Method of payment and the success of mergers and acquisitions: the role of taxes

Radboud University

Master's thesis

Author:	Floris Huurenkamp
Student number:	S4771850
Supervisor:	D.J. Janssen
Study-specialisation:	Master in economics- Corporate Finance and Control
Date of submission:	10-08-2020

Abstract

Mergers and acquisitions activity has increased drastically during the last decades. Nowadays, M&A is a multi-trillion dollar industry, accounting for the biggest part of FDI. However, many M&A's turn out to be unsuccessful, destroying firm value and costing billions. Prior literature comes up with different results on the success of M&A's and what causes this success. This study contributes to the discussion on the effect of the method of payment on the success of M&A's, by looking at the abnormal returns of the target's stock after the announcement date. In addition, the role of capital gains taxes on this relation is tested. An event study is carried out using data of 244 M&A deals with EU-based target firms during the timeframe 2010-2019. The results show significant positive cumulative average abnormal returns of 20.04% during the -1/+30 event window. Moreover, the results indicate higher abnormal returns for M&A's when paid with cash or a mix between cash and shares, relatively to M&A's paid for by shares. Finally, the results show the capital gains tax rates do not have a significant interaction effect on the role of the method of payment on the success of M&A's.

Keywords: Mergers and acquisitions, method of payment, abnormal returns, capital gains, taxation

Table of contents

1. Introduction 5

2. Literature review 7

2.1 Abnormal returns in mergers and acquisitions 7

2.2 The method of payment 10

2.3 The role of taxes 15

3. methodology 18

3.1 Data gathering 18

3.2 Sample description 18

3.3 research method 20

3.4 Dependent variable 20

3.5 Independent variables 23

3.6 Control variables 24

4. Results 26

4.1 Descriptive statistics 26

4.2 Correlation matrix 27

4.3 Abnormal returns during the -1/+30 event window 28

4.4 Analysis 1: Cumulative abnormal returns and the method of payment 29

4.4.1 Regression analysis 29

4.4.2 Robustness check 31

4.5 Analysis 2: The role of taxes 32

4.5.1 Regression analysis 32

4.5.2 Robustness check 34

5. Conclusion & discussion 35

5.1 Results compared to previous research 35

5.2 Conclusion, limitations and future research 36

Bibliography 38

Appendix A: capital gains taxes per country 44

Appendix B: GDP per capita per country 45

Appendix C: Overview target countries per year 46

Appendix D: Variables descriptive statistics 47

Appendix E: Correlation matrix 48

Appendix F: Average abnormal returns per day 49

Appendix G: Analysis 1 50

Appendix H: Robustness check analysis 1 51

Appendix I: Analysis 2 52

Appendix J: Robustness check analysis 2 52

1. Introduction

In the past decades, the role of M&A's has increased in many developed and developing countries. It has become one of the biggest parts of foreign direct investment (FDI) (Aykut, 2007). In 2019, a total of over 49,000 M&A deals was carried out. These deals had a total value of 3.7 trillion dollar (IMAA,2020). This huge amount shows the M&A industry is of vast importance for the worldwide economy. However, many mergers and acquisitions do not have the intended outcome. Empirical research showed that 43% of merged firms worldwide had lower profits compared to comparable firms that didn't merge (Salant et al.,1983; Meeks,1977). Also, 50% of merged firms in the United States reported negative cumulative abnormal returns in the years after the merger (Gugler et al., 2003). These numbers show that the predicted synergies are not achieved in a lot of cases, which results in a lot of failures in M&A's.

Despite the fact that a lot of research has been conducted into M&A's and their consequences, the relationship between M&A's and their consequences remains unclear. A reason for this could be that corporate restructuring is a very complex and multidimensional activity (Bowman & Singh,1993). Because of this, results in prior literature are often contradictory.

Prior research has focussed on many different deal characteristics and their relation to M&A success. The method of payment is seen as an important deal characteristic, which has a big influence on the outcome of M&A's. Bidding firms can pay for the target using either cash, stock, or a combination of both. The choice of the method of payment has big consequences for the deal and the period after the deal. However, the theory behind the relation between the method of payment and M&A success is still unclear. There are many opposing theories and findings, which leave a gap for further research (Silva Da Rosa et al.,2000). Furthermore, scientists disagree on which variables influence the method of payment chosen by the bidder firm. Some stress the role of information asymmetry, while others state it are taxes which are of big interest (Amihud et al.,1990). The role of taxes is elaborated on in various prior literature. Ismail and Krause (2010) state taxes could play an important role due to the increased premium required in cash mergers relatively to stock mergers. However, other papers find characteristics as investment opportunities, measured by using the Tobin's q-ratio, as being among the most important variables (Martin,1996).

Because of the contradictions in literature, this paper focusses on the relationship between the success of mergers & acquisitions and the method of payment chosen in the deals, by looking at the different form of payment and the cumulative abnormal returns in target stock returns. The abnormal returns, which are used as indication for success in this paper, are calculated for every deal in the sample. The abnormal returns show the reaction of the market on the M&A, giving us an indication on how successful shareholders think the M&A will be (Hackbarth & Morellec,2009). A regression analysis then tests the effect of the independent variables on these abnormal returns. Furthermore, it extends literature by including taxes on M&A deals as possible interaction effect on this relationship.

Prior literature mainly speculates on the role of taxes of the relationship between method of payment and abnormal returns, but it often doesn't include the variable in the empirical research. Furthermore, most prior research on the relationship between the method of payments and M&A's is based on data from the United States or China. Focussing solely on these countries has a disadvantage that it keeps institutional effects like taxes fixed, which makes it hard to find a significant effect of taxes (Faccio & Masulis,2005). In this paper, data from European countries is used. This way we keep some of the most important institutional factors fixed. However, the tax rates do differ between the EU countries, making it possible to find a relationship.

The paper's theoretical contribution is twofold. First, it contributes to the conflict of what effect the chosen method of payment has on the success of M&A's, as there is a lot of disagreement among scientists about how this relation works. And second, it helps to fill the gap in literature on how the relation between method of payment and M&A success can be explained, by testing the moderating effect of taxes on the relation. The social relevance of the paper is big. Although the M&A industry is a multi-trillion dollar industry and accounts for the biggest part of FDI investment, many mergers and acquisition result in a failure. Therefore, the need for understanding factors which make a M&A to a success is huge. By knowing the relation between the method of payment and the success of a M&A, and the role of taxes, firms can prepare themselves better for a new deal, making the right choices and increasing the chance of success of reaching the expected synergies. This could lower the chances of value destruction and failures in mergers and acquisitions.

The findings of this paper show positive significant cumulative average abnormal returns (CAARs) of 20.04% during the -1/+30 event window. Most of the cumulative abnormal returns are experienced during the first four days of this event window. The regression analysis further shows that the abnormal returns are higher for cash-paid M&A's compared to stock-paid M&A's. Finally, the results show that the capital gains tax rate does not have a direct or indirect influence on the abnormal returns of the target firms.

The rest of the thesis consists of the following sections. The next chapter contains a review on relevant literature and hypothesis formulation. Chapter 3 will elaborate on the methodology used in the paper for the empirical analysis. Next, chapter 4 will contain the results from the analysis. Chapter 5 will give a summary of the findings, together with a discussion of the results, limitations, and some suggestions for future research.

2. Literature review

2.1 Abnormal returns in mergers and acquisitions

When managers of a company make a decision and this has consequences for the company, it changes the perspective of the shareholders. During the 1990's, several papers were published concerning the question of how M&A's and other types of corporate restructuring changes the value of companies. Looking at the market value of restructured firms and comparing this to the portfolio of stand-alone firms, many papers find a lower market value for the restructured or conglomerate firms. In their paper, Lang and Stulz (1994) look at this difference in market value by comparing the Tobin's q ratio of the different firms. This Tobin's q ratio is equal to the market value of the company divided by the replacements cost of the company's assets. The results of the paper indicate that recently acquired or merged companies generally have a lower Tobin's q compared to stand-alone firms (Lang & Stulz,1994). Furthermore, some studies find that conglomerates are priced at discounts, destroying billions of dollars of value (Berger & Ofek,1995; Lins & Servaes,1999).

According to the efficient market hypothesis (EMH) of Fama (1970), the information of events like M&A's is incorporated in the share price immediately. The EMH assumes markets are completely efficient and all information is included in the price, whether this information is publicly available or not (Malkiel,2003). This implies there are no abnormal returns in share prices before an event. However, many studies find empirical evidence of the existence of abnormal returns around the announcement date of M&A's. Huang and Walking (1987) find cumulative abnormal returns of 23.4% for target firms during the -50/-1 event window, showing there are abnormal returns prior to the announcement date. Carvalho and Camargos (2013) perform an event study on 87 Brazilian companies during 10 days prior and 10 days after the announcement of a dividend distribution. They find positive abnormal returns for target firms on multiple days during the -10/+10 event window. Graham et al. (2002) study the effect of the announcement of a M&A by looking at the cumulative abnormal returns of the companies around the date of the announcement. Where most other research only focusses on days prior to the announcement date and a couple of days afterwards, they also consider the effects of the long-term post-announcement period. They find a mean combined abnormal return of the target and acquirer of 3%. However, in the two years after the announcement, the excess value of the acquiring company decreases with 7% (Graham et al.,2002).

The abnormal returns found can be partially explained by the expected synergies a merger or acquisition will bring. These synergies can be achieved when the companies merge or one company acquires the other (Loukianova et al.,2017). Because of the merger or acquisition, the new company can experience economies of scale or greater efficiency due to complementary skills of the combined employees. These are examples of operating synergies. Moreover, M&A's could also enhance the financial position of the combined firm, increasing the debt capacity or tax benefits. These are

examples of financial synergies (DePamphilis,2015). However, there could be many other explanations for the abnormal returns around merger announcements. Agrawal and Nasser (2012) stress the role of insider trading. Despite the fact that insider trading is illegal, many traders with inside knowledge are not under supervision of the SEC. Therefore, insider trading can result in abnormal returns prior to the announcement date. Tang and Xu (2016) state that companies that want to be acquired become undervalued, making it possible for traders to make abnormal profits with the stock.

Other literature focusses more on the abnormal returns after the announcement date. Ball And Brown (1968) were among the first to publish a paper showing that there are also abnormal returns after the announcement date. The authors state that good news about a firm or about the merger could bring positive abnormal returns and bad news could bring negative abnormal returns. Bernard and Thomas (1989) show in their study that there is a delay in the price response when new information is available. Possible reasons for this could be that traders do not integrate all information well in the price. They may miss certain parts of information or they do not interpret the information in the correct way. This also shows that the efficient market hypothesis does not work completely in reality. Another explanation can be that because of high information costs, and the relatively low gains from the information, some information does not get to the traders or with a delay. This results in the existence of abnormal returns after the announcement date (Bernard & Thomas, 1989).

Previous literature shows opposing results on abnormal returns after the announcement date. Eckbo (1983) made a distinction between challenging and non-challenging M&A's. Many governments have integrated antitrust laws in order to make sure a fair competition exists in an industry. M&A's can violate these laws if it results in a monopolistic situation, in which the company has too much market power. Therefore, a merger or acquisition is defined as challenged when the government anti-trust laws make the outcome of the deal uncertain. The author finds positive abnormal returns of 14.08% for target firms during the -1/+10 event window. No significant abnormal returns are found for the acquiring firms. However, when looking at the sample of challenged M&A's, the abnormal returns for acquirers increase to 4.85%. This shows that acquiring firms can experience abnormal returns under certain circumstances. Servaes (1991) investigates the difference in abnormal returns between hostile bids and friendly bids. He finds that target firms receive higher abnormal returns in case of a hostile bid compared to a friendly bid after the announcement date. For the acquiring company however, the abnormal returns are insignificant in both cases. Gregory and McCorriston (2005) look at the abnormal returns of target firms in the UK. They find insignificant returns during the -2/+30 event window. However, the abnormal returns differ a lot between regions. When the target company is taken over by a company from the US, the abnormal returns are found to be lower relative to domestic mergers or mergers by a EU firm. This literature suggests the presence of short-term abnormal returns. When looking at the abnormal returns in the long run, literature shows these returns are insignificant positive in the best case for both target and acquiring firms (Bradley et

al.,1988; Ang & Cheng,2006). However, where most literature finds insignificant abnormal returns for acquiring firms, Mandelker (1974) does find abnormal returns for acquirers of over 14% in the seven months prior to a merger announcement. Wansley et al. (1983) elaborate on this finding by dividing a sample of acquirers into acquirers whose financial profile is mostly equal to the target firm and acquirer for who this is not the case. The findings of the paper suggest that acquirers whose financial profile resembles the target firm more, experience significant abnormal returns. On the other hand, acquirers whose financial profile is completely different compared to the target firm experience at most insignificant positive abnormal returns (Wansley et al., 1983).

