

*Master thesis*

# SEEKING FORTUNE IN FOREIGN SAFE HAVENS

Does policy uncertainty impact cross-border M&A?

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## ABSTRACT

This research focuses on the influence of policy uncertainty on cross-border M&A volume and performance. By using a sample consisting of 15,910 successfully completed cross-border M&A deals in 41 countries, the research builds upon previous research on this topic and aims at filling the literature gap on drivers of cross-border M&A. The uniquely large geographic scope of the research and the utilization of the continuous WUI variable, designed by Ahir, Bloom, & Fuceri (2018), provide the opportunity to test acquirer and target country policy uncertainty influences, as well as the interactional effect of policy uncertainty in both countries. The research does find evidence that policy uncertainty stimulates outbound acquisitions, but the effect varies across countries. Acquirers do pay lower bid premiums if policy uncertainty is high in the target country. The suggestion that deal performance is affected by policy uncertainty in the acquirer or target country is not supported with significant evidence. Country-pair analysis does find that policy uncertainty in the acquirer country significantly decreases the number of cross-border acquisitions and increases deal performance, but fails to provide evidence for any direct effect of policy uncertainty in the target country or any indirect effect through the interaction term. Robustness checks uncover that the country-pair findings are heavily influenced by the US and UK related deals.

**Keywords:** Policy uncertainty, Mergers and acquisitions, Cross-border M&A, monetary M&A value, M&A performance, Investment

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# I. Introduction

The world economy has developed in a worrying fashion since late 2018. It has transitioned from robustly accelerating to widespread stagnating, due to decreased global investment and subsequently weak international trade (Bobasu, Geis, Quaglietti, & Ricci, 2020). According to Reuters, the value of cross-border M&A is a little less than one third of global M&A, which accumulated to about 3.9 trillion USD in 2019. Cross-border M&A accounts for 1.2 trillion USD, a record low since 2013 after a year-on-year decline of 25%<sup>1</sup>. This development has taken place amid a restless political environment that was subject to the Brexit referendum and negotiations, rising trade tensions between China and the US, multiple geopolitical tensions, and inherent challenges in emerging economies. Some of these disruptive events are results of historic political and governmental decision making, but all are phenomena that shape future economic and political policy. These events create uncertainty among economic agents and make it harder to form calculated predictions on future economic developments. Pastor & Veronesi (2010) claim that policy uncertainty arises because of the unpredictable aspect of future governmental decisions that result from impactful events. The governments have a key position in shaping the business environment, as they determine the rules of the game. Policy decisions incorporate macroeconomic stabilization policy, trade policy, regulatory policy, antitrust policy, industrial policy, policies designed to pursue economic growth, and lastly policies designed to redistribute income, property and wealth.

Ahir, Bloom, & Fuceri (2018) find that global policy uncertainty has increased in recent years. Additionally, they find that periods of high uncertainty have resulted in significant economic activity decreases, especially in countries with lower institutional quality. Recent studies explain that uncertainty about future policy hampers general firm acquisitiveness (Bhagwat, Dam, & Harford, 2016; Nguyen & Phan, 2017) and highlight the importance of corporate perceptions of present policy and expectations of future policy. The relation between cross-border M&A and policy uncertainty is particularly interesting because deals are subject to policy developments in the acquirer as well as developments in the target country and therefore provide interesting cross-country study material. Increased understanding of the financial dynamics of cross-border M&A is valuable for both investors and policymakers. In these turbulent times, with e.g. the ongoing COVID-19 Pandemic, Brexit, and US elections, the economic policy uncertainty implications appear to be a relevant topic. The economic

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<sup>1</sup> <https://www.reuters.com/article/us-global-deals-idUSKBN1YZ0YZ>

effects on cross-border M&A transactions in times of economic policy uncertainty deserve more in depth analysis, therefore the main research question will be the following:

**Research Question:** *To what extent does economic policy uncertainty impact cross-border M&A volume and performance?*

Previous studies have proxied policy uncertainty by utilizing elections (Cao, Li, & Liu, 2015), economic and financial variable volatility (Leahy & Whited, 1996), and the economic policy uncertainty index (Baker, Bloom, & Davis, 2016), but these measures lack continuity or are solely available for advanced economies. This research uses the World Uncertainty Index (WUI) designed by Ahir et al. (2018), which is constructed based on a text-searching approach. It incorporates input from the Economist Intelligence Unit (EIU) country reports and captures uncertainty related to political and economic events in 143 countries. The effect of policy uncertainty on deal volume and performance is captured through multiple panel regressions and event study methodology. Deal volume is measured as the number and value of completed cross-border M&A and deal performance is measured on the basis of cumulative average abnormal returns of those deals per quarter and per country or country-pair. The research contains 15,910 cross-border M&A deals completed in January 2000 to December 2019. The transaction data is retrieved from the Thomson Financials database and the stock data is obtained from the Datastream database. The control variables are collected from Thomson Financials, the World Bank, ICRG reports.

This thesis aims to fill the gap in the literature in several aspects. Firstly, it analyses policy uncertainty implications by using the relatively new World Uncertainty Index. Secondly, this thesis covers cross-border M&A deals from all continents, whereas previous literature mainly focused on US deals. Thirdly, the research contains country-level analysis and country-pair-level analysis to measure the influence of uncertainty in the acquirer country as well as the target country. Fourth, the study encompasses more recent deals, up until December 2019, capturing policy uncertainty from more recent political and economic events.

The findings present significant support for the diversification theory that states that acquiring firms try to evade domestic policy uncertainty by acquiring foreign targets (Cao et al., 2015). The value of inbound cross-border M&A does significantly decrease if policy uncertainty is high in the target country, thereby supporting the deterrence hypothesis (Cao et al., 2015; Chen, Cihan, & Jens, 2018; Gulen & Ion, 2016). The country-pair analysis finds a significant decreasing effect by policy uncertainty in the acquirer country, in accordance with

findings of Chen et al. (2018), but in contrast with the single country analysis. This effect appears to be highly influenced by deals completed by firms originating from the US or UK and explains the contradicting results. Additionally, high geographical proximity and cultural similarity seem to support cross-border M&A volume and performance.

