t value		B	t value		B	t value	
Shift of control	1.866	0.386					-3,898	-0,775	
Financial distress				-0,541	-0,068		4,603	0,578	
MB > 1				-5,429	-1,070		-5,973	-1,186	
LN Market value				-3,915	-3,051	***	-4,350	-3,366	***
PE				-0,005	-0,335		-0,002	-0,154	
Target sales				0,001	1,190		0,001	1,286	
Target ROA				0,153	1,071		0,198	1,392	
Acquirer status	10,057	2,252	**				10,521	2,197	**
Number of bidders	19,045	1,003					19,697	1,063	
All cash	3,214	0,697					1,348	0,282	
All stock	0,722	0,053					4,230	0,284	
Same industry	8,885	1,869	*				9,999	2,020	**
Tender offer	-0,950	-0,182					0,094	0,018	
Held prior	-0,004	-0,045					-0,016	-0,175	
LN Transaction value	-1.858	-1.853	*						
Constant	30.071	5.376	***	57.106	7.248	***	50.231	5.602	***
F	1.890	*		2.314	**		2.265	***	
Adjusted R Squared	0.033			0.036			0.078		
N	234			210			210		

This table provides the multivariate regression results with the acquisition premium as dependent variable. The sample is divided in domestic (panel A.) and cross border (panel B.) In model 1 we test for the effects of deal related variables, while model 2 shows the effects of firm related factors. In model 3 the effects are shown when both firm- as deal related variables are incorporated in the model. The first number behind the variable is the coefficient and the second is the corresponding t-value. The asterisks indicate the level of statistical significance where: *** = significant at 1%, ** = significant at 5% and * = significant at 10%. The presence of asterisks means that the corresponding variable differs significantly from zero. If heteroscedasticity is present we computed the regression using heteroscedasticity- and autocorrelation consistent (HAC) Newey West standard errors.

A shift of control only seems to have a significant effect in the domestic market. After controlling for other variables domestic acquirers are willing to pay a higher premium to obtain control. The value associated with control is that the acquirer is able to improve performance by replacing old management (Damodaran, 2005). This effect is not observed for deals conducted by foreign acquirers.

Further we see that financial distress and the market to book ratio only have a significant effect in domestic deals. Domestic acquirers seem to be willing to pay for the value enhancing opportunities a target with negative earnings and a market to book ratio below 1 offer, while foreign acquirers are not. This in combination with domestic acquirers paying a higher premium for control provides evidence for the inefficient management hypothesis and the market for corporate control in the domestic takeover market. These findings are in line with Zhu, Jog, & Ochere (2011). It is argued that domestic acquirer's motivation in emerging countries is associated with the market of corporate control. They find that domestic acquirers tend to acquire poorly managed, inefficient firms and restructure them afterwards. This is also supported in the descriptive statistics section, where we found that domestic deals are associated with relatively more financial distressed targets.

In cross border deals acquirers are willing to pay a higher premium for targets who are active in the same industry. According to O'Shaughnessy (2003), core-related acquisitions should on average present higher synergy possibilities than in acquisitions where target and acquirer are unrelated. The findings that foreign acquirers are willing to pay for potential synergy gains associated with acquisitions in the same industry, but not for proxies of under management (negative earnings and market to book ratio), suggest that foreign acquirers are motivated by synergy gains instead of under management gains. This is also in line with Zhu, Jog, & Ochere (2011) who find that that targets of cross-border acquisitions outperform targets of domestic acquisitions in the pre-acquisition period. Foreign firms tend to takeover well-established, strong performing firms to enter new markets. We argue that foreign acquirers are motivated by the potential synergistic gains arising from horizontal acquisitions in new markets and are willing to pay for this in the form of a higher premium. This is also supported in the descriptive statistics section where we found that cross border deals are associated with relatively more core-related deals.

We find evidence for hypothesis 2. Premium determinants indeed seem to differ between foreign and domestic acquirers. Financial distress, the market to book ratio and a shift of control only seem to have a significant effect on the acquisition premium in domestic deals, suggesting that the market of corporate control is more present in the domestic takeover market. On the other

hand, core-related deals only have a significant effect for cross-border deals. Since this variable is a proxy for synergistic gains, it seems that foreign acquirers are more interested in creating synergies arising from entering new markets within the same industry. An explanation of these different motivations to pay a premium is that domestic acquirers already established themselves in the local market and are therefore better capable of identifying and restructuring poorly performing firms. Foreign acquirers would suffer more from the high information asymmetry in emerging markets. Therefore domestic firms are willing to pay a premium for the opportunities to improve firm performance while foreign firms are not.

5. Conclusion & Discussion

In this section we will provide a systematic overview of the results. Further, we address some limitations of this research and provide recommendations for further research.

5.1 Overview of the Results

This thesis aims to explain the acquisition premium determinants in the BRICS countries and specifically focuses on the effect of cross border deals and a shift of control. In this research, the acquisition premium and the determinants are compared between cross border and domestic deals in order to see if the premium depends on different factors and motivations. Further we look at the value of control and the dependency of this effect on other firm- and deal characteristics. The above is extra relevant for emerging markets like the BRICS countries since control seems to be more important in markets characterized by high information asymmetry and contracts that are difficult to enforce.

To test for these effects we use a sample of 1140 transactions in BRICS countries between 1993 and 2017. We find that foreign acquirers pay a higher average premium than domestic, which is in line with our expectations. This effect remains to exist when controlling for other determinants indicating that the higher premium paid in cross border deals cannot be attributed to alternative explanations related to firm- and deal characteristics. However, when looking at the cross border effect for different levels of control, this positive effect on the premium seems only to exist for deals where a minority stake is acquired.