More recent studies shift the attention of the success of an M&A from the pure shareholder view to the broader stakeholder view. In this view, corporate social responsibility (CSR) and sustainability play an important role. Although they are not mandatory, more and more companies publish a sustainability report every year, next to the mandatory financial reports. However, it are mostly the big, publicly traded firms that publish a sustainability report. In 2017, over 90% of the world's largest companies (G250) published a sustainability report (KPMG,2017). Various studies look at the effect of a company's CSR performance on the success of a M&A. For example, Aktas et al. (2011) find that acquirers can obtain abnormal returns if the target scores well on CSR performance and that acquirers with high CSR performance obtain higher abnormal returns when announcing a merger or acquisition. Deng et al. (2013) further elaborate on the relationship and also find that M&A's take less time to be completed and have a lower chance of failing when the acquirer has a better CSR performance. These findings suggest that CSR performance can be an important determinant of abnormal returns.

Prior literature is thus inconclusive about what causes abnormal returns prior to and after M&A announcements. However, most literature does seem to find positive abnormal returns for target firms during the period around the announcement date. On the other hand, abnormal returns of acquiring firms are found in much less cases. Moreover, if they are found, the event window is much larger, creating the possibility of a biased analysis. Based on the findings in previous literature, we formulate the following hypotheses:

H 1: *Significant positive cumulative abnormal returns can be found for target companies during the -1 +30 event window of a M&A.*

2.2 The method of payment

M&A's can increase the value of companies. Much prior literature showed the announcement of a M&A deal has a positive effect on the abnormal returns of target companies (Eckbo,1983; Servaes,1991). In literature, there are multiple perspectives of which factors influence the abnormal returns in M&A deals. One of the earlier perspectives is that inside traders, who have knowledge which is not publicly available, use their advantage to invest in the target's stock, creating the abnormal returns (Keown & Pinkerton,1981; Cornell & Sirri,1992). Despite the fact that these inside traders can have a significant effect on abnormal returns, later research shows other factors also have an influence. A later group introduces another perspective. They stress the role of the media and the rumours which are spread prior to the announcement of a M&A. As rumours are spread and media puts more information in newspapers, investors who are seeking a quick profit invest in the target company, increasing demand and therefore creating abnormal returns (King & Padalko,2005). Borges and Gairifo (2013) test this hypothesis and find that a significant part of the abnormal returns prior to the announcement date can be explained by rumours in the media of a possible takeover bid.

The effect of characteristics like insider trading, media and rumours are especially important prior to the announcement date. When an M&A is announced, these characteristics lose their power because the information becomes widely known, and insider trading is no longer possible. Therefore, other authors state that it is deal characteristics that influence the abnormal returns after the announcement date. These characteristics include for example the chosen approach of the bidder (Cheng,2017). Some papers for example find that target abnormal returns are higher for tender offers, since the bid premium is often higher for a tender offer, because the shareholders need to be convinced to sell their shares. Also, the presence of multiple bidder firms for the same target can also result in higher abnormal returns for the target firms, because firms may have to come up with a higher bid than they would originally offer (Datta et al.,1993).

Another important deal characteristic is the method of payment. Much prior research stated the importance of the method of payment on the deal outcome. Acquirers can pay for the target company in different ways. They can pay for the firm by using cash, shares, or a combination of both. When paying for the company with cash, the acquirer can use his own cash funds and/or borrow the money, increasing the company's debt. Since companies often do not have enough money to pay for the merger, they need to borrow additional money in order to have sufficient funds for the deal. Using cash to pay for the deal has as an advantage that the acquirer does not have the risk that it loses control of the company. However, a big disadvantage of using cash is that it is relatively expensive. The bidder has to use much of its internal funds and has to pay interest if it uses debt. When using stock as method of payment, the acquirer issues new equity and uses this to pay for the target firm. Here, the advantage for the acquirer is that it is cheaper to use shares, since they don't have to borrow extra

cash. The big disadvantage of using shares as method of payment is that it lowers the control the acquirer's shareholders have on the firm (Faccio & Masulis, 2005).

However, the decision of which method of payment to use is not based on just these advantages and disadvantages. There are different perspectives on what determines the chosen method of payment. Some of these have contradicting views. Myers and Majluf (1984) investigated the role of information asymmetry between the target and acquirer on the choice between cash, stock or mixed payments. The acquirer has information about their firm which is not publicly available. This information can be crucial for the profitability of the firm and thus for the profitability of the merger or acquisition and the future shares (Fishman,1989). Because the rest of the world does not have this knowledge, the acquirer's shares could be overvalued or undervalued. When the acquirer's stock is overvalued, the acquirer prefers to use stock as payment method, allowing him pay with something of which they know is worth less then it states, and transferring the risk of losses to the target shareholders. On the other hand, if the acquirer's stock is undervalued, they prefer using cash as method of payment. This way, they keep the future profits of the shares for themselves, leaving the target shareholders with a fixed value (Fishman,1989; Hansen,1987). This relationship between asymmetric information and the method of payment is later tested empirically by various studies. For example, Linn & Switzer (2001) find evidence supporting the role of information asymmetry. However, Cornett and De (1991) find in their study that asymmetric information does not have a significant effect on the chosen method of payment. Based on a sample of 152 announced acquisitions, they conduct an analysis on how information asymmetry influences the chosen method of payment. They measure information asymmetry by looking at the share return volatility. Firms with a higher share return volatility are paired with more information asymmetry, since there is more uncertainty and a higher risk. The findings show that the chosen method of payment is not different for companies with different scales of information asymmetry.

The management control hypothesis states that companies do not prefer to use stock as method of payment, because managers do not like to share control with the target firm's shareholders. This is the case especially for high-ownership firms (Harris & Raviv,1988). Amihud et al. (1990) test the management control hypothesis empirically. They use a sample of 165 US-based acquirers for their analysis. Their findings suggest that companies of which a relatively big part of the shares are owned by the management are more likely to use cash as method of payment for a M&A. This is in line with the management control hypothesis. However, not all research is in line with the management control hypothesis. Swieringa and Schauten (2007) also empirically test the hypothesis, using a sample 227 M&A's with Dutch acquirers. They split the percentage of closely held shares in low (<23%), intermediate (23%-63%) and high (>63%). Their results are not as straightforward as the management control hypothesis suggests. The results show that acquirers with an intermediate part of closely held shares are more likely to use cash as payment for a M&A, while acquirers with a low or high percentage of closely held shares are more likely to use shares as method of payment, because chances

are low that the deal will have a big impact on the corporate control. Differences between high-ownership firms and low-ownership firms can also have an influence on the abnormal returns. Yook et al. (1999) find that high-ownership firms that acquire a firm using shares as method of payment have significant higher negative returns compared to low-ownership firms. This difference is not found for firms using cash bids. This can be explained by using the asymmetric information hypothesis. It is assumed that high-ownership firms do not want to use stock as method of payment. If they still do so, this implies a great overvaluation of the bidder's stock. This will result in lower (or negative) abnormal returns.

The financial position of the acquirer also plays an important role in the decision which method of payment to use. If all markets would be efficient, the choice between cash or shares would be based on the advantages and disadvantages of both for the firm. However, as Greenwald et al. (1984) state, this is not the case. Because of market inefficiencies, the cost of external financing can increase for acquirers. This higher cost of external financing can lead to a sub-optimal outcome for the firm. Alshwer et al. (2011) look at the relation between financial constraints and the chosen method of payment in M&A's. They find that acquirers who are financially constrained are more likely to choose stock as method of payment, because they cannot borrow additional debt, or the cost of external capital are simply too high. Firms who are not financially constrained follow the pecking order, which leads to relatively more cash-paid M&A's. Karampatsas et al. (2014) further elaborate on this relationship by looking at the credit ratings of acquirers. When firms have a high rating, they can access the public debt market relatively easy, without too much constraints. However, firms with a low credit rating will have relatively many constraints and will have less access to the public debt market. Looking at the paper of Alshwer et al. (2011), you should expect that a higher credit rating would thus result in a bigger chance of using cash as payment. The findings of the paper indeed show a positive relation between credit rating and the likelihood of cash financing (Karampatsas et al., 2014).

Another perspective is based on the influence of taxes. When the acquirer pays with cash, the target shareholders have to pay taxes on their capital gains right away. However, when shares are the chosen method of payment, the payment of the capital gains taxes can be deferred until the moment the shares are sold. Therefore, the target shareholders will require a higher premium for cash-paid M&A's, in order to make up for the tax liabilities. These higher premiums result in higher abnormal returns (Ismail & Krause,2010). Huang and Walking (1987) find empirical evidence that cash payed M&A yield higher abnormal results compared to deals paid by stock. Also, they state taxes are one of the main reasons why this is the case, because of the possibility to defer taxes when stock is chosen as method of payment. However, they did not include the taxes in their empirical analysis, making it unclear if the taxes really played a role. the role of taxes on the deal outcome will be further elaborated on in the rest of this thesis.

Other previous literature also looked at the effect of the method of payment on the deal outcome of M&A's. Wansley et al. (1983) use a sample of 203 to test whether the method of payment has an influence on the abnormal target returns during the -40/+40 event window. The results in the paper show that both cash-paid and stock-paid M&A's result in positive abnormal returns for the target company. However, these abnormal returns are significantly greater for cash-paid M&A's compared to stock-paid M&A's. Harris et al. (1987) look at the relation between method of payment and returns from a very wide perspective. They look at the results for firms located in the US and in the UK, in order to see if there are differences between countries with big institutional differences. Also, the authors use a very wide event window, ranging from six months prior to the announcement date to two years after the completion date. The findings of the paper show some important differences between the two countries. During the last six months before the announcement date of a M&A, not including the month of the announcement date, acquirer returns do not differ between cash-paid mergers and stock-paid mergers in the UK. However, in the US, higher returns are found for acquirers who enter into a stock-paid deal. In the month of the announcement date, no acquirer abnormal returns are seen for both cash-paid and stock-paid M&A's in the UK. In the US however, the findings show that there are significant positive abnormal returns for the acquirer in cash-paid deals and significant losses in stock-paid deals. This is a big difference which the authors find hard to explain. Finally, when looking at the long-term post-merger returns, the findings show that there are no significant abnormal returns in cash-paid M&A's in both countries. However, when looking at stock-paid mergers and acquisitions, the authors find small significant losses in the post-merger returns, only for the US-based firms (Harris et al., 1987). Davidson and Cheng (1997) also look at the effect of the method of payment on the abnormal returns of target shares after the announcement date. Using a sample of 219 M&A's from the USA, they look at the abnormal target returns during the -1/+5 event window. The findings show that there is a significant difference in abnormal returns between M&A's paid by cash and stock. Target abnormal returns are significantly higher when paid for by cash, relatively to stock. The authors furthermore test what causes this relationship. They find that cash-paid M&A's have significant higher bid premiums. This finding shows support for the tax perspective, since the higher bid premiums are the result of taxes (Davidson & Cheng,1997). However, Blackburn et al., 1997 find different results in their analysis. Using a sample of 440 target firms based in the USA, he first calculates the target cumulative abnormal returns during the -5/+5 event window and finds significant returns in both before and after the announcement date. Next, he tests for differences in abnormal returns between cash-paid and stock-paid deals. The findings show there is no difference in target CARs between the different methods of payment (Blackburn et al.,1997).

When looking at the role of the method of payment, there are different perspectives on where the chosen method depends on. The decision could be made based on asymmetric information, the management control hypothesis, the financial state of the bidder, tax considerations or another perspective, with one not necessarily excluding the other. Independent of what the underlying

perspective is, much previous research finds different abnormal returns for firms using a different method of payment. Most of this research finds higher abnormal returns for firms choosing cash as payment method. In this paper we only focus on the effect of the method of payment on target abnormal returns and not acquirer returns. The reason for this is that the tax perspective plays a big role in this paper. This perspective expects higher abnormal returns for target shareholders when cash is used as payment method, because the target shareholders need to be compensated for the tax liabilities. Despite the fact that the higher tax influences the price paid by acquirers, the tax perspective does not stress the role of acquirer returns. We therefore formulate the following hypothesis:

H 2: *Abnormal returns for target firms are higher for cash-paid M&A's compared to stock-paid deals during the -1/+30 event window.*

2.3 The role of taxes

As stated before, much prior literature suggests that managers motivate M&A's based on the synergies they expect to experience when combining the firms. These synergies can be of a more operating nature, like economies of scale, or they can have a more financial goal. An example of the last is taxes. When a merger or acquisitions takes place, both firms can experience tax benefits, decreasing their tax liabilities, and creating value. Therefore, it is very important to have a good image of what tax advantages (and thus synergies) an acquirer expects, thereby including the possible risks and pitfalls of this strategy (Ianca,2008).