The paper is structured as follows. Firstly, the literature review provides an overview of available literature on the topics related to cross-border M&A volume and performance, policy uncertainty, the relation of uncertainty and corporate investment. The hypotheses that are tested in this thesis will also be formulated in this section. Secondly, the data and methodology section will explain the used data and research techniques for the analyses. Thirdly, the results of the conducted tests and corresponding robustness checks are discussed. Lastly, the conclusion states the answers to the research question, suggests recommendations for both investors and policymakers and discusses opportunities for further research on this topic.



## II. Literature review

In this chapter, the relevant academic literature is briefly summarized. The first subchapter focuses on the extensive amount of research on cross-border M&A volume and performance, the dependent variables of this study, and will cover both motives and influences on this matter. The second subchapter puts emphasis on academic literature about uncertainty, the independent variable, and lays out its consequences and how it is previously measured by other scholars. The third subchapter will attend the relationship of both cross-border M&A and uncertainty. Lastly, the literature review is finalized with a set of hypotheses that will be addressed in this research and the corresponding visualization in the conceptual framework.

### 2.1 CROSS-BORDER M&A VOLUME AND PERFORMANCE

M&A transaction considerations are among the most impactful decisions in the corporate world. The transactions account for a considerable amount of expansions, restructuring and corporate investments and demand great financial contributions and informational input (Eckbo, 2009). According to Brouthers, Van Hastenburg, & Van Den Ven (1998), merger and acquisition motives can be classified in three subgroups: (1) enhanced firm performance (Brockman, Rui, & Zou, 2013; Hoberg & Phillips, 2010; Walter & Barney, 1990), like increased profits, spreading risk (Garfinkel & Hankins, 2011; Mukherjee, Kiymaz, & Kent Baker, 2004) reducing costs (Gaughan, 2002); (2) managers' personal benefit, such as empire building, increased remuneration for an increase in sales or profitability, the prestige of successfully managing and completing the deal itself (El-Khatib, Fogel, & Jandik, 2015; Jenter & Lewellen, 2015; Trautwein, 1990; Yim, 2013) and (3) strategic motives, like synergy, increased market power, entering new markets (Gaughan, 2002), acquire production factors (Wang & Boateng, 2007) eliminate competition (Vermeulen & Barkema, 2001), create economies of scale, obtain access to specific raw materials, and exploiting beneficial valuation of the acquirer or target shares (Dong et al., 2006; Lin & Chou, 2016; Rhodes-kropf & Viswanathan, 2016; Shleifer & Vishny, 1992; Walter & Barney, 1990). Engaging in mergers and acquisitions can be a useful strategic tool to ensure future success in the constantly changing business landscape (Calipha, Tarba, & Brock, 2010).

Erel, Liao, & Weisbach (2012) point out that merger motives of domestic and cross-border deals show great similarity, but in order to analyze merger activity it is important to underline the distinction. They stress that country-based differences between firms, like

cultural, institutional and geographic factors, play a major part in merger considerations in cross-border M&A. Foreign acquisitions are popular due to relatively high speed, ease and success rate compared to the tough process of starting a new business from scratch (Gaughan, 2002; Mclaughlin & Mehran, 1995) and significantly reduces the chance of failure due to the evasion of previously mentioned cultural and institutional thresholds (Barkema, Bell, & Pennings, 1996). Other factors can be unfavorable institutional factors within the acquiring country that form a driving force behind outbound acquisitions and favorable institutional circumstances in the target country that act as a pulling force for inbound acquisitions. Mitchell & Mulherin (1996) find that M&A activity is triggered by favorable industry shocks as a result of deregulation. This is underwritten by Harford (1999), who indicates that a reduction in financial constraints for firms leads to large cash reserves and results in merger waves. Additionally, tax optimization through international structures induces cross-border M&A transactions (Morck & Yeung, 1990). Rossi & Volpin (2004) suggest that regulation and law influences the decision to engage in foreign acquisitions. They find that cross-border M&A activity intensifies if investor protection in the target country is relatively low compared to the acquirer country. Parallely, higher reporting standards and shareholder protection in the acquirer country increase transaction values of cross-border deals relative to matching domestic acquisitions (Bris & Cabolis, 2008; Nguyen & Phan, 2017) and give incentive to pay with stock instead of cash amounts (Rossi & Volpin, 2004). Ahern, Daminelli, & Fracassi (2012) claim that cultural factors like individualism, hierarchy and trust determine cross-border merger volume fluctuations. They find that the number of foreign acquisitions is lower when two countries are relatively culturally different. Lastly, Cao, Li & Liu (2015) simulate political uncertainty by using national elections and demonstrate that in pre-election years the number of inbound acquisitions decreases, because firms try to evade local uncertainty. The number of domestic firms' outbound acquisitions increases because firms seek diversification and try to escape local uncertainty.

Researchers have extensively scrutinized and debated success of mergers and acquisitions and have come up with varying results on how both domestic and cross-border M&A's perform (Trichterborn, Knyphausen-Aufseß, & Schweizer (2016)) and theories on what influences M&A performance (Chalençon, Colovic, Lamotte, & Mayerhofer (2017)). Assessing events as such is challenging because of the uniqueness of deals (Lubatkin, 1987). Still, most studies approach this topic with mass data studies instead of tracing the endogenous deal characteristics. Hassan, Ghauri, & Mayerhofer (2018) state that it is important to consider

acquisition motives that are defined by the acquiring firm when valuing M&A performance. Even though empirical research is extensive, the discussion about an optimal theory on M&A performance measurement has been inconclusive (Chan & Cheung, 2016). Das & Kapil (2012) describe two broadly used approaches, namely outcome studies and event studies. Outcome studies compare pre- and post-acquisition stock prices. The stock price development of the merging companies is then compared to similar firms or the general stock performance in the industry (Tichy, 2001). This method is mostly used by industrial organization economists, whereas event studies are commonly used in finance literature. The latter also investigates stock prices, but rather focuses on the stock market reactions at the time of the announcement date. The assumption that stock markets are efficient enables the researcher to measure the economic impact of an M&A transaction by the change in a target or acquiring company's share price.