The premium for domestic deals is influenced by other determinants than for cross border deals. A shift of control only seems to have a positive effect in the domestic market. Further, we see that financial distress and the market to book ratio only have a significant effect in domestic deals. Domestic firms pay a higher premium for targets that experience financial distress and have a market to book ratio below 1. Cross border deals seem to differ from domestic for the effect of conducting a takeover within the same industry. Foreign acquirers seem willing to pay a higher premium for core related targets while domestic acquirers are not. These findings suggest that domestic acquirers are willing to pay for the value enhancing opportunities related to poor performing targets, which can be explained by the inefficient management hypothesis. Control is

an important factor in realizing the gains related to under-management of the target firm, explaining the positive effect on the premium. The fact that this is not found for foreign acquirers suggests that the “market for corporate control” is more present in the domestic takeover market. We argue that domestic firms are better capable of identifying and restructuring poorly performing firms than foreign acquirers due to the high information asymmetry in these markets. Therefore domestic firms are willing to pay a premium for the opportunities to improve firm performance while foreign firms are not. The finding that foreign acquirers are willing to pay a higher premium for core related targets provides evidence for the synergy hypothesis, which means that that foreign acquirers are more interested in creating synergies arising from entering new markets within the same industry. The above reasoning for the difference in takeover motivation is further confirmed by the finding that, on average, domestic acquirers acquire more financial distressed targets and foreign firms acquire more firms within the same industry.

We expected the effect of control on the acquisition premium to be higher for cross border deals. The reasoning behind this is that information asymmetry is higher for foreign firms which makes control more relevant and valuable. Like stated above, control does not seem to have a significant effect on the premium for cross border deals. Further, when testing the effect of control related cross border deals we find a negative significant effect for this interaction term, suggesting that foreign acquirers pay a smaller premium for control than foreign acquirers. However, when controlling for firm- and deal characteristics, the significance of this effect disappears.

For the sample as a whole, we do find a shift of control to have a positive effect on the acquisition premium. However, we find strong evidence that the effect of a shift of control is dependent on performance indicators of the target firm. The significance of the unique effect of control disappears when controlling for the interaction term between a shift of control and a variable that indicates financial distress. For the interaction effect, we do find a positive effect. This suggests that acquirers are willing to pay a higher premium for control, but only for target firms that seem to present value enhancing opportunities due to inefficient management. On the other hand, we find that acquirers are only willing to pay a higher premium for the value enhancing opportunities related to financial distressed firms, in case a majority stake in the target

company is acquired. These findings can be explained by the value of control. The value of control is higher for poor performing targets, since these targets offer more room for improvement. At the same time, these opportunities for improvement are only relevant when acquiring a majority stake

The last thing we tested was if a positive trend existed in the acquisition premium as a result of increased competition. All though the acquisition premium is not equal over time, there is no evidence to assume that the acquisition premium is rising.

5.2 Limitations and Further Research

This thesis has some limitations. First, there is a lot of data missing for the M&A market in BRICS countries. To let this thesis be as comprehensive as possible we wanted to incorporate as many 5% block deals possible for the time frame 1993-2017. From the 7631 observations that initially met our criteria, we were able to use only 1140. For a large part this is caused by measurement errors or missing data for the deals. This means that a large part of the deals is not incorporated in our research due to a particular attribute, which could mean that are results are influenced by a sample selection bias.

The lack of data results in two other limitations. The first is that we could use relatively few explanatory variables. For example, other studies show that immaterial assets and research and development expenditures are import factors for explaining the acquisition premium. These factors could be extra relevant for BRICS countries due to the high information in emerging markets. The next limitation arising from the lack of data, is that in order to have enough data observations to test for the effects in sub samples, we chose to use acquisitions conducted by both public as private acquirers. Due to the fact that for private firms less information is available, we could not compute variables that measure the relative difference between acquirers and targets. These variables based on relative difference have been found to have strong explanatory power over the acquisition premium. On the other hand, only taking deals into account where the acquirer is public might lead to a sample selection bias. The above to limitations might explain the relatively low R-squared/explanatory power of our models.

Another limitation that should be taken into account when you interpret our results, is that we use proxy variables for measuring the theoretical concepts. We chose proxy variables, based on previous literature, that are characterized to have close correlation with the true variables we are interested in. However, because of the use of proxies, the conclusions related to the inefficient management and synergy hypothesis are less robust than when the true variables would have been applied.

In this thesis we tested for a time trend in the acquisition premium. All though we did not find a positive trend like we expected, the F-test indicated that the average premium is not equal over time. To gain a deeper understanding of the development of the premium over time, further research could focus on testing if the effects of the explanatory variables are constant over different time frames and if these determinants are influenced by macroeconomic factors. The insights of the premium determinants for more recent time frames, would be more relevant for future acquirers than information based on our comprehensive sample.

Further research could also focus on a replication study for other emerging countries. It would be interesting to see if the finding that, after controlling for other factors, foreign acquirers only seem to pay a higher premium in minority stake acquisitions can be found for other emerging markets as well.

Last recommendation for further research is based on our findings related to the inefficient management and synergy hypothesis. In this research we used interaction terms based on the cross border and shift of control variable. This led to the conclusion that domestic and foreign acquires have different motivations for paying a higher premium. It would be interesting to further study the differences in premium determinants between the two groups. For example by using interaction terms for the proxies used to measure management inefficiency and synergies as well, to gain more insight in the composition of the effect of these variables.

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