When a firm has had losses in previous years, they can have the right to carry these losses forward to next years, 'lowering' the profit of these years and therefore paying less taxes. However, these net operating loss carryforwards can expire, which could mean the company cannot fully use the tax credit. However, tax laws allow firms to share the tax credits with acquired firms. So, when a company acquires a new firm, it can use the profits of this firm to use the tax credits or the carryforwards of net operating losses in order to make it possible for the acquirer to use these sooner or use them more (Scholes & Wolfson, 1989). Devos et al. (2008) look at the value of synergies in 264 large mergers. They find that the total synergies of a merger account for over 10% of the total equity of the new firm. This shows that mergers can indeed increase a firm's value drastically. Next, the authors split the total synergies in order to get a good image of what causes the synergies. They find that tax synergies contribute for 1.64% of the gains in total equity. The other 8.4% is due to operational synergies (Devos et al.,2008). The findings imply that M&A's can have a significant tax advantage, which can increase the chance of success of a merger and can increase the value of the firm.

Because of the big tax advantages firm can get when merging with or acquiring another firm, some scientists wonder if this does not give a wrong incentive for firms to go into a M&A to lower the tax liabilities, which then have to be paid by other members in society. Auerbach and Reishus (1987) state that tax advantages as these could lower social welfare and increase the chance of unsuccessful mergers and acquisitions. However, their analysis shows that although many firms achieve significant tax benefits from M&A's, they cannot find evidence that the tax motive was the driving force behind the decision for a M&A.

Next to the income taxes that may be influenced by a merger or acquisition, another taxation that takes place due to a M&A's is the taxation of capital gains by the target's owners. Where income tax synergies are potential advantages which can occur every year the merger is still intact, the taxation of capital gains is a direct consequence of a deal. The capital gains tax rate can differ per country and it can change every year. The height of the tax rate has a big influence on mergers and acquisitions. When the capital gains tax rate is high, target shareholders have to pay a relatively big part of their capital gains in taxes. This could mean that target shareholders require a higher bid

premium in order to compensate for the high taxes. This would imply that M&A's become more expensive for acquirers, which could result in fewer deals (Petruzzi,1988). These hypotheses were first tested by Ayers et al. (2003). In their research, they empirically test the relation between the capital gains tax and acquisition premiums. They use three different proxy's for capital gains tax. The first one is based on the assumption that target shareholders got the shares for a price of zero, which indicates the price at the M&A is the capital gain. The second and third proxy take the stock price of respectively 3 and 5 years ago as basis price for the target shareholders. The results of the study show that there is a positive relation between the capital gains tax and the acquisition premiums for all three proxy's used in the study. This is in line with the expectations of Petruzzi (1988) and shows that M&A's become more expensive when the capital gains taxes are higher (Ayers et al.,2003).

When higher capital gains taxes are expected to increase the cost of M&A deals, it is logical to expect that this can have an influence on the amount of deals. If the capital gains taxes (and thus the cost of deals) are high, the increase in company value because of synergies can vanish partially or completely because of the high costs. This means that deals which would create value for both shareholders and stakeholders, will not be executed. In a later paper, Ayers et al. (2007) test this statement empirically by looking at acquisition activity in the USA from 1973 through 2001. The authors define acquisition activity as the percentage of traded firms in a calendar quarter. In line with the expectations from earlier research, the authors find a negative relationship between capital gains tax rates and acquisition activity. These results imply that in times of low capital gains tax rates, acquisition activity is relatively high, and vice versa (Ayers et al.,2007).

Looking at the research above, there seems to be a relation between the capital gains tax and M&A activity and outcomes. When capital gains taxes are high, target shareholders require a higher premium in order to compensate for their tax expenses. These higher premiums as expected to lead to higher abnormal returns in the target's stock. However, the relationship between capital gains taxes and abnormal returns in M&A's is found to be more complicated. Other studies began to elaborate more on the differences between the possible methods of payment. Ayers et al. (2003) also made a distinction between tax-free deals (stock-paid deals) and taxable deals (cash-paid deals). Next to their findings that higher capital gains taxes are positively correlated with equity premiums, and thus abnormal returns, they find that this relationship is significantly larger for cash-paid deals than for stock-paid deals. Because target shareholders can defer the capital gains taxes when a M&A is stock-paid, the need for a higher equity premium is lower for them compared to target shareholders in cash-paid M&A's, because they can profit from increases in the value of their new shares before they pay taxes. Target shareholders in cash-paid deals have to pay the tax in the same year as the deal and thus want to be compensated for the taxes (Ayers et al.,2003).

Also Bugeja and da Silva Rosa (2008) conduct research on the influence of taxes on the chosen method of payment. The authors look at M&A's in Australia during the period before and after the Income Tax Assessment Act 1997. Before this act, target shareholders in Australia had to pay the

capital gains tax immediately after the completion of a merger or acquisition. After the introduction of the act, target shareholders could choose to defer the capital gains tax until they sold the shares. By looking at the different timeframes, the authors try to test whether the chosen method of payment changes after a change in taxation regulations. In order to do this, Bugeja and da Silva Rosa (2008) use a proxy for the capital gains of the target shareholders. Using a logit regression, they find that the probability of using cash or a mix as method of payment decreases significantly after the introduction of the 1997 Act. This shows there is a relationship between the method of payment and the taxation of the capital gains (Bugeja & da Silva Rosa, 2008).

However, other studies come up with different results. In the paper by Erickson (1998), the author doesn't only look at the capital gains taxes of the target company, but also adds the acquiring company's tax status in the research. The findings suggest that target capital gains taxes do not have a significant influence on the chosen structure of the M&A. However, the paper suggests the acquirer's tax characteristics do have a significant influence on the chosen method of payment, because of interest costs that can be deducted from the pre-tax income and debt-based tax shields which could benefit the firm when cash is chosen as method of payment (Erickson,1998). Ghosh and Jain (2000) conduct research on the effect of the tax rate on the relation between the method of payment and abnormal target returns. They state that tax considerations are very important for the merger outcome, because it increases the abnormal returns in cash-paid mergers. However, the results suggest that the capital gains tax rate does not influence the relation between the method of payment and the success of mergers. Abnormal returns for cash-paid deals in countries with low capital gains taxes do not differ from those in countries with high capital gains taxes.

The existing literature shows opposing results on what effect the target company capital gains tax rate has on the different payment methods and the success of a deal. However, many studies find a positive relationship between the capital gains tax and abnormal returns. Therefore, with the expectation that cash-paid transactions lead to higher abnormal returns because of the capital gains tax liabilities, relatively to stock-paid deals, and the theory that higher taxes lead to higher abnormal returns because of the extra compensation required, we expect to see a difference in the relationship between capital gains taxes and abnormal returns. For cash-paid deals, we expect the relationship to be stronger compared to stock-paid deals, in line with the tax perspective of the method of payment. This implies that the capital gains tax rates have a moderating effect on the relationship between method of payment and target abnormal returns. We therefore formulate the following hypothesis, which elaborates on H 2:

H 3: *The relationship described in hypothesis 2 is stronger when the capital gains tax rate is higher.*

3. methodology

In this chapter, the paper's research methodology will be elaborated on. Chapter 3.1 and 3.2 describe the data gathering and sample description processes. Section 3.3 defines the chosen research method. The measurement of the dependent variable and the independent variables are covered in chapter 3.4 and 3.5. Section 3.6 elaborates on the additional control variables.

3.1 Data gathering

In order to look at the effect of the method of payment on the success of M&A's, a quantitative analysis is used. The data for this analysis is retrieved from two databases. The first part of the data is provided by the Factset database. Factset is an online database containing much financial and non-financial information about countries and companies. They have a special section on their website for company restructuring. This section contains information of over 720,000 deals between companies worldwide. The database contains the main deal characteristics for every deal, together with some company-specific data like firm size.

The second part of the data is retrieved from the Thomson Reuters Eikon database. The database contains a large amount of financial information like market data and news for companies, indexes and countries. The daily returns from the target company and the target index used in this paper are retrieved from the Eikon database. This data is needed in order to calculate the abnormal returns of the target firms. Together, the two datasets provide us with the data needed for our analysis.

3.2 Sample description

The Factset database contains over 720,000 corporate restructuring deals. However, for this research we only need data on M&A deals. Because we need calculate the abnormal returns until 30 days after the announcement days, we can only use completed deals. Cancelled deals can result in different stock movements if the cancellation is made public inside the -1/+30 event window. Moreover, rumours or rumours that a M&A is cancelled are not included in the data as well. Next, the sample only includes M&A deals announced between January 1st, 2010 and January 1st, 2020. This timeframe is chosen because we do not want other big macroeconomic factors to influence our results. In 2007, the financial crisis broke out in Europe. This had a major influence on the European stock markets (Olbrys & Majewska,2014). Because the financial crisis can have an effect on our results, the sample only includes deals after january 1st 2010.

Furthermore, the sample only includes deals of which the target firm is located in an EU-country. There are two main reasons for this. With much prior research focusing on the data from the US or China, and the institutional differences between these countries and the EU, this paper aims to

fill the gap on European-based M&A's (Cooke,1991). The second reason is that corporate taxes in the EU are one of the institutional factors that differ between the countries. This makes it possible to compare the taxes between the countries in order to find an effect. The United Kingdom, who recently left the European, are still integrated in the data. This is because they were member of the EU during the last ten years, which is the timeframe chosen for the sample. Two countries who are not included in the data are Cyprus and Malta. These countries have a complex tax system when it comes to capital gains. Just taking the tax rate for these countries could result in biased results. Moreover, these countries only have very few available deals. We therefore don't include Cyprus and Malta in the analysis. This leaves 26 countries in our sample.

In order to make it possible to calculate the abnormal returns of the target companies, only public firms are used. When companies are not public, stock price data is not always known and cannot be compared with a certain index, since it is not traded in an index. This makes it impossible to calculate abnormal stock returns, which are needed for the analysis. Moreover, data about the stock returns and index returns should be available in the Eikon database during the estimation window and event window.

Finally, some target firms are traded only once in a few days because of low market capitalization, which leads to a stock return of 0% relatively often. Because this can have a negative effect on the precision of the results, the target firms who have over 50 days of 0% returns during the 370 days of stock returns are deleted from the sample. With all these criteria, the final sample consists out of 246 target firms which are used in the analysis. Table 1 below contains an overview of the sample description and the amount of deals left after each criterion.

Table 1: sample description

Criterion	Amount of deals left
M&A deals only	553,280
only completed deals	528,366
Announcement date between January 1, 2010 and December 31, 2019	263,106
Target firm EU-based	84,695
Only public firms	1,157
Returns are available in Eikon	537
Market cap	**246**

3.3 research method

For the analysis, an event study is conducted in order to test the hypotheses formulated in the previous chapter. An event study can help measuring the impact a certain event has on the value of a firm. These events can be macroeconomic like a financial crisis, or it can be on a more individual level like the publication of a company's annual report (MacKinley,1997). M&A's are also a great example of such events, and an event study is thus the perfect way to conduct this research. The event study will be conducted using multiple regressions. Different models will be tested here in order to see if the method of payment and the capital tax rate have a significant effect on the success in M&A's. Based on the outcome of the regression analyses, the hypotheses are tested so the research question can be answered.

3.4 Dependent variable

In order to test the relationship between the method of payment and the success of M&A's, we should define success in a testable, quantitative way. Prior literature often uses the abnormal returns in order to measure the success of a merger. These abnormal returns are the difference between the actual daily return of a share and the expected daily returns of that share. When a merger is successful, the expected synergies are expected to be achieved. These synergies result in a higher valuation of the firms, increasing the stock price. These increases are the abnormal returns (Bühner,1991). Abnormal returns can also be negative. This happens when the synergies are not achieved, and the value of the firms decrease.

The abnormal returns needed for this research are calculated according to prior literature. The calculation requires an event window and an estimation window. The event window is the timeframe of which you want the abnormal returns for the analysis. In this paper, we look at the effect of the method of payment and taxes on the abnormal returns. These variables are expected to have an effect on the abnormal returns after the announcement period. Where some papers only look at the short-term abnormal returns (Camargos,2013), other papers suggest taking a longer event window, in order to get better results (Wong & Cheung,2009). We set the event window on -1/+30 trading days. In most deals, the period between the announcement date and the completion date is over 30 trading days, and target firm stock data is thus available. In a few cases, the deal is completed very fast after the announcement date. If the deal is completed in less than 30 trading days after the announcement date, the deal is deleted from the sample.