Moeller, Schlingemann, & Stulz (2004) find that target firms mostly gain from engaging in mergers and acquisitions and acquiring firms yield negative or near zero returns on average. This is dependent on the method of payment, as acquiring firms that pay in stock signal that their shares are overpriced (Myers & Majluf, 1984; Travlos, 1987), the resulting negative market reaction is then inevitable (Dong, Hirschleifer, Richardson, & Teoh, 2006). An explanation for the lack of value creation for the acquiring company might be due to a consensus that firms only engage in mergers and acquisitions if the internal growth opportunities are exhausted (Jovanovic & Braguinsky, 2002) or as a result of empire building (Jensen, 1986). Alternatively, the hubris theory hypothesizes that acquirers overpay when acquiring target firms, because management overestimates its capacity to optimize operations and achieve fruitful economic performance (Roll, 1986).

Returns in cross-border acquisitions are less pronounced than their domestic equivalents (Moeller et al., 2004). Berger & Ofek (1995) believe this is due to the diversifying aspect of cross-border transactions, because investors do generally not seem to reward diversifying deals with positive abnormal returns. Cross-border deal returns are also affected by country-level characteristics such as geographical proximity (Xie, Reddy, & Liang, 2017) and historical ties (Chowdhury & Maung, 2018), where both papers find that these phenomena enhance acquisitiveness and deal performance. Morosini, Shane, & Singh (1998) were the first to investigate cultural distance and measure its impact on cross-border M&A performance. They found that cultural distance increased cross-border M&A performance because it acted as a tool to directly acquire routines and goods that were embedded in the national culture of the host country. On the other hand, (Ahern et al., 2012) find lower announcement returns for

countries with greater cultural distance, specifically with large discrepancies in social norms concerning trust and individualism. Corporate governance differences in acquirer and target countries also impact takeover returns. The ‘positive spillover by law’ theory, which declares that strong corporate governance regulation in the acquirer country positively influences takeover returns, because the synergy is partly due to the increased governance of the targets’ assets (Bris, Brisley, & Cabolis, 2008; Martynova & Renneboog, 2008).

## 2.2 POLICY UNCERTAINTY

Generally, uncertainty is expressed in two forms. It reflects the range of possible outcomes of future development and it results from the inability to form economic projections based on rational probability distributions (Akerlof & Shiller, 2010). Uncertainty about policy, therefore, creates sentiment among economic agents, who base their behavior and views of future economic developments on rational arguments and facts, but also on irrational optimistic or pessimistic mood (Nowzohour & Stracca, 2017).

It is challenging to specifically measure policy uncertainty, since general uncertainty among firms stems from many different sources, e.g. uncertainty as a result of uncontrollable events like natural disasters, financial crises, pandemics, wars and oil crises, all having an effect on policies (Nguyen & Phan, 2017). In the past, several measures have been used as proxies for policy uncertainty. One approach studies volatility of key economic and financial variables like the VIX index (Bloom, 2009; Leahy & Whited, 1996; Ludvigson, Ma, & Ng, 2018), but these measures have limited power to explain uncertainty among firms in sectors with high governmental exposure (Baker, Bloom, & Davis, 2016). An alternative method is using political elections as a proxy for political uncertainty (Boutchkova, Doshi, Durnev, & Molchanov, 2012; Cao, Li, & Liu 2015; Durnev, 2012; Julio & Yook, 2012). The shortfalls of this measure is that policy uncertainty is not measured in periods between election years, while policy is very much executed in these years and thus affects economic activity. Gulen & Ion (2016) have analyzed capital expenditures in the US during these inter-election periods, but did not find a significant decrease. In order to capture policy uncertainty between elections, Baker et al. (2016) computed the Economic and Policy Uncertainty (EPU) index, which reflects a continuous measure for policy uncertainty in separate countries independent of election years, capturing both short-term and long-term uncertainty. According to the EPU index, policy uncertainty has historically proven to be especially high in times of financial crises, political crises, health crisis, and the refugee crisis (Baker et al. 2016; Breinlich et al., 2017). The index

is based on news coverage, tax code provisions and disagreement between economic forecasters in the US and solely newspaper coverage in other countries. The EPU index is, however, composed for mostly advanced economies and therefore suboptimal in cross-country comparisons.

More appropriate is the World Uncertainty Index (WUI) index, designed by Ahir, Bloom, & Furceri (2019), which covers 143 countries including both advanced economies as well as emerging market economies. The index shows high peaks of uncertainty during events like presidential elections, 9/11, SARS outbreak, Iraq War and Brexit<sup>2</sup>. The WUI is compiled on the basis of country reports issued by the Economist Intelligence Unit (EIU), a source of specific topic coverage, namely economic and political developments. The index is different from the EPU index in two ways. Firstly, the WUI is compiled on the basis of country reports issued by one publisher instead of many different newspapers. The use of one single publisher instead of a variety of newspapers causes the data to be consistent and objective across different countries, as the editing process is similar for all country reports. This facilitates cross-country analysis. Secondly, the EIU country reports are of very high quality, on average better than national newspapers in countries of interest.

### 2.3 UNCERTAINTY AND CORPORATE INVESTMENT

In 2019, the IMF published the World Economic Outlook, that discovered a decline in industrial production due to high policy uncertainty and a decrease in expected global demand (IMF, 2019). The IMF stresses that policy uncertainties increase downside risk to global investment and growth, and subsequently reduce business investment, distort supply chains and hampers productivity growth. Multiple studies describe the effect of uncertainty on the capital markets and corporate investment decisions and find varying results. Desai, Foley, & Hines (2004) find that local uncertainty affects capital structures, by inducing affiliates of multinationals to seek less external debt but rather use the internally available capital. Parallely, policy uncertainty reduces irreversible capital expenditures (Gulen and Ion, 2015; Jens (2017)), increases R&D spending by firms to strengthen their market position (Atannassov, Julio, & Leng (2015)), and triggers stock price volatility but on average leads market value destruction (Pastor & Veronesi, 2010).

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<sup>2</sup> World Uncertainty Index overview is included in Appendix B

The potential success of M&A transactions rely largely on the overall state of the economy. The diverse prospects of acquirer and target about declining economic growth cause M&A deals to be delayed, cancelled or even averted (Franklin, 2020). The overall economy is heavily influenced by monetary, political and regulatory measures (Galí & Gambetti, 2015; Rostagno, Altavilla, Carboni, Lemke, Motto, Saint Guilhem, & Yiangou, 2019). Both investors and managers consider the political and regulatory environment as key systematic risks for their operations, revenue streams and M&A success (Altman, 2015). Merger waves are fueled by beneficial regulatory changes (Martynova & Renneboog, 2008), but contractionary monetary policy refrains companies to engage in mergers and acquisitions (Adra, Barbopoulos, & Saunders, 2020). Also uncertainty about future policy is negatively related to firm acquisitiveness (Bhagwat, Dam, & Harford, 2016; Nguyen & Phan, 2017). This highlights the importance of corporate perceptions of present policy and expectations of future policy.

One important difference between domestic and cross-border transactions, is that cross-border acquisitions are subject to policy uncertainty in the acquirer country as well as the target country. Cross-border deals are therefore useful for investigating cross-country differences respective of the level policy uncertainty. Also, engaging in cross-border M&A is by itself perceived as more challenging, due to language barriers, distinction of legislation, political environment, and cultural habits. Moreover, reversal of cross-border investments is costlier than domestic investments (Shleifer & Vishny (1992)), resulting in firms choosing to execute an exporting strategy over engaging in foreign direct investment in times of relatively strong policy uncertainty (Rajan & Marwah, 1998). These findings imply that cost irreversibility does play a role in the decision to engage in cross-border M&A. The higher implied risk magnifies the cost of policy uncertainty. The ‘real option’ theory or ‘delaying’ hypothesis argues that higher policy uncertainty increases the value of the delay option (Bernanke, 1983; Cao et al., 2015). This hypothesis states that outbound acquisitions from the acquiring country will be delayed in times of policy uncertainty, e.g. in the year before elections. Despite the increased risk, cross-border M&A can also serve as a strategy to manage and minimize exposure to domestic policy uncertainty (Davis & Cobb, 2010). By not placing all bets on one market, firms hedge for domestic policy uncertainty (Coles, Daniel, & Naveen, 2006). Companies that expect favorable domestic policy adjustments will focus on completing domestic M&A deals, whereas they will focus on foreign opportunities if they expect unfavorable domestic policy adjustments (Cao et al., 2019). Therefore, cross-border M&A appears to be a commonly used tool to ensure geographic diversification.

## 2.4 HYPOTHESES DEVELOPMENT

The research question is divided into three components in order to accurately describe the impact of policy uncertainty on volume and performance of cross-border deals. The components will cover effects of (1) policy uncertainty in the acquirer country, (2) policy uncertainty in the target country, (3) interaction of policy uncertainty per country-pair.

### **Acquirer country policy uncertainty and outbound cross-border acquisitions**

Undertaking M&A transactions requires large and irreversible investments for businesses. The domestic policy environment poses uncertainty on future cash flow generation, cost of financing and regulatory factors. It is therefore expected that policy uncertainty alters firm behavior in terms of M&A volume. Cao et al., (2019) describe the “hedging hypothesis” where firms seek cross-border M&A opportunities to spread their income sources, subsequently reducing the risk of the company’s operations and escape high policy uncertainty in their domestic market (Brewer, 1981; Fatemi, 1984; Garfinkel & Hankins, 2011; Severn, 1974). They find that firms are willing to pay more for these diversifying opportunities, driving up deal volume, in times of high policy uncertainty. Policy uncertainty in the domestic country reduces the value that is potentially created for the shareholder. A stable foreign policy environment should therefore be perceived as favorable and cause a positive market reaction upon the announcement (Cao et al., 2015). Gulen & Ion, (2016) and Nguyen & Phan (2017) find that firms are more strict in selecting acquisition opportunities in times of high domestic policy uncertainty as they want to focus solely on profitable core deals. This signals less empire building, but more strategic and thoroughly considered value adding acquisitions, which will benefit the acquirer’s stock performance. Considering the above explained features, the following hypotheses are formulated:

***Hypothesis 1:*** *The level of policy uncertainty in the acquirer country is associated with increasing outbound cross-border M&A volume and performance.*

M&A volume and performance will be defined by the number of outbound cross-border M&A transactions, deal value of outbound cross-border M&A transactions and cumulative average abnormal returns in the acquiring country surrounding acquisition announcements.

### **Target country policy uncertainty and foreign firm's inbound acquisitions**

Cross-border M&A transactions incorporate more hurdles than domestic acquisitions. In order to successfully acquire foreign targets, a firm needs to overcome legislative, political, linguistic and cultural hurdles. After the cross-border acquisitions, foreign investors are not able to control governmental policy alterations that influence the target company's business activities. Cao et al. (2015) describe that the number of inbound acquisitions is reduced if policy uncertainty in the target's country is high as foreign firms try to evade policy uncertainty. Nguyen & Phan (2017) find that policy uncertainty in the target country motivates acquirers to pay lower bid premiums, since the realization of optimistic outlooks are not guaranteed. Bonaime et al. (2018) find that CAAR is lower in times of high policy uncertainty in target countries, because investors are risk averse. This is underwritten by Ellis, Moeller, Schlingemann & Stulz (2011) who find that acquiring a firm in a relatively unstable country results in a negative stock market reaction for the acquiring company. The risk and impact of policy uncertainty is perceived greatest for targets with large sunk costs, strictly regulated business activities, and large economies of scale (Henisz & Zelner, 1999). It is expected that high policy uncertainty in the target country negatively influences market perception of the deal success factor. Therefore the following hypothesis is formulated:

***Hypothesis 2:*** *The level of policy uncertainty in the target country is associated with decreasing inbound M&A volume and performance.*

M&A volume and performance will be defined by the number of inbound cross-border M&A transactions, deal value of inbound cross-border M&A transactions and cumulative average abnormal returns in the acquiring country surrounding acquisition announcements.



### **Policy uncertainty per country-pair**

It is important to shed light on the relative policy uncertainty of target and acquirer countries. Diversification strategy is only effective if the acquiring company is situated in a relatively unstable country and is seeking investment opportunities in a relative stable country. Cao et al. (2015) have conducted a research with country pair-year observations and tested whether the effect of uncertainty was different if both countries were in an election year. Acquiring firms in a country seem to engage in cross-border M&A before an election to hedge for policy uncertainty, but these firms will avoid target countries with forthcoming elections. For this thesis, the WUI for both acquirer and target country is derived, with high WUI reflecting high policy uncertainty. Also, the interaction effect of policy uncertainty level in both countries is measured. Similar to Cao et al. (2015) it is expected that the volume and performance between two countries is affected by the policy uncertainty level in both. It is assumed that policy uncertainty in the acquirer country increases the volume and performance of cross-border deals for the country-pair, as acquiring firms can take a hedge position in the target country. Parallely, high policy uncertainty in the target country decreases the volume and performance of cross-border deals per country-pair, supporting the deterrence hypothesis and resulting in a negative interaction effect of uncertainty in both countries. This results in the following hypotheses:

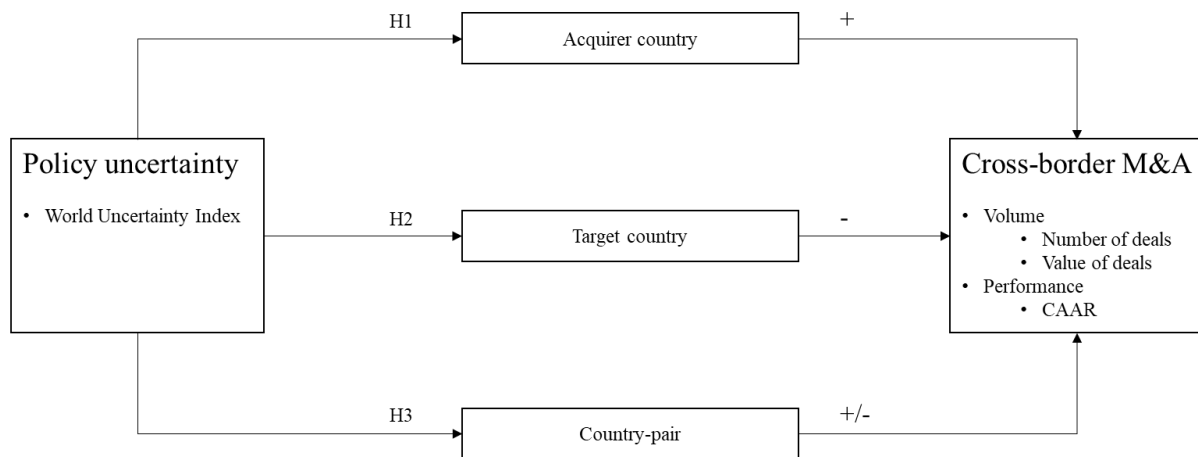
***Hypothesis 3:*** *High policy uncertainty in the acquirer country and low policy uncertainty in the target country is associated with increased cross-border M&A volume and performance per country-pair.*

M&A volume and performance will be defined by the number of cross-border M&A transactions per country-pair, deal value of cross-border M&A transactions per country-pair and cumulative average abnormal returns of deals per country-pair upon the acquisition announcement.

## 2.5 CONCEPTUAL FRAMEWORK

The previously described hypotheses can be displayed in a conceptual framework, which provides the opportunity to visualize the effects of policy uncertainty on the cross-border M&A volume and performance through the channels explored in this research.

**Figure 1:** Conceptual framework



This figure shows the first relationship between policy uncertainty and cross-border M&A in the acquirer country (hypothesis 1). The relationship is expected to be positive, implying that high policy uncertainty stimulates firms to engage in cross-border M&A, leading to increased cross-border M&A volume. Investors perceive these deals as positive, thereby driving up stock prices, expressed in increased CAARs in the acquiring country. The second relationship displayed is between policy uncertainty and cross-border M&A in the target country (hypothesis 2). The relationship is expected to be negative, implying that high policy uncertainty in the target country does prevent foreign firms from conducting acquisitions there, leading to decreased cross-border M&A volume. Investors are expected to perceive deals in uncertain target countries as value decreasing, leading to lower cumulative average abnormal returns in the acquirer country. The third and last relationship displayed is between policy uncertainty and cross-border M&A per country-pair (hypothesis 3). It is expected that if uncertainty is high in the acquirer country and low in the target country, that both cross-border M&A volume and performance increase.

### III. Data & Methodology

#### 3.1 DATA

##### *Data collection*

The M&A transaction data is obtained from the Thomson Financials database. This database incorporates an extensive amount of information regarding M&A transactions from all over the globe. Since the sample of interest does not have a specific geographical focus, this database appears to be the most suitable database for this research. The overall sample consists of M&A transactions that were completed within the research period from January 1<sup>st</sup>, 2000 (Q1) to December 31<sup>st</sup>, 2019 (Q3) (criterion 1). Furthermore, the data is subject to the following specifications in order to be included in the sample: (2) the deal is an M&A transaction, therefore other deal types will be excluded from the sample; (3) the deal is completed; (4) both acquirer and target originate from one of the countries that are featured in the WUI; (5) the acquiring company is publicly listed; (6) the deal represents a value of at least EUR 1 million; (7) the deal reflects a change of control, implying that the acquiring company owned less than 50% of outstanding stocks before deal completion and owns more than 50% after deal completion; (8) the target and acquiring company originate from different countries. The resulting sample consists of 19,002 M&A transactions.

The deal information from Thomson Financials database is accompanied with deal and company specific information that is consolidated for the dependent variables that describe the deal number and deal value in country  $j$  in quarter  $t$ . The event study method that is applied to test for deal performance requires input from both stock prices of acquiring companies, as well as country market indices for all 41 countries to benchmark the individual stock performance in its respective country. This input is generated from the Datastream financial database.

The control variables are created through collection of information from several sources. The World Bank provided the data for GDP per Capita, GDP Growth, Trade-to-GDP. Common legal system data is acquired from the research of La Porta et al. (1998). Furthermore, Investment Profile and Institutional Quality are based on the International Country Risk Guide (ICRG), which is a widely used report for country risk analysis (Bekaert, Harvey, & Lundblad, 2005). For the country-pair study additional control variables are added to the equation. Similar Language and Similar Religion are dummy variables generated based on country-level information from Stulz & Williamson (2003). Similar Region is a dummy variable created on the basis of regional subdivisions designed by Ahir et al. (2018).

Due to limited availability of stock and economic information, deal characteristics, and control variable input the preliminary M&A deal sample is restricted to 15,910 transactions representing a total value of 6.1 trillion USD. The deal selection process is visualized in Table 1.

**Table 1:** Sample selection

Depiction of the deal sample selection process.