The estimation window is used to make an estimation of the stock returns of a certain company, based on the returns of the index the company trades in. Because these estimations need to be free of any bias, the estimation window should be long enough to make good estimations and should be free of other big events that could bring abnormal returns and other shocks in the share

prices. Therefore, choosing an adequate estimation window is crucial for the results. Park (2004) states that the estimation window should be free of any unusual market movements caused by the country or company which is not part of the event. However, when your sample includes many companies from many different countries, it takes a lot of time and work to find the ideal estimation window, if it can be found. That's why Park (2004) suggests taking a longer than average estimation window in such a case, in order to lower the impact of the possible problem. Because this paper uses a sample of target firms from countries all over the European Union, it is impossible to account for every national unusual market movement. We therefore use a relatively long estimation window. Where previous papers frequently use an estimation window between 120 and 160 days (Bradley et al.,1988; Wansley et al., 1983), the estimation window in this paper is 250 days. As seen in chapter 2, much prior literature finds abnormal returns prior to the announcement date. Using these dates for our estimation window could bias the model and the results. Corrado (2010) acknowledges this and suggests taking a period between the estimation window and the announcement date. In order to prevent the possible bias, we leave 90 days between the estimation window and the event window. Therefore, the estimation window used in this paper is -340/-90.

The next step for calculating the abnormal returns is creating a model for calculating the expected daily returns for every share based on the estimation window. This is done by using the market model. This model is commonly used for calculating abnormal returns. In the market model, the expected returns of a share are shown as a linear function, based on the market return of the index. The linear function can be presented as (Song et al.,2017; MacKinley,1997):

$$|E|R_{xt} = \alpha_x + \beta_x R_{mt} + \varepsilon_{xt}$$

Where:

$|E|R_{xt}$ is the expected return of company x on day t

α_x is the constant, or the value of $|E|R_{xt}$ when the index return is equal to 0

β_x is the beta of company x, representing the systematic risk of the firm

R_{mt} is the market return on day t

ε_{xt} is an error term, representing the unexpected abnormal returns of company x on day t. The expected error term is equal to 0

With the market model it is possible to calculate the stock returns when there are no abnormal returns. The next step is to find out whether there are abnormal returns by looking at the difference between the actual returns and the expected returns (Hayn,1989**)**:

$$AR_{xt} = R_{xt} - |E|R_{xt}$$

Where:

AR_{xt} is the abnormal return for company x on day t

R_{xt} is the actual return for company x on day t

$|E|R_{xt}$ is the expected return of company x on day t

The last step is to calculate the cumulative abnormal returns. The cumulative abnormal returns give us a better view on the effect of the event on the success of an M&A compared to the daily abnormal returns, because the abnormal returns can differ per day. Taking separate days will make it hard to use for our analysis. Therefore, we use the cumulative abnormal returns. These are calculated during the event window using the following formula (Hayn,1989):

$$CAR_{xn} = \sum_{t=t1}^{t2} AR_{xt}$$

Where

CAR_{xn} are the cumulative abnormal returns for company x during event window n (-1/+30)

T1 is the start of the event window (-1)

T2 is the end of the event window (+30)

AR_{xt} is the abnormal return for company x on day t

The CARs of the target companies will serve as dependent variable in the analysis. In the analysis, the effect of the independent variables on the CARs will be tested in order to answer the hypotheses.

3.5 Independent variables

The first independent variable in this research is the method of payment. In this research, we only look at deals where cash, shares, or a combination of these two is used as method of payment. Some papers also include deals where other methods are used. However, these methods aren't used often and would not have a big contribution to this research. Since this data is nominal, we can't use it directly in the analysis. Therefore, 3 dummy variables are generated, one for each possible method of payment (cash, shares and mix). The value of this dummy variable is equal to 1 if that method of payment is chosen, and 0 otherwise. Most prior literature uses this method in order to find a relation between the chosen method of payment and abnormal returns (Huang & Walking,1987; Wansley et al.,1983).

The second independent variable is the capital gains tax. The tax variable is used in many papers. However, the way it is measured differs a lot. Some scientists use models in order to proxy the amount of capital gains tax that have to be paid by the target shareholders. For example, Ayers et al. (2004) try to proxy the capital gains taxes by looking at the difference between the stock price at the announcement date and the shareholders 'basis' in the stock, the price for which he bought the shares. This can be of good help when looking at an abstract model or theory, but it is impossible to collect all information about basis prices of all shareholders. So, the proxy of Ayers et al. (2004) is hard to use in practice. Hayn (1989) uses a combination of methods in order to proxy the capital gains taxes. He uses four components to calculate the added capital gains tax because of the short-term gains, which he uses as proxy for the capital gains tax. The first is the difference between the stock price 40 days before the announcement date and the lowest stock price in the six months prior to the announcement date. The second component is based on the turnover ratio of the target's shares over the six months prior to the announcement date. The third component is the difference between the marginal individual tax rate and the capital gains tax rate in the year of the announcement date. Finally, the fourth component is based on the number of shares outstanding. These four components together would make a good proxy for the capital gains tax variable. The first component measures the short-term capital gains of the shares. The second and last component give a good view of the number of shares that are traded during this period. And the third component allows us to calculate the capital gains tax liabilities of these capital gains. However, like the proxy of Ayers et al. (2004), collecting the data for this takes a lot of work. Moreover, looking only at the difference between the stock price 40 days before the announcement date and the lowest stock price can result in wrong capital gains, since all shareholders have a different basis price.

Another possible way to measure the capital gains tax is by using the tax rate. This is a simpler way compared to the ones mentioned above. Where those other measurements include proxy for the amount of tax to be paid, the tax rate only looks at the percentage of tax that needs to be paid. Ohrn & Seegert (2019) use the tax rate in order to look at the effect of the tax rates on merger quality. They use the tax rates from the from different countries and different years in order to get the tax rate that

matches the deal. Advantages of this measure is that it is simple to get the data and simple to use. On the other hand, just using the tax rate could result in an analysis which is too simplistic. However, the proxies used in other measures can never be completely realistic, since shareholders have different prices for which they have bought the shares, and the amounts they have also differ. In this paper, the capital gains taxes are measured using just the capital gains tax rate. Although it might be simplistic, it gives a good view of the relative capital gains for M&A's in different countries and years. The used capital gains tax rates per country per year can be found in appendix A.

The last variable used for the analysis is to test if the capital gains tax has an influence on the effect of the method of payment on the CARs. In order to test this, an interaction variable (CASHTAX) is created by multiplying the method of payment dummy variable with the tax rate. An interaction term tests whether the effect of an independent variable (X) on a dependent variable (Y) depends on the value of a second independent variable (Z), by dividing the relationship in groups. It is expected that a higher capital gains tax rate will increase the relation between cash-paid mergers and the abnormal returns. This would mean that cash-paid M&A's result in higher abnormal returns in countries with higher capital gains tax rates. A significant positive interaction term would mean that this is indeed the case. We therefore expect the variable to be positive and significant.

3.6 Control variables

In order to increase the validity of the results from the regression analysis, five control variables will be included in the analysis as well. These control variables are selected based on prior literature. The first control variable is whether the M&A deal is international or not. Prior literature suggests that M&A deals between firms from different countries experience higher abnormal returns because of the positive relation between cultural differences and abnormal returns. For example, Morosini et al. (1998) find that M&A's between firms from the same country have lower abnormal returns compared to deals between firms from different countries. This variable will be measured as a dummy variable equal to 1 if the deal is cross-border and equal to 0 if the deal is domestic.

The second control variable is the attitude of the deal. The attitude can be divided in hostile, friendly and neutral. Baradwaj et al. (1990) find that hostile offers can bring additional wealth effects for the target. Their results show that targets in hostile M&A's have significantly higher abnormal returns compared to targets in nonhostile M&A's. A reason for this could be that the acquirer has to bid more in case of a hostile takeover (Baradwaj et al.,1990) attitude variable will also be measured as a dummy variable equal to 1 if the deal is hostile, and equal to 0 if it is friendly or neutral.

The third control variable is controlling shareholders. When there is one party who has a controlling interest in the target firm of more than 30%, it might be hard to convince this party to accept the deal. This is for example the case with family firms. Abnormal returns could therefore vary for firm who do have a controlling group and firms who have not. Prior literature shows that abnormal

target returns can be higher for firms with a controlling shareholder, compared to firms who do not (Harris & Raviv,1988). This variable will be measured as a dummy variable equal to 1 if the target firm has a shareholder who owns more than 30% of the target's stock and equal to 0 otherwise.

Next, we control for the target's firm size. Many prior literature controls for firm size. When firms are bigger, they possess more internal knowledge and they can experience bigger economies of scale, making it easier for the synergies to be achieved. In line with this theory, much prior literature finds that firm size is positively correlated with abnormal returns (Hoffmeister & Dyl,1981; Schwert,2000). The variable will be measured by taking the natural logarithm of the target's enterprise value.

The fifth control variable is the GDP per capita of the target's country. Ji (2016) finds that firms from countries with a relatively high GDP per capita perform better after the M&A deal is completed. This is because countries with a higher GDP per capita have better infrastructure and institutions. This is very important for the companies when they have to co-operate once they have merged. We measure the GDP by taking the natural logarithm of the GDP per capita in US dollar for every year and for every country of the target. Appendix B contains a table with all values of GDP per capita per country and per year.

4. Results

This chapter contains the results from the regressions analyses. These results are used in order to test the hypotheses and answer the research question. Paragraph 4.1 elaborates on the descriptive statistics of the results. Paragraph 4.2 checks the correlation between the variables used in the regressions. After that, paragraphs 4.3, 4.4 & 4.5 will include the results of the regressions in order to test the hypotheses.

4.1 Descriptive statistics

Table 6 in appendix C shows the distribution of the used M&A deals based on the target country and the year of the announcement date. For Croatia and Lithuania, no deals can be found based on the sample criteria from chapter 3.2. Between the other 24 countries, there are big differences in the amount of deals. Where countries like Bulgaria and Romania only provide 2 deals each, 20 deals are found with Italian targets. The United Kingdom is the biggest provider, with 95 deals. This results in the UK having a big share in the total amount of deals (38.93%). The big differences in amount of deals between the countries does not have a big influence on the results, because there still are enough differences in method of payment and tax rates, which are needed for the analysis. The amount of deals per year also differs. However, these differences are smaller compared to the countries, ranging from a minimum of 12 in 2013 to a maximum of 40 in 2018.

Descriptive statistics of the variables can be found in the tables in appendix D**.** Table 7 shows the statistics of the cumulative abnormal returns (CARs). The mean of the CARs, or the cumulative average abnormal returns (CAAR) is 24.53% and the standard deviation is 59.18. However, these CARs are not yet corrected for outliers. In the data, two outliers are found with CARs of 837.37% and 307.98%. These two outliers have a disproportionate influence on the results, inflating both the mean and the standard deviation of the CARs. This could lead to biased results, and therefore to wrong conclusions. Prior literature suggests multiple ways to cope with the outliers. When the outliers are expected to influence the results too much, it could be a good idea to drop the observations (Berthold,1999). In order to make sure the two observations do not bias the results they are dropped from the analysis.

Table 8 in appendix D shows the statistics for the CARs, as well as the independent variables and the control variables. The CAAR has dropped from 24.53% to 20.04%, and the standard deviation of the CARs dropped from 59.18 to 21.47. This shows the big influence the outliers had on the results. The table also shows the lowest and highest CAR of the sample. With the lowest CAR being -33.87 and the highest being 80.50%, the abnormal returns differ a lot between the deals. The dummy variables for cash, stock and mix are also included in the table. The cash dummy has a mean value of 0.52. This implies that 52% of the deals are paid by cash, which is 127 out of the 244. The mean values of the stock and mix dummy variables are 0.28 and 0.20 respectively, indicating that 28% (67

deals) of the deals is paid using stock and 20% (50 deals) of the deals is paid using a mix of cash and stock. Looking at the capital gains rates (Tax), the table shows an average tax rate of 24.42%, ranging between 9% and 33.99%. The interaction term (CASHTAX), which is the variable made by multiplying the cash dummy variable with the tax rate, shows an average value of 12.92, ranging from 0 to 33.99. This is of course logical, since CASHTAX will have a value of 0 in case a deal is not paid in cash. When a deal is paid in cash, the value of CASHTAX is equal to the tax rate of the matching country and year. The control variables International (whether a M&A is international of domestic), Control (whether the target firm has a controlling shareholder) and Hostile (whether a deal is hostile or not), 3 dummy variables are made. The table shows that the mean values for these variables are 0.59, 0.04 and 0.07 respectively, indicating that 59% of the total deals were international, 4% of the target firms had a controlling shareholder, and 7% of the deals can be characterised as hostile. Finally, the control variables for GDP per capita (logGDPCAP) and target total assets (logassets) have a mean of 10.59 and 13.14 respectively.