No.	Identifier	Description	Deal Count
1	Time Period	The announcement date is between 1/1/2000 and 12/31/2019	n/a
2	Deal Type	M&A transaction	257,330
3	Deal Status	Completed	202,893
4	Nation	Both acquirer and target originate from one of the selected nations	153,733
5	Acquirer Status	Publicly listed	83,392
6	Deal Value	The transaction represents a value of at least 1 \$million	72,718
7	Power	Acquirer owns 50% or less of outstanding shares pre-transaction and more than 50% post-transaction	67,111
8	Cross-Border	Acquirer and target originate from different countries	19,002
9	Data Availability	Selection after elimination of deals that are subject to stock data	15,910

The deal data is demounted in table 2 to provide further insight into specific characteristics of the sample. The deals are separated on the basis of geographical allocation and income level of acquirer and target nations. For geographical allocation it stands out that deals from the Western Hemisphere, Europe, Asia and the Pacific are well represented in the deal sample. In the Western Hemisphere, Asia and the Pacific deals are locally oriented, with a relatively small portion of cross-border deals compared to Europe where acquiring firms appear to be much more oriented on foreign targets with almost half of its deals consisting of cross-border acquisitions. The largest deals are conducted in the Western Hemisphere, followed by respectively Europe and Asia and the Pacific. However, Europe conducts the largest cross-border acquisitions.

Furthermore, Table 2 shows that the majority of the deals originate from advanced economies, a small portion of deals are conducted in emerging markets and the amount of deals from low-income countries is negligible. Firms from advanced economies act relatively much as an acquirer compared to firms from emerging economies. Appendix C explains total and cross-border deal number and value distributions for all individual countries. An overview of

number of acquisitions between acquiring and target countries included in the research is displayed in Appendix D.

**Table 2:** Sample overview

Consolidated presentation of deal volume per geographical region and IMF income division as determined by Ahir, Bloom, & Furceri (2019) . Full country overview and description can be found in Appendix C.

Group	All deals by acquirer nation		Cross-border deals by acquirer nation		All deals by target nation		Cross-border deals by target nation	
	Number	Value (\$ Million)	Number	Value (\$ Million)	Number	Value (\$ Million)	Number	Value (\$ Million)
Total	67,111	20,919,001	15,910	6,098,319	67,111	20,919,001	15,910	6,098,319
<b>Geographical region</b>								
Africa	519	71,677	134	32,066	565	86,522	170	41,463
Asia and the Pacific	14,750	1,935,247	2,292	589,115	14,087	1,669,068	1,668	328,772
Europe	17,601	5,687,744	7,200	3,527,583	17,539	5,035,259	7,188	2,888,427
Middle East and Central Asia	53	3,086	4	467	90	27,013	42	24,431
Western Hemisphere	34,188	13,221,247	6,280	1,949,089	34,830	14,101,139	6,842	2,815,227
<b>IMF income</b>								
Advanced economies	62,768	20,065,524	15,063	5,886,286	61,720	19,846,253	14,086	5,692,452
Emerging economies	4,332	851,499	845	211,268	5,364	1,056,873	1,809	393,095
Low-income economies	11	1,978	2	765	27	15,875	15	12,772

### *Independent variable*

The World Uncertainty Index (WUI) is a dataset developed by Ahir, Bloom, & Furceri (2019), a county-level index that represents the level of uncertainty that firms deal with in terms of future governmental policy. The rationale is that policy uncertainty increases stock price volatility and hampers investment in policy-sensitive areas. The dataset consists of quarterly data, which appears to be useful and in line with previous research that uses quarterly computed Economic Policy Uncertainty data (Gulen & Ion, 2016; Nguyen & Phan, 2017). The index describes the economic and political state in a country. It is preferred to look at country-level information, rather than firm-level information in order to capture the economic and political conditions in the right fashion. The heterogenetic character of all countries make it hardly possible to study this phenomenon on a firm-level (Martynova & Renneboog, 2008). The WUI will be determined for both the acquiring country as well as the target country. This provides the opportunity to test for the effect on outbound acquisitions by acquirer countries and inbound acquisitions by the target country, as well as to create an interaction effect of both WUI levels.

Data on the World Uncertainty Index (WUI) is obtained from the policy uncertainty website<sup>3</sup>. The website hosts multiple databases that capture policy uncertainty. It is initiated by Scott Baker, Nick Bloom and Steven Davis, a collective of professors who have extensively researched economic policy uncertainty implications. The WUI is compiled of country level data and is constructed on the basis of a text-mining approach in country reports issued by the Economist Intelligence Unit (EIU), a source specified in analyzing and reporting economic and political development. The index represents the frequencies of the word “uncertainty” – including variants like “uncertain”, and “uncertainties” – and is adjusted for the total word count of the country report for comparability purposes. The WUI is suitable due to the following characteristics: (1) the index covers 143 countries including both advanced economies as well as emerging market economies, which provides a chance to globally track the effects of policy uncertainty; (2) it describes policy uncertainty from the first quarter of 1996 onward for all countries and additionally from the first quarter of 1955 for 34 large economies, well enough to serve the timespan of interest in this thesis – 2000 to 2020; (3) the WUI is compiled on the basis of country reports issued by one publisher - the EIU – with a singular editing process for all reports, ensuring data consistency and objectivity across different countries, making it suitable for cross-country analysis; (4) the EIU country reports that provide input for the index give a good indication of policy sentiment and serve as an adequate instrument to monitor policy uncertainty, as the reports are of very high quality, on average better than national newspapers in respective countries.

Cross-country-analyses are susceptible to omitted variable bias as it is difficult to capture inter-country differences. To overcome this problem, it is important to consider historical factors that have a direct result on current differences in the dependent variable (Wooldridge, 2009). In this study, the three-quarter weighted moving average of the WUI is created for all included countries and controls for the lagging effect of previous policy uncertainty on deal execution and investor perception. The importance of accounting for such effects lies in the fact that policy uncertainty during the run up period towards the close is essential in the deal process. The decision to engage in mergers and acquisitions is not solely influenced by policy uncertainty at the time of the announcement and might therefore be susceptible to omitted variable bias. The weighted moving average is calculated by the following formula:  $2020Q4 = ((2020Q4*0.6) + (2020Q3*0.3) + (2020Q2*0.1))/3$ . The descriptive statistics for every individual country can be found in Appendix E.