4.2 Correlation matrix

The correlation coefficients between the variables used in the regression can be found in the correlation matrix in table 9 in appendix E. This correlation matrix shows how much two variables are correlated. When the correlation coefficient is too high, this could lead to biased results because of multicollinearity. When a correlation coefficient is higher than 0.5 or lower than -0.5, the chance of biased results because of multicollinearity is reasonably high (Taylor,1990). Most coefficients in table 7 are between -0.5 and 0.5. However, there are some which do not fall in this range.

The correlation coefficients between the three dummy variables for the method of payments is relatively high. The coefficients are -0.641 between cash and stock, -0.529 between cash and mix, and -0.312 between stock and mix. These high correlations are easy to explain, since the three variables are a dummy of the same variable: method of payment. Every deal is paid by either cash, stock or a mix. Therefore, for every deal, the value of one of the three dummy's is equal to 1 and the other two dummy variables are equal to 0. Because this is the case for every observation, the correlation between the variables is very high. The same holds for the correlation between the interaction term CASHTAX and the three cash dummy variables and tax variable. Because the interaction term is a product of these variables, the correlation between them is relatively high. When the cash dummy is equal to 0, the CASHTAX variable is also equal to 0. When the cash variable is equal to 1, the CASHTAX variable is equal to the tax rate. This interrelatedness between the different variables result in the high coefficients of 0.947 (CASHTAX and cash), -0.607 (CASHTAX and stock), -0.501 (CASHTAX and mix) and 0.323 (CASHTAX and tax). The high correlations between these variables is therefore not a big problem for our results.

Furthermore, the cash variable has a relatively high correlation coefficient with the international variable (0.418). Despite the fact that this is lower than the 0.5 benchmark, it could still lead to multicollinearity, which will be tested later. The high correlation between the two variables indicates that international M&A's are paired with cash payments relatively often. Because of this, tests for multicollinearity will be conducted before each regression.

4.3 Abnormal returns during the -1/+30 event window

In order to test whether significant abnormal returns can be found for target firms during the -1/+30 event window, the abnormal returns per day are calculated for all deals. Next, the average abnormal returns (AAR) per day are calculated. These AARs can be found in table 10 in appendix F. Next to the AARs, the table shows the standard deviation for the AARs and the corresponding t-value. A t-test tests whether the returns are significantly different from 0 at a confidence interval of 95%. This means that in order for AArs to be significant, the t-value should be higher (lower) than 1.96 (-1.96) The table shows significant positive average abnormal returns during each of the first four days of the event period (-1/+2). The abnormal returns are especially high at the announcement day. The average abnormal returns are 14.41% on that day, making it the day with the highest average abnormal returns during the event window. This is also logical, since the market reacts on the news of the announced M&A as soon as possible once it is announced. The biggest abnormal returns would therefore be expected on the same day as the announcement, which is empirically supported by our findings. After the first four days, the AARs begin to decline and even turn negative. However, most of the days, the returns are not significant. Nine days after the announcement date, the table shows significant negative AARs. This shows that during post-announcement period, target firms can also experience negative abnormal returns on some days. Finally, the table shows significant positive AARs 20 days after the announcement date. At the bottom of table 10, the cumulative average abnormal returns (CAARs) of the complete event window are represented. Like with the AARs, a t-test is used in order to test if the CAARs are significantly higher than 0 in a 95% confidence interval. The t-value has to be equal to or bigger than 1.96 again for the CARs to be significant positive. Table 10 shows a t-value of 14.58 for the CAARs. Hypothesis 1 stated that significant positive cumulative average abnormal returns can be found for target firms during the -1/+30 event window. The results in the table indeed show that this is the case for the sample used in this analysis. Hypothesis 1 is therefore accepted.

4.4 Analysis 1: Cumulative abnormal returns and the method of payment

4.4.1 Regression analysis

We have seen significant positive target CARs in the sample during the -1/+30 event window. The next step is to test whether the method of payment has an influence on the height of the CARs. Hypothesis 2 stated that cash paid M&A's result in higher abnormal returns for the target company compared to stock paid M&A's. In order to test this, an OLS regression is conducted. Before the results can be analysed, they have to be checked for multicollinearity and heteroscedasticity. Multicollinearity occurs when two or more independent or control variables are strongly correlated with each other. This correlation influences the calculation of the variable's coefficients, which reduces the reliability of the results (Farrar & Glauber,1967). To test for multicollinearity, the VIF-test is conducted. The outcome of the VIF-test is represented in table 11 in appendix G. Multicollinearity is expected for variables with a VIF-factor higher than 5-10. As can be seen in the table, the highest VIF-factor is 1.91 for the cash dummy. This implies there is no multicollinearity among the variables in the regression. The next problem is heteroscedasticity. This occurs when the variance of a variable is unequal and can be influenced by another variables. It could be that the error term is influenced by one of the variables, which could bias the results (Cook & Weisberg,1983). In order to test for heteroscedasticity, the Breusch-pagan test is conducted. The results of this test can also be found in table 11 in appendix G**.** The results of the test show a p-value of 0.0851. It is therefore not statistically proven our data suffers from heteroscedasticity.

The output of the regression is shown in the table below. The table consists out of two models based on the 244 deals in our sample. The table shows the beta coefficients of the variables and the t-values in brackets below the variables. The first model only includes the five control variables. The results show that the variables international and hostile are both significant. These results are in accordance with prior literature (Baradwaj et al.,1990; Morosini et al.,1998). The second model also includes the dummy variables for the method of payment. Since there are only three dummy variables, one must be left out of the regression in order to serve as reference group. In the regression table, the dummy for mixed payments is chosen to be the reference group. The first thing that stands out in the table is the big difference in R-squared between both models. The first model has an adjusted R-squared of 0.0971, indicating that 9.71% of the variation of the dependent variable (CARs) can be explained by the control variables. The second model shows an adjusted R-squared of 0.1966, indicating that the explanatory power of the model is 19.66%. Including the dummy variables for the method of payment thus increases the explanatory power of the model drastically. The second model shows a small negative coefficient of -1.345 for the cash dummy. However, the coefficient is not significant (t-value of -0.39). This indicates that the CARs of cash-paid M&A's do not significantly differ from M&A's paid for by a combination of cash and stock. However, everything is different for

the stock variable. The coefficient of the stock dummy variable is -17.159, with a t-value of -4.71. This means that CARs are on average 17.159% lower for stock-paid M&A's compared to M&A's which are paid for with a mix. Moreover, the table shows us that the stock dummy variable is significant ($p<0.001$). Hypothesis 2 stated that cash-paid M&A's result in higher target abnormal returns compared to stock-paid M&A's. Table 2 below showed that using stock as method of payment results in significant lower CARs compared to deals where a mix is used, while cash-paid M&A's do not result in significantly different CARs compared to mix-paid. We can therefore say that cash-paid deals result in higher abnormal returns compared to M&A's using stock as method of payment. This supports the expectations based on the hypothesis, and hypothesis 2 can therefore be accepted.

Table 2: Output regression analysis 1

CARs	(1)	(2)
cash		-1.345
		(-0.39)
stock		-17.16***
		(-4.71)
international	10.53***	6.651*
	(3.92)	(2.38)
control	11.98	10.61
	(1.80)	(1.69)
hostile	14.57**	11.84*
	(2.73)	(2.34)
logassets	0.282	0.409
	(0.42)	(0.65)
logGDPCAP	6.247	4.797
	(1.75)	(1.41)
_cons	-57.46	-35.85
	(-1.49)	(-0.97)
Obs	244	244
Adj. R-squared	0.0971	0.1966

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

4.4.2 Robustness check

In order to increase the reliability of the results, an additional robustness check is conducted. This robustness check controls for country-fixed effects, so differences between countries cannot influence the results in the analysis. In order to do this, a new regression analysis is conducted using only the UK firms as sample. First, a new VIF test and Breusch-Pagan test are conducted in order to check for multicollinearity and heteroscedasticity. The results of these tests are presented in table 12 in appendix H. The VIF tests shows a maximum VIF value of 1.937 for the cash dummy variable. This indicates that there is no multicollinearity in the regression. The Breusch-Pagan test shows a low chi2 value (10.13), also suggesting the data does not suffer from heteroscedasticity. The output of the regression is presented in table 13 in appendix H. Again, two models are shown. The first model contains only the control variables, while the second model also includes the dummy variables for the method of payment. Mix is also here the reference category. A number of things stand out while looking at the table. First, the difference in adjusted R-squared between the models is very large again. It grows from 7.92% to 28.83%. Next, the significance of the control variables has changed. Where the variables hostile and international were significant in both models of the first analysis, the robustness check only shows a significant effect for the international variable in the first model. However, the stock variable still has a significant negative coefficient, while the cash variable still is insignificant. The coefficient of the cash variable did change from -1.345 to 1.315, but because it is still insignificant, it does not change the results. We can therefore say our results from the first analysis are robust to country-fixed effects.

4.5 Analysis 2: The role of taxes

4.5.1 Regression analysis

The last part of the analysis concerns the role of the capital gains tax rate on the relation between CARs and the method of payment in order to test the third hypothesis. Hypothesis 3 states that the relationship between cash payments and CARs is stronger when the capital gains tax rate is higher. A new regression is conducted, now also including the variable for the capital gains tax rate (tax) and the interaction term (CASHTAX). Once again, the VIF test and Breusch-Pagan test are conducted in order to test for multicollinearity and heteroscedasticity. The outcome of these tests are shown in table 14 in appendix I. The VIF test shows very high values for two variables. These are the cash dummy variable and the interaction term variable CASHTAX, with values of 17.868 and 18.685 respectively. These high numbers could mean the data suffers from multicollinearity, since the values are above 5-10. However, since the interaction term is based on the cash dummy variable, it is logical that the interaction term is highly correlated with the cash dummy. When a deal is not paid by cash, both the cash dummy and the interaction term CASHTAX are equal to 0. When a deal is paid for by cash, the cash dummy is equal to 1 and the interaction term is equal to the capital gains tax rate. The two variables are thus meant to be correlated, and the high VIF value is not a problem for the analysis (Shieh,2011). The other VIF values are lower than the benchmark of 5. This makes it clear that there is no reason to expect multicollinearity between those variables. The Breusch-Pagan test shows a Chi2 value of 1.29 and prob>chi2 of 0.2568. Therefore, there is no reason to assume our data to suffer from heteroscedasticity.

Table 3 below shows the output of the second analysis. The table consist out of three models. The first model includes only the control variables. This is the same model as in the first analysis and yields the same results. The second model also includes the cash and stock dummy variables and the tax variable, representing the capital gains tax rate linked to the deal. The adjusted R-squared of model 2 has increased drastically again compared to model 1. However, when comparing model 2 here with the second model from the first analysis, the tax variable does not change the adjusted R-squared a lot (0.1966 to 0.1973). The cash dummy variable is again insignificant here, while the stock dummy is significant and negative with a beta of -16.80 and $p<0.001$. The tax variable shows a negative beta of -0.277, indicating a negative relation between CARs and the capital gains tax rate. However, this effect is not found to be significant. Therefore, the results show there is no direct relationship between the capital gains tax rate and the cumulative abnormal returns. However, the tax variable could still have an indirect effect on the CARs. In order to test this, a third model is included in table 3. This model includes the interaction term CASHTAX next to the control variables and the cash, stock and tax variable. If this variable is positive and significant, we can state that the capital gains tax rate has a moderating effect on the relation between the method of payment and the CARs. The results of the model show the beta of the interaction term is only 0.0351 and the t-value is only 0.09. Therefore, the

variable is not significant, which means the capital gains tax do not have an indirect effect on the CARs. Cash-paid M&A's do not lead to significantly higher CARs in situations where the capital gains tax rate is higher. Hypothesis 3 is therefore rejected.