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<sup>3</sup> <https://www.policyuncertainty.com/index.html>

### *Control variables*

The model accounts for control variables in order to capture effects that are country-specific. Time and country fixed effects will be included in the research through quarter and country considerations. The country-specific effects include natural logarithms of economic development factors like GDP growth, GDP per inhabitant and Trade-to-GDP to measure the degree of cross-border focus of the respective country. Common legal system is a dummy variable that controls for minority shareholder protection (La Porta et al., 1998). Two more variables control for the quality of the business environment. These are the exogenous variables institutional quality and investment profile. Commonly to Erel, Liao and Weisbach (2012), the institutional quality variable is constructed by summing up the law and order index, the bureaucratic quality index and the corruption index for every country. The Investment Profile for a specific country is calculated by averaging three indices, namely the repatriation of profits, payment delays and the risk of expropriation. Similar Language, Similar Religion (Stulz & Williamson, 2003), and Similar Region (Ahir et al., 2018) are dummy variables that are created to control for cultural and geographical proximity between acquirer and target countries. Also, the natural logarithm of the aggregate number and value of deals, both domestic and cross-border deals, is utilized as a control variable to check for larger M&A trends in the country of interest. The interaction effect of WUI for acquiring countries and target countries will be added to the equation as a control variable. Lastly, for the country-pair analysis, the difference of alle previously mentioned control variables will be included to control for effects that are the result of large variable dissimilarities.

### *Descriptive statistics*

The dependent variables are described in table 3. Panel A presents the descriptive statistics of the single country dependent variables. For every country, only quarters with at least one deal count as an observation. The study incorporates fewer observations for the acquirer countries relative to the target countries. This implies that on average, within a specific acquirer country, the same number of deals is executed in a limited number of quarters, thus more deals per quarter, compared to the target country. This is in line with the mean number of deals being slightly higher. The average deal value is also higher for the acquirer country. Both deal volume metrics suggest that deals are more clustered in the acquirer countries compared to the target counterparts. Policy uncertainty can be an explanatory factor for deals to be clustered across time. It simultaneously affects all dealmakers and stimulates cross-border deals to take place

in specific time periods, while obstructing cross-border deals in other time periods. The deal performance dependent variable is expressed as cumulative average abnormal returns (CAARs) and winsorized at the 5% level to prevent that the maximum and minimum values are further than three standard deviations from the mean CAAR. In panel A, it is visible that deal performance per quarter is roughly similar when deal returns are clustered per acquirer or target country. The standard deviation and corresponding maximum and minimum values indicate that stock volatility is higher for the target countries.

Panel B presents the country-pair deal volume variables. The country-pair variables consist of more observations than the amount of observations for singular country data, leading to less deals and lower deal value per observation. This is in line with the mean for the number of deals being considerably lower, namely 1.9821 deals per quarter  $t$  for every country-pair. The mean deal value per quarter  $t$  for every country-pair equals 759 million US dollars. The mean CAAR is positive and equals 1.29% so in general investors have an appetite for securities of firms that engage in cross-border M&A. The data is positively skewed, meaning that the positive tail is relatively large compared to the negative tail. This is in line with the min and max values, as they show relatively high positive outliers compared to relatively small negative outliers. The kurtosis is higher than +1 and confirms that the CAAR data represents a leptokurtic distribution.



**Table 3:** Descriptive statistics - Dependent variables

The Deal Number variables represent the number of cross-border deals conducted by country  $j$  in quarter  $t$ . The Deal Value variables represent the total cross-border deal value of country  $j$  in quarter  $t$ . The CAAR variables depict cumulative average abnormal returns per quarter and country and are presented in percentages. Country-pair analysis describes the deal volume and deal performance in quarter  $t$  between acquirer country  $j$  and target country  $k$ .

Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
<b>Panel A:</b> Country analysis							
Deal Number - Acquirer	1,978	8.0435	12.0644	1.0000	80.0000	2.7238	10.7274
Deal Number - Target	2,441	6.5178	11.3032	1.0000	97.0000	4.2961	24.4266
Deal Value - Acquirer (Million \$)	1,978	3.082	7.592	1.0000	107,592	5.9780	54.4190
Deal Value - Target (Million \$)	2,441	2,497	8,158	1.0130	144,251	7.8203	87.1448
CAARs (-3, 3) - Acquirer (%)	1,978	1.3799	3.5863	-5.0785	9.3771	0.3575	2.8122
CAARs (-3, 3) - Target (%)	2,441	1.3167	4.3972	-6.7195	11.3888	0.4069	3.0322
<b>Panel B:</b> Country-pair analysis							
Deal Number - pair	8,027	1.9821	2.7760	1.0000	33.0000	5.3452	38.4091
Deal Value - pair (Million \$)	8,027	759	3,166	1.0000	101,570	13.5972	280.2565
CAARs (-3, 3) pair (%)	8,027	1.2917	5.0412	-7.0724	12.0963	0.3923	2.6983

The descriptive statistics for the independent and control variables are displayed in table 4. Panel A lists the descriptive statistics for the independent variables. The uncertainty level for the acquirer country ( $WUI_a$ ) and uncertainty level for the target country ( $WUI_t$ ) are winsorized at the 5% level, so that extreme values are not further than three standard deviations from the mean value. The policy uncertainty in the acquirer country and target country appear to be fairly equal. The mean  $WUI_a$  is marginally lower compared to the  $WUI_t$ , 0.0630 versus 0.0656. At first glance, this contradicts the hedging or diversification hypothesis, as this theory predicts that firms seek investing opportunities abroad to escape local uncertainty. Both variables are positively skewed, implying that uncertain countries deviate more from the mean compared to certain countries, or the center of gravity of the data is relatively uncertain. This is in line with the min-max distribution of both variables, with the max for both variables is around above 1.8 and the min value being zero. The value of the interaction variable  $WUI_{at}$  is a result of the previously described descriptive statistics of the both subcomponents ( $WUI_{at} = WUI_a * WUI_t$ ).

The country-specific control variables are listed in panel B. The dummy variable Common Law dummy describes that 8% of the country-pair deal sample both execute English common law. The difference in natural logarithm of GDP per capita is marginally positive and normally distributed. This means that on average the GDP per capita in the acquirer country is higher compared to the target country. The growth rates in acquirer country  $j$  and target country  $k$  are practically similar. The difference in investment profile and institutional quality are both

positive with respectively mean differences of 0.2520 and 0.1969. These statistics indicate that the business and institutional environment is on average better in the acquiring country than in the target country. The difference in Trade-to-GDP, the proxy for openness, is the most distinct of all country-pair control variables. The mean difference is 1.1364, with relatively high kurtosis and normally distributed data. Similar Language and Similar Religion show fairly similar results. In approximately 42% of all deals the acquirer country and target country share the same language, 46% originate from the same region, and 45% share the same religion. This underlines the fact that the preference for cultural similarity and geographical proximity is substantial, however not determining. Additionally, in 62% of all deals the acquirer country and target country share the same legal system, confirming the importance of legislative similarity (La Porta et al., 1998).