Table 3: output regression analysis 2

CARs	(1)	(2)	(3)
cash		-0.533	-1.382
		(-0.15)	(-0.13)
stock		-16.80***	-16.79***
		(-4.59)	(-4.58)
tax		-0.277	-0.295
		(-1.09)	(-0.89)
CASHTAX			0.0351
			(0.09)
international	10.53***	5.963*	5.970*
	(3.92)	(2.08)	(2.08)
control	11.98	10.36	10.33
	(1.80)	(1.65)	(1.64)
hostile	14.57**	11.26*	11.24*
	(2.73)	(2.21)	(2.21)
logassets	0.282	0.441	0.439
	(0.42)	(0.70)	(0.69)
logGDPCAP	6.247	6.407	6.373
	(1.75)	(1.73)	(1.71)
_cons	-57.46	-46.61	-45.80
	(-1.49)	(-1.22)	(-1.16)
Obs	244	244	244
Adj. R-squared	0.0971	0.1973	0.1939

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

4.5.2 Robustness check

Also for the second analysis, an additional robustness check will be executed to control for country-specific effects. Again, the sample of UK-based target firms will serve as sample here. Of course, the tax rate has to differ between different years during the 10 year period of our sample (2010-2019), in order to test the effect of the interaction term. The tax rate in the UK differed relatively much during these 10 years, ranging from 19% to 28% (See table 2 in appendix A). This makes it possible to run the regression, while also controlling for country-fixed effects. First, tests for heteroscedasticity and multicollinearity are conducted. The results of these tests can be found in table 15 in appendix J. Like in the second analysis, the VIF test shows very high values for the variables cash and CASHTAX. Again, this is no problem because the CASHTAX variable is a product of the cash dummy. The other VIF-values are lower than 5, so there is no reason to expect multicollinearity to be a problem. The Breusch-Pagan test shows a Chi2 value of 0.08, indicating there is no heteroscedasticity in our data. Table 16 in appendix J shows the output of the regression analysis for the robustness check. Again, the table consists out of the three models. Looking at the tax variable, the beta's in the robustness check have changed compared to the regular analysis. The beta was negative insignificant in the analysis in both models. However, table 16 shows positive beta's for the tax variable in both models (0.675 and 1.538). However, these beta's are still insignificant. When looking at the interaction term CASHTAX, the same happens. Where the output table in table 3 showed an insignificant beta of 0.0351, the table in the robustness check shows an insignificant beta of -1.558. Despite the different beta's, the coefficients stay insignificant, indicating that the results in our analysis are robust to country-fixed effects.

5. Conclusion & discussion

Mergers and Acquisitions play an important role in the corporate investment and restructuring of companies. It has become a multi-billion dollar industry. However, many M&A's aren't as successful as initially expected, because the expected synergies are not achieved. Much prior literature conducted research on the success of M&A's and their causes. This study contributed to the discussion on the success of M&A's by looking at the abnormal returns of target firms during the -1/+30 event window. Next, using a regression analysis, the role of the method of payment on these abnormal returns is tested. Finally, the role of capital gains taxes on this relationship is tested using an interaction variable. The results from the regression were tested using t-tests. Furthermore, robustness checks were included in order to control for country-specific effects. The results of this study will be discussed and compared with previous research in paragraph 5.1. Next, paragraph 5.2 will contain a conclusion, some limitations and recommendations for future research.

5.1 Results compared to previous research

The findings in this study showed significant average cumulative abnormal returns of 20.04% for target firms during the -1/+30 event window. Some previous studies found comparable results. Suk and Sung (1997) found average cumulative abnormal returns for target firms of 22.1% for M&A's during the -1/+5 event window. Although they use a smaller event window, the results are almost similar to the results in this study. However, this can be easily explained by the fact that the average abnormal returns per day in this study were biggest during the first four days, which could be seen in table 10 in appendix F. After the first four days, only two more days had significant average abnormal returns. The big difference between this study and the paper by Suk and Sung (1997) is that they used a sample of US-based target firms, whereas this study used EU-based target firms. Despite this, no big differences can be seen between the CARs. Carvalho and Camargos (2013) also find significant target returns during the post-announcement period, which is in line with this paper's results.

Next, this study finds that M&A deals which are paid for by cash on average result in higher cumulative abnormal returns compared to stock-paid M&A's. This can be seen in table 2. The table shows that abnormal returns for stock-paid M&A's are significant lower compared to mix-paid deals. CARs from cash-paid deals however do not differ significantly from mix-paid deals These results are robust for country-fixed effect, which is tested empirically in table 13 in appendix H. The results are in line with prior literature. Wansley et al. (1983) found positive abnormal returns for both cash-paid and stock-paid M&A deals. However, the CARs were higher for deals which were paid for by using cash compared to stock-paid deals. The findings in this study are not in line with the findings of Blackburn et al. (1997). The authors of this paper find no relation between the method of payment and the target CARs. One thing that might explain the difference in results is the division of the deals in terms of

method of payment. In this study, 52% of the deals are paid for by cash 28% stock and 20% mix. In the paper by Blackburn et al. (1997), the share of cash-paid deals is 68%, and only 17% is paid for by stock. Because of the relatively few stock-paid deals, the results could be different from this paper.

The next analysis in this study finds that the tax variable doesn't influence the target CARs. This contradicts the expectation of Petruzzi (1988), who stated that higher capital gains taxes would increase the price required by target shareholders. This higher price would increase the abnormal returns. The expectation of Petruzzi (1988) was empirically tested by Ayers et al. (2003). The findings of this paper suggest there is a positive relation between capital gains tax and target CARs, which is in line with the expectation of Petruzzi (1988). However, the findings of this study are not in line with the prior literature. The final analysis of this paper tests the indirect effect of the capital gains tax rate on the relation between the method of payment and the target CARs, by looking at the interaction term CASHTAX. The results in table 3 show us that the interaction term is not positive, but not significant. This means the tax rate does not have an indirect effect on the CARs via the method of payment, contradicting the tax perspective of the method of payment. This is in line with the paper by Ghosh and Jain (2000). The authors also hypothesised that tax would have an influence on the relation between the method of payment and target CARs. However, the results suggest this indirect relation is not present. A possible reason why the indirect relation is not found is that because the higher tax rate increases the price, the firm could become overvalued, resulting in less trust in the synergies to be achieved (Lewellen et al., 1989).

5.2 Conclusion, limitations and future research

This study empirically contributed to the study on the success of mergers and acquisitions. Using a sample of 244 M&A deals announced between 2010 and 2019 and with the target firm located in an EU-country, the success of the deals was measured by looking at the abnormal returns during the -1/+30 event window. These abnormal returns are found to be positive significant with a mean of 20.04%. Next, the relation between the method of payment and the abnormal returns was tested. Finally, the role of capital gains tax was tested. The findings suggest M&A's are on average more successful (higher CARs) when paid for with cash compared to M&A's paid for with shares. The study also finds that the capital gains tax rate does not have a direct influence on the success. Moreover, when the capital gains tax rate is tested for an indirect relation via the method of payment, the findings suggest abnormal returns for cash-paid M&A's are not bigger when the tax rate is higher. This contradicts the tax perspective of the method of payment. In summary, this paper has found that the method of payment has an important influence on the success of M&A's. The capital gains taxes do not play a significant role in this relation.

This study also has some limitations, which could have influenced the results. The first limitation is the relative low number of observations. Despite the fact that the Factset database

includes a lot of M&A deals, this amount decreased drastically due to the fact that only public firms could be used for the analysis. This criterion was needed to calculate the abnormal returns. When firms are not publicly listed, data on the daily stock returns is missing, as well as data on an index. This relatively low amount of observations makes the results vulnerable for unreliable observations which are for example influenced by other events than just the M&A. In order to deal with this, two outliers with abnormal returns of 307% and 837% were deleted from the sample. However, we cannot know for sure if other observations are unbiased. Another problem of the low amount of observations is the unequal division of deals between the countries. When looking only at the abnormal returns, this is not a big problem, since the robustness checks indicated that the results are robust for country-fixed effects. However, the results considering taxes could be biased because of an unequal division in tax rates. If too many cash-paid M&A's have a tax rate which does not differ much, a good relation cannot be found. A second limitation of the study is the use of the capital gains tax rate in order to measure the role of taxes. This method can be seen as too simplistic, since it is only based on the tax rate, and not on the amount of taxes paid. This could influence the results. However, the amount of taxes paid cannot be found in datasets, making it hard to use the amount of taxes paid. It could be possible to use a proxy for the amount of taxes as a measure, like for example Ayers et al. (2004) did in their paper. However, such a proxy is based on many unrealistic assumptions that could make it irresponsible to use. Moreover, it can be hard to find the data needed to calculate it. A first suggestion for future research is therefore to focus on measurement of the capital gains taxes which is based on realistic assumptions and can be calculated using available data. A second suggestion for future research is to deeper investigate the differences in abnormal returns between countries. This could be differences between Europe and the US or China, or differences between EU-countries. In this study, we have controlled for country-fixed effects and for the GDP per capita. However, many other factors can play a role in the success of M&A's. Examples of interesting topics are looking at culture or regulation.

Bibliography

Agrawal, A., Nasser, T. (2012) Insider trading in takeover targets. *Journal of corporate finance,* 18(3), p. 598-625

Aktas, N., deBodt, E., Cousin, J. (2011) Do financial markets care about SRI? Evidence from mergers and acquisitions. *Journal of banking & finance*, 35, p. 1753-1761

Ali, A., Hwang, L.S. (2000) Country-specific factors related to financial reporting and the value relevance of accounting data. *Journal of accounting research,* 38(1), p. 1-21

Alshwer, A.A., Sibilkov, V., Zaiats, N. (2011) Financial constraints and the method of payment in mergers and acquisitions. *SSRN*, p. 1-41

Amihud, Y., Lev, B., Travlos, N.G. (1990) Corporate control and the choice of investment financing: the case of corporate acquisitions, *Journal of finance* 45, p. 603-616

Ang, J.S., Cheng, Y. (2006) Direct evidence on the market-driven acquisitions theory. *Journal of financial research*, 29(2), p. 199-216

Auerbach, A.J., Reishus, D. (1987) The impact of taxation on mergers and acquisitions. *University of Chicago Press*, p. 69-86

Ayers, B.C., Lefanowicz, C.E., Robinson, J.R. (2004) The effect of shareholder-level capital gains taxes on acquisition structure. *The accounting review,* 79(4), p. 859-887

Ayers, B.C., Lefanowicz, C.E., Robinson, J.R. (2007) Capital gains taxes and acquisition activity: Evidence of the lock-in effect. *Contemporary Accounting Research,* 24(2), p. 315-344

Ayers, B.C., Lefanowicz, C.E., Robinson, J.R. (2003) Shareholder taxes in acquisition premiums: The effect of capital gains taxation. *The journal of finance,* 58(6), p. 2783-2803

Aykut, D. (2017) Emerging trends in FDI flows to Asia. *The world bank*, p. 1-25

Ball, R., Brown, P. (1968) An empirical evaluation of accounting income numbers. *Journal of accounting research,* 16, p. 159-178

Baradwaj, B.G., Fraser, D.R., Furtado, E.P.H. (1990) Hostile bank takeover offers: Analysis and implications. *Journal of banking & finance,* 14(6), p. 1229-1242

Berger, P., Ofek, E. (1995) Diversification's effect on firm value. *Journal of financial economics*, 37, p. 39-65

Bernard, V.L., Thomas, J.K. (1989) Post-earnings-announcement drift: Delayed price response or risk premium? *Journal of accounting research,* 27, p. 1-36

Berthold, M. (1999) Fuzzy models and potential outliers. *International Conference of the north American fuzzy information processing society,* 18(1), p. 532-535

Blackburn, V.L., Dark, F.H., Hanson, R.C. (1997) Mergers, method of payment and returns to manager- and owner-controlled firms. *The financial review,* 32(3), p. 569-589

Borges, M.R., Gairifo, R. (2013) Abnormal returns before acquisition announcements: evidence from Europe. *Applied economics*, 45:26, p. 3723-3732

Bowman, E.H., Singh, H. (1993) Corporate restructuring: Reconfiguring the firm. *Strategic management journal*, 14(1), p. 5-14

Bradley, M., Desai, A., Kim, E.H. (1988) Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. *Journal of financial economics*, 21, p.3-40

Bugeja, M., da Silva Rosa, R. (2008) Taxation of shareholder capital gains and the choice of payment method in takeovers. *Accounting and business research*, 38(4) p. 331-350

Bühner, R. (1991) The success of mergers in Germany. *International journal of industrial organization*, 9 (4), p. 513-532

Carvalho, D.M., Camargos, M.A. (2013) The efficient market hypothesis of Brazilian capital market, 2000-2010: an event study of distribution of dividends. *Revista Produção Online*, 13(4), p. 1227-1251

Cheng, Y. (2017) Corporate governance and bidder abnormal returns in M&A. *ITM web of conferences*, 12, p. 1-6

Cook, R.D., Weisberg, S. (1983) Diagnostics for heteroscedasticity in regression. *Biometrika*, 70(1), p. 1-10

Cooke, T.E. (1991) Environmental factors influencing mergers and acquisitions in Japan. *Journal of international financial management and accounting*, 3(2), p. 160-188