**Table 4:** Descriptive statistics - Independent and control variables

Descriptive statistics of all independent and control variables in the country-pair analysis. The country-specific variables depict the index difference between acquirer country  $j$  and target country  $k$ .

Variable		Obs	Mean	Std. Dev.	Min	Max
<b>Panel A:</b> Independent variables						
WUIa	World Uncertainty Index Acquirer	15,910	0.0630	0.0426	0.0051	0.1584
WUIt	World Uncertainty Index Target	15,910	0.0656	0.0438	0.0048	0.1620
WUIat	Interaction WUI Acquirer and Target	15,910	0.0045	0.0046	0.0002	0.0164
<b>Panel B:</b> Country-specific control variables						
CL	English Common Law $j-k$	15,910	0.0811	0.6104	-1.0000	1.0000
GDPc	GDP per Capita $j-k$	15,910	0.1275	0.6490	-1.7141	2.3679
GDPg	GDP Growth $j-k$	15,910	0.0105	1.6739	-6.0240	6.0354
IP	Investment Profile $j-k$	13,572	0.2520	1.5437	-3.5000	4.4583
IQ	Institutional Quality $j-k$	13,572	0.1969	0.8223	-2.0000	2.8333
SL	Similar Language	15,910	0.4213	0.4938	0.0000	1.0000
SRG	Similar Region	15,910	0.4569	0.4982	0.0000	1.0000
SRL	Similar Religion	15,910	0.4456	0.4970	0.0000	1.0000
TTG	Trade-to-GDP $j-k$	15,837	1.1364	41.8225	-107.1697	103.4197

## 3.2 METHODOLOGY

This research will execute multiple OLS regressions to determine the effect of independent variables on dependent variables. The regressions support previous research of Cao et al. (2015). Firstly, the methodology regarding the effect of policy uncertainty on deal volume is explained for both acquirer and target nations. Secondly, the event study and regression methodology regarding the relation between policy uncertainty and value creation for the acquiring company is described. Lastly, country pair analysis methodology is laid out for the effect of policy uncertainty on deal volume and performance under country-pair specific circumstances.

### *Deal Volume*

In previous research, deal volume is described in two-fold, both as aggregate executed number of deals and aggregate monetary amount of deals in a specific country in a certain timeframe. The distinction is important, because a high number of deals does not automatically represent a high aggregate deal value and vice versa. By analyzing only one of the two components, one might miss valuable information. Potentially, high policy uncertainty might have varying effects on large and small deals. Therefore it is possible that fewer deals are conducted during high uncertainty, but with increased value per deal, the monetary amount of deal remains equal and indicates an absence of policy uncertainty impact.

In this study, cross-border deal volume will be expressed in two-fold as well. In accordance with Bonaime et al. (2018), the natural logarithm of the quarterly aggregate number of deals will be used as a first measure to investigate deal volume alterations. Secondly, the natural logarithm of quarterly aggregate monetary deal value, in million USD, will be utilized as an additional measure for deal volume in line with previous research (Bonaime et al., 2018; Nguyen & Phan, 2017). The natural logarithm assures that the data is balanced, as the distorting effect of extreme values is removed and skewness is decreased. It is then unnecessary to further winsorize the deal volume data.

The first regression aims to formally test whether variation of cross-border deal volume is coherent with variations in WUI levels. It investigates inbound cross-border deals for target countries and outbound cross-border deals for acquirer countries. Country  $j$  represents the country of origin where either the target or acquirer firm is located. Quarter  $t$  is the respective quarter for which deal volume is aggregated. This leads to the following regression:

$$\ln(\text{Cross} - \text{Border Deal Volume}_{jt}) = \beta_1 WUI_{jt} + \beta_2 \text{Control}_{jt} + \lambda_j + \eta_t + \varepsilon_{jt} \quad (1)$$

Where,  $\beta_1$ , and  $\beta_2$  represent the vectors of the parameters. The dependent variable  $\ln(\text{Cross} - \text{Border Deal Volume}_{jt})$  contains the natural logarithm of either the quarterly number of deals or aggregated deal value<sup>4</sup>. The independent variable,  $WUI_{jt}$ , denotes the policy uncertainty level of country  $j$  in quarter  $t$ .  $\text{Control}_{jt}$  is the vector of the exogenous control variables that are included in the regression. In this case, these control variables are common law dummy; economic variables like GDP growth, GDP per capita, and Trade-to-GDP; and the ICRG variables, institutional quality and investment profile. The natural logarithm of total deal volume, including domestic deals, per country  $j$  and quarter  $t$  will ensure that the observed relation between WUI and cross-border deal volume is not a result of generic deal volume fluctuations. Country-fixed effects that are included in the regression and represented by  $\lambda$ . Time-fixed effects are represented by  $\eta$ . The standard errors are double clustered on quarter level and country level in order to account for within-country correlation.

### *Deal Performance*

Besides deal volume, it is useful to investigate the influence of policy uncertainty on acquirer shareholder value. Policy uncertainty reinforces external risk on executing M&A deals and other operational activities. Potentially, this negatively affects shareholder value. It might however be possible that shareholder value increases, as policy uncertainty discourages empire building and forces acquiring firms to handle higher thresholds in the selection process of potential M&A targets, subsequently leading to more profitable takeovers (Gulen & Ion, 2016). It is therefore interesting to investigate the shareholder value development, in this research referred to as M&A performance. This is an extensively discussed subject since the 1960s. Das & Kapil (2012) have written a systematic review on empirical literature concerning M&A performance and have categorized M&A performance measures under market measures, accounting measures and other measures<sup>5</sup>.

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<sup>4</sup> The natural logarithm of quarterly number of deals is computed as the number of cross-border deals plus one completed in country  $j$  in quarter  $t$  in accordance with research of Erel et al. (2012). The natural logarithm of quarterly aggregated deal value is computed by taking the natural logarithm of the aggregated monetary value of cross-border deals completed in country  $j$  in quarter  $t$  (Bonaime et