Cornell, B., Sirri, E. (1992) The reaction of investors and stock prices to insider trading. *The journal of finance*, 47, 1031-1060

Cornett, M., De, S. (1991) Medium op payment in corporate acquisitions: evidence from interstate bank mergers. *Journal of money, credit and banking*, 23(1), 767-776

Corrado, C.J. (2010) Event studies: a methodological review. *Deakin University- School of eccounting, economics and finance.* P. 1-36

Datta, D.K., Pinches, G.E., Narayanan, V.K. (1992) Factors influencing wealth creation from mergers and acquisitions: a meta-analysis. *Strategic Management Journal*, 13 (1), p. 67-84

Davidson, W.N., Cheng, L.T.W. (1997) Target firm returns: Does the form of payment affect abnormal returns? *Journal of business finance & accounting*, 24(3), p. 465-479

Deng, X., Kang, J., Low, B.S. (2013) Corporate social responsibility and stakeholder value maximization: evidence from mergers. *Journal of financial economics*, 110, p. 87-109

DePamphilis, D. (2015) Mergers, acquisitions, and other restructuring activities (8th edition) Maarssen, Netherlands: Elsevier gezondheidszorg

Devos, E., Kadapakkam, P., Krishnamurty, S. (2008) How do mergers create value? A comparison of taxes, market power, and efficiency improvements as explanations for synergies. *Review of financial studies*, 22(3), p. 1179-1211

Eckbo, B.E. (1983) Horizontal mergers, collusion, and stockholder wealth. *Journal of financial economics*, 11(1), p. 241-273

Erickson M. (1998) The effect of taxes on the structure of corporate acquisitions. *Journal of accounting research,* 36(2), p. 279-298

Faccio, M., Masulis, R.W. (2005) The choice of payment method in European mergers and acquisitions. *The journal of finance,* 60(3), p. 1345-1388

Fama, E. (1970) Efficient capital markets: A review of theory and empirical work. *The journal of finance,* 25(2), p. 383-417

Farrar, D.E., Glauber, R.R. (1967) Multicollinearity in regression analysis: The problem revisited. *The review of economics and statistics,* 49(1), p. 92-107

Fishman, M. (1989) preemptive bidding and the role of the medium of exchange in acquisitions. *Journal of finance,* 44, p. 41-57

Ghosh, A., Jain, P.C. (2000) Financial leverage changes associated with corporate mergers. *Journal of corporate finance,* 6(4), p. 377-402

Graham, J.R., Lemmon, M.L., Wolf, J.G. (2002) Does corporate diversification destroy value? *The journal of finance,* 62(2), p. 695-720

Greenwald, B., Stiglitz, J.E., Weiss, A. (1984) Informational imperfections in the capital market and macroeconomic fluctuations. *American Economic Review,* 74, p. 194-199

Gregory, A., McCorriston, S. (2005) Foreign acquisitions by UK limited companies: Short- and long-run performance. *Journal of empirical finance,* 12(1), p. 99-125

Gugler, K., Mueller, D.C., Yurtoglu, B.B., Zulehner, C. (2003) The effects of mergers: an international comparison. *International Journal of Industrial Organization,* 21(5), p. 625-653

Hackbarth, D., Morellec, E. (2008) Stock returns in mergers and acquisitions. *The journal of finance,* 63(3), p. 1213-1252

Hansen, R.G. (1987) A theory for the choice of exchange medium in mergers and acquisitions. *The journal of business,* 60(1), p. 75-95

Harris, M., Raviv, A. (1988) Corporate control contests and capital structure. *Journal of financial economics*, 2, p.55-86

Harris, R.S., Franks, J., Mayer, C. (1987) Method of payment in takeovers: Results for the U.K. and the U.S. *National Bureau of Economic Rsearch,* working paper, p. 1-67

Hayn, C. (1989) Tax attributes as determinants of shareholder gains. *Journal of financial economics,* 23(1), p. 121-153

Hoffmeister, R.J., Dyl, E.A. (1981) Predicting outcomes of cash tender offers. *Financial Management,* 10(5), p. 50-58

Huang, Y., Walking, R.A. (1987) target abnormal returns associated with acquisition announcements: payment, acquisition form, and managerial resistance. *Journal of financial economics*, 19, p. 329-349

Ianca, C. (2008) Tax implication of structuring and financing mergers and acquisitions. *Theoretical and applied economics*, 15(9), p. 69-78

IMAA (2020) Used for data on mergers and acquisitions. From https://imaa-institute.org

Ismail, A., Krause, A. (2010) Determinants of the method of payment in mergers and acquisitions. *The quarterly review of economics and finance*, 50(1), p. 471-484

Jaccard, J., Turrisi, R. (2003) Interaction effects in multiple regression, second edition. Thousand oaks, California: Sage publications

Ji, X. (2016) How the GDP will affect M&A deals in U.S. *Southern Illinois university Carbondale*. Working paper. P. 1-16

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

Keown, A.J., Pinkerton, J.M. (1981) Merger announcements and insider trading activity: an empirical investigation. *The journal of finance*, 36, p. 855-869

King, M., Padalko, M. (2005) Pre-bid run-ups ahead of Canadian takeovers: How big is the problem? *Bank of Canada working paper nr 2005-3*

KPMG (2017) The KPMG international survey of Corporate Responsibility Reporting 2017, p. 10

Lang, L., Stulz R. (1994) Tobin's q, corporate diversification and firm performance. *Journal of political economy,* 102(1), p. 1248-1280

Lewellen, W., Loderer, C., Rosenfeld, A. (1989) Mergers, executive risk reduction, and stockholder wealth. *Journal of financial and quantitative analysis*, 24(4), p. 459-472

Linn, S., Switzer, J. (2001) Are cash acquisitions associated with better post-combination operating performance than stock acquisitions? *Journal of banking and finance*, 25, p. 1113-1138

Lins, K., Servaes, H. (1999) International evidence on the value of corporate diversification. *Journal of finance*, 54(1), p. 2215-2239

Loukianova, A., Nikulin, E., Vedernikov, A. (2017) Valuing synergies in strategic mergers and acquisitions using the real options approach. *Investment management and financial innovations,* 14(1), p. 236-247

MacKinley, A.C. (1997) Event studies in economics and finance. *Journal of economic literature,* 35(1), p. 13-39

Malkiel, B.G. (2003) The efficient Market Hypothesis and its critics. *Journal of Economic Perspectives*, 17(1), p. 59-82

Mandelker, G. (1974) Risk and return: the case of merging firms. *Journal of financial economics,* 2, p. 303-335

Martin, K.J. (1996) The method of payment in corporate acquisitions, investment opportunities, and management ownership. *Journal of finance*, 51(4), p. 1227-1246

Meeks, G. (1977) Disappointing marriage: A study of the gains from merger. First edition. Cambridge University Press, Cambridge

Morosini, P., Shane, S., Singh, H. (1998) National cultural distance and cross-border acquisition performance. *Journal of international business studies*, 29, p. 137-158

Myers, S., Majluf, N. (1984) Corporate financing and investment decisions when firms have information that investors do not have. *Journal of financial economics*, 13, 187-221

Ohrn, E. Seegert, N. (2019) The impact of investor-level taxation on mergers and acquisitions. *Journal of public economics,* 177 (1), p. 1-19

Olbrys, J., Majewska, E. (2014) Direct identification of crisis periods on the CEE stock markets: The influence of the 2007 U.S. subprime crisis. *Procedia economics and finance,* 14, p. 461-470

Park, N.K. (2004) A guide to using event study methods in multi-country settings. *Strategic management journal*, 25(7), p. 655-668

Petruzzi, C.R. (1988) Mergers and the double taxation of corporate income. *Journal of accounting and public policy,* 7(2), p. 97-111

Salant, S.W., Switzer, S., Reynolds, R.J. (1983) Losses from horizontal merger: the effects of an exogeneous in industry structure on Cournot-nash equilibrium. *Quarterly journal of economics,* 98(1), p. 185-199

Scholes, M.S., Wolfson, M.A. (1989) The effects of changes in tax laws on corporate reorganization activity. *National Bureau of Economic Research,* Working paper, p. 1-36

Schwert, W.G. (2000) Hostility in takeovers: In the eyes of the beholder? *The journal of finance*, 55(6), p. 2599-1640

Servaes, H. (1991) Tobin's q and the gains from takeovers. *Journal of finance*, 46(1), p. 409-419

Shieh, G. (2011) Clarifying the role of mean centering in multicollinearity of interaction effects. *British journal of Mathematical and statistical psychology,* 64(1), p. 462-477

Silva Da Rosa, R., Izan, H.Y., Steinbeck, A., Walter, T. (2000) The method of payment decision in Australian takeovers: an investigation of causes and effects. *Australian journal of management*, 25(1), p. 67-94

Song, X., Tippett, M., Vivian, A. (2017) Assessing abnormal returns: The case of Chinese M&A acquiring firms. *Research in international business and finance*, 42, p. 191-207

Suk, D.Y., Sung, H.M. (1997) The effects of the method of payment and the type of offer on target returns in Mergers and tender offers. *The financial review,* 32(3), p. 591-607

Swieringa, J., Schauten M.B.J. (2007) The payment method choice in Dutch mergers and acquisitions. *Erasmus University Rotterdam working paper*, p. 1-30

Tang, Z., Xu, X. (2016) What causes the target stock price run-up prior to M&A announcements? *Journal of accounting and finance*, 16(6), p. 106-120

Taylor, R. (1990) Interpretation of the correlation coefficient: A basic review. *Journal of diagnostic medical sonography,* 6(1), p. 35-39

Yook, K.C., Gangopadhyay, P., McCabe, G.M., Information asymmetrie, management control, and method of payment in acquisitions. *The journal of financial research*, 22(4), p. 413-427

Wansley, J.W., Roenfeldt, R.L., Cooley, P.L. (1983) Abnormal returns from merger profiles. *Journal of financial and quantitative analysis,* 18(2), p. 149-162

Wong, A., Cheung, K.Y. (2009) The effects of merger and acquisition announcements on the security prices of bidding firms and target firms in Asia. *International journal of economics and finance,* 1(2), p. 273-283

Appendix A: capital gains taxes per country

The table below shows the capital gains taxes per country for the 26 countries used in this sample. Despite the fact that Great Britain is no longer part of the European Union, they are still integrated in the sample, since they left the European Union on the first of February 2020. For this research, data is used from 01/01/2010 until 01/01/2020. Great Britain was still a member of the EU during this timeframe. The values in the table are the tax rate in %.

Table 4: Capital gains tax rates per country per year

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Belgium	33.99	33.99	33.99	33.99	33.99	33.99	33.99	33.99	29.00	29.00
Bulgaria	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Croatia	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	18.00	18.00
Czech Republic	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Denmark	25.00	25.00	25.00	25.00	24.50	22.00	22.00	22.00	22.00	22.00
Estonia	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00	21.00
Finland	26.00	26.00	24.50	24.50	20.00	20.00	20.00	20.00	20.00	20.00
France	33.33	33.33	33.33	33.33	33.33	33.33	33.30	33.33	33.00	31.00
Germany	29.41	29.37	29.48	29.55	29.58	29.72	29.72	29.79	30.00	30.00
Greece	24.00	20.00	20.00	26.00	26.00	29.00	29.00	29.00	29.00	28.00
Hungary	19.00	19.00	19.00	19.00	19.00	19.00	19.00	9.00	9.00	9.00
Ireland	25.00	25.00	30.00	33.00	33.00	33.00	33.00	33.00	33.00	33.00
Italy	31.40	31.40	31.40	31.40	31.40	31.40	31.40	24.00	24.00	24.00
Latvia	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	20.00	20.00
Lithuania	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00	15.00
Luxembourg	28.59	28.80	28.80	29.22	29.22	29.22	29.22	27.08	26.01	24.94
Netherlands	25.50	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00	25.00
Poland	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00	19.00
Portugal	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00
Romania	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00	16.00
Slovakia	19.00	19.00	19.00	23.00	22.00	22.00	22.00	21.00	21.00	21.00
Slovenia	20.00	20.00	18.00	17.00	17.00	17.00	17.00	19.00	19.00	19.00
Spain	30.00	30.00	30.00	30.00	30.00	28.00	25.00	25.00	25.00	25.00
Sweden	26.30	26.30	26.30	22.00	22.00	22.00	22.00	22.00	22.00	21.40
United Kingdom	28.00	26.00	24.00	23.00	21.00	20.00	20.00	19.00	19.00	19.00

Sources: PWC, from https://taxsummaries.pwc.com/ID/Capital-gains-tax-(CGT)-rates
KPMG, from https://home.kpmg/xx/en/home/services/tax/tax-tools-and-resources/tax-rates-online/corporate-tax-rates-table.html

Appendix B: GDP per capita per country

The table below shows the GDP per capita for the 26 countries used in the sample during the period 2010-2019. This numbers are all in constant 2010 US dollars, in order to correct for changes in exchange rates. The values in the table are the GDP per capita, measured in constant 2010 USD.

Table 5: GDP per capita per country per year

Country	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Austria	46,858	48,065	48,172	47,901	47,843	47,789	48,260	49,113	50,020	50,655
Belgium	44,142	44,310	44,361	44,355	44,856	45,503	45,985	46,680	47,166	47,541
Bulgaria	6,843	7,019	7,062	7,137	7,309	7,612	7,967	8,331	8,651	9,026
Croatia	13,924	13,929	13,659	13,621	13,663	14,112	14,706	15,350	15,890	16,455
Czech Republic	19,808	20,119	19,930	19,827	20,344	21,382	21,864	22,755	23,359	23,834
Denmark	58,041	58,576	58,488	58,788	59,438	60,402	61,787	62,733	63,873	65,147
Estonia	14,784	15,933	16,487	16,769	17,315	17,623	18,082	19,098	19,954	20,742
Finland	46,460	47,423	46,539	45,907	45,550	45,655	46,721	48,033	48,749	49,241
France	40,638	41,329	41,258	41,283	41,478	41,765	42,055	43,002	43,664	44,317
Germany	41,532	43,969	44,071	44,139	44,934	45,321	45,960	46,917	47,478	47,628
Greece	26,918	24,496	22,831	22,251	22,566	22,615	22,666	23,053	23,558	24,024
Hungary	13,114	13,390	13,261	13,559	14,166	14,745	15,114	15,810	16,648	17,466
Ireland	48,715	48,670	48,573	48,971	52,775	65,433	67,078	71,756	76,881	79,703
Italy	36,001	36,193	35,019	33,979	33,667	33,961	34,455	35,098	35,432	35,614
Latvia	11,345	12,279	12,947	13,391	13,776	14,342	14,731	15,452	16,269	16,698
Lithuania	11,954	12,964	13,642	14,272	14,900	15,346	15,940	16,851	17,709	18,427
Luxembourg	104,965	105,265	102,405	103,722	105,659	107,638	110,162	109,453	110,742	111,026
Netherlands	50,950	51,500	50,781	50,565	51,101	51,872	52,727	53,942	55,023	55,690
Poland	12,600	13,225	13,437	13,632	14,095	14,646	15,102	15,845	16,659	17,387
Portugal	22,499	22,150	21,337	21,257	21,541	22,018	22,534	23,381	23,995	24,590
Romania	8,210	8,416	8,629	8,966	9,306	9,712	10,237	11,029	11,532	12,131
Slovakia	16,727	17,184	17,480	17,579	18,045	18,897	19,274	19,829	20,599	21,039
Slovenia	23,510	23,663	22,990	22,722	23,328	23,826	24,552	25,722	26,768	27,152
Spain	30,503	30,147	29,236	28,911	29,399	30,550	31,450	32,283	32,950	33,350
Sweden	52,817	54,020	53,284	53,409	54,334	56,139	56,776	57,367	57,921	57,975
United Kingdom	39,436	39,731	40,040	40,623	41,370	42,009	42,510	43,011	43,325	43,688

Source: Worldbank databank, from https://databank.worldbank.org/reports.aspx?source=2&series=NY.GDP.PCAP.KD

Appendix C: Overview target countries per year

Table 6: overview target firms per country and announcement year

Target Country	Announcement year										
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Austria	0	0	0	0	0	0	1	2	0	0	3
Belgium	1	1	0	0	0	0	0	2	3	0	7
Croatia	0	0	0	0	0	0	0	0	0	0	0
Czech Republic	1	0	0	0	0	0	0	1	0	0	2
Denmark	1	1	0	0	1	0	0	1	0	0	4
Finland	0	0	0	0	1	0	1	2	0	2	6
France	0	2	0	1	2	3	2	4	5	2	21
Germany	0	0	1	1	3	2	1	5	2	4	19
Greece	0	0	0	0	0	1	0	0	1	0	2
Hungary	0	0	0	0	0	1	0	0	1	1	3
Ireland	0	1	0	0	0	1	0	0	2	1	5
Italy	1	0	3	1	1	5	0	1	2	6	20
Latvia	0	1	0	0	0	1	0	0	0	0	2
Lithuania	0	0	0	0	0	0	0	0	0	0	0
Luxembourg	0	0	1	1	0	1	0	0	0	0	3
Netherlands	2	1	1	0	3	2	1	3	1	1	15
Poland	1	0	1	1	0	0	0	1	1	0	5
Romania	0	0	0	1	1	0	0	0	0	0	2
Slovakia	0	0	1	0	1	0	0	1	0	0	3
Slovenia	0	0	0	0	0	0	0	0	0	1	1
Spain	1	2	2	0	0	0	1	1	3	1	11
Sweden	1	0	0	0	0	1	1	0	4	3	10
United Kingdom	7	7	6	6	9	13	10	11	15	11	95
Bulgaria	0	0	0	0	0	1	0	1	0	0	2
Estonia	0	0	0	0	0	0	1	0	0	0	1
Portugal	0	1	0	0	1	0	0	0	0	0	2
Total	16	17	16	12	23	32	19	36	40	33	244

Appendix D: Variables descriptive statistics

Table 7: descriptive statistics of CARs before outliers are removed

Variable	*Observations*	*Mean*	*Standard deviation*	*Min*	*Max*
CARs	246	24.53	59.18	-33.87	837.37

Table 8: descriptive statistics of all variables

Variable	*Observations*	*Mean*	*Standard deviation*	*Min*	*Max*
CARs	244	20.04	21.47	-33.87	80.50
Cash	244	0.52	0.50	0	1
Stock	244	0.28	0.44	0	1
Mix	244	0.20	0.40	0	1
Tax	244	24.42	5.43	9	33.99
CASHTAX	244	12.92	13.12	0	33.99
International	244	0.59	0.49	0	1
Control	244	0.04	0.20	0	1
Hostile	244	0.07	0.25	0	1
logGDPCAP	244	10.59	0.38	8.94	11.59
logassets	244	13.14	1.97	8.37	18.68

Appendix E: Correlation matrix

Table 9: Correlation matrix of all variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
(1) CARs	1.000										
(2) cash	0.269	1.000									
(3) stock	-0.405	-0.641	1.000								
(4) mix	0.115	-0.529	-0.312	1.000							
(5) tax	-0.044	0.109	-0.034	-0.097	1.000						
(6) CASHTAX	0.247	0.947	-0.607	-0.501	0.323	1.000					
(7) international	0.249	0.418	-0.290	-0.196	-0.084	0.365	1.000				
(8) control	0.102	0.033	-0.035	-0.003	-0.082	0.022	0.004	1.000			
(9) hostile	0.167	0.022	-0.089	0.071	-0.057	0.019	-0.049	0.029	1.000		
(10) logassets	0.011	-0.004	0.036	-0.035	0.047	0.012	0.028	-0.038	-0.098	1.000	
(11) logGDPCAP	0.143	0.011	-0.109	0.108	0.358	0.113	0.134	-0.123	0.091	-0.004	1.000

Appendix F: Average abnormal returns per day

Table 10: Average abnormal returns per day

Event day	*AAR*	*Standard deviation*	*T-value*	*Significant*
-1	0.4388038%	2.933914	3.397409	YES
0	14.41229%	26.07978	13.42419	YES
+1	2.146322%	12.56332	3.880747	YES
+2	0.7997097%	8.252749	2.201195	YES
+3	0.2219649%	3.843133	1.311969	NO
+4	-0.0368043%	2.519959	-.3317645	NO
+5	-0.0318067%	2.095448	-.3447996	NO
+6	-0.01776438%	2.353082	-1.714896	NO
+7	-0.1435399%	2.472413	-1.318793	NO
+8	0.1706565%	2.840479	1.364759	NO
+9	-0.1919379%	2.072542	-2.103692	YES
+10	0.2361953%	2.91861	1.838316	NO
+11	-0.1245419%	2.164992	-1.306724	NO
+12	0.001362%	3.635606	0.0085102	NO
+13	0.0691154%	1.985767	0.7906264	NO
+14	0.3610487%	4.454265	1.841258	NO
+15	-0.0961999%	1.980549	-1.103351	NO
+16	0.0653319%	2.655786	0.5588012	NO
+17	1.727978%	37.22767	1.05438	NO
+18	0.2102689%	4.113292	1.161209	NO
+19	0.0308525%	3.052118	.2296224	NO
+20	0.3387481%	3.837156	2.00536	YES
+21	0.0524853%	2.869354	0.4155069	NO
+22	0.0413314%	1.920669	0.4888234	NO
+23	-0.0056906%	2.625544	-.049234	NO
+24	-0.0531172%	1.814664	-.6649117	NO
+25	-0.1611008%	2.085002	-1.755158	NO
+26	0.029108%	2.403898	.2750565	NO
+27	0.1142319%	4.036067	0.6429153	NO
+28	0.1039042%	2.542125	0.9284552	NO
+29	-0.0969534%	2.008741	-1.096388	NO
+30	0.0239388%	1.828794	0.2973464	NO

-1/+30	20.03579%	21.46889	14.5778	YES

Appendix G: Analysis 1

Table 11: VIF test and Breusch-Pagan test analysis 1

	VIF	1/VIF
cash	1.913	.523
stock	1.746	.573
international	1.246	.803
logGDPCAP	1.065	.939
hostile	1.033	.968
control	1.02	.98
logassets	1.013	.987
Mean VIF	1.291	.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of CARs
chi2(1) = 2.96
Prob > chi2 = 0.0851

Appendix H: Robustness check analysis 1

Table 12: VIF test and Breusch-Pagan test robustness test 1

	VIF	1/VIF
cash	1.937	.516
international	1.547	.646
stock	1.452	.689
hostile	1.062	.942
control	1.053	.95
logGDPCAP	1.05	.952
logassets	1.028	.973
Mean VIF	1.304	.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of CARs
chi2(1) = 0.13
Prob > chi2 = 0.7154

Table 13: Output robustness check analysis 1

CARs	(1)	(2)
cash		1.315
		(0.26)
stock		-23.42***
		(-4.59)
internatio~l	9.962*	2.690
	(2.28)	(0.57)
control	10.10	3.874
	(0.85)	(0.37)
hostile	12.66	10.19
	(1.94)	(1.77)
logassets	0.973	1.260
	(0.98)	(1.44)
logGDPCAP	-115.2	-70.27
	(-1.91)	(-1.31)
_cons	1231.5	759.6
	(1.92)	(1.33)
Obs	95	95
Adj. R-squared	0.0792	0.2883

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

Appendix I: Analysis 2

Table 14: VIF test and Breusch-Pagan test of analysis 2

	VIF	1/VIF
CASHTAX	18.685	.054
cash	17.868	.056
tax	2.094	.478
stock	1.761	.568
international	1.311	.763
logGDPCAP	1.281	.781
hostile	1.045	.956
control	1.025	.976
logassets	1.016	.984
Mean VIF	5.121	.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of CARs
chi2(1) = 1.29
Prob > chi2 = 0.2568

Appendix J: Robustness check analysis 2

Table 2: VIF test and Breusch-Pagan test robustness check analysis 2

	VIF	1/VIF
CASHTAX	19.475	.051
cash	17.248	.058
tax	2.731	.366
logGDPCAP	2.633	.380
international	1.57	.637
stock	1.479	.676
hostile	1.117	.895
logassets	1.069	.936
control	1.065	.939
Mean VIF	5.376	.

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of CARs
chi2(1) = 0.08
Prob > chi2 = 0.7787

Table 3: Output robustness check analysis 2

CARs	(1)	(2)	(3)
cash		1.130	34.03
		(0.22)	(1.19)
stock		-23.64***	-23.32***
		(-4.57)	(-4.51)
tax		0.675	1.538
		(0.34)	(0.72)
CASHTAX			-1.558
			(-1.17)
internatio~l	9.962*	2.821	3.321
	(2.28)	(0.59)	(0.70)
control	10.10	3.657	2.557
	(0.85)	(0.35)	(0.24)
hostile	12.66	10.16	11.71
	(1.94)	(1.76)	(1.98)
logassets	0.973	1.222	1.380
	(0.98)	(1.37)	(1.54)
logGDPCAP	-115.2	-17.05	-14.71
	(-1.91)	(-0.10)	(-0.09)
_cons	1231.5	179.5	133.9
	(1.92)	(0.10)	(0.07)
Obs	95	95	95
Adj. R-squared	0.07921	0.2809	0.2841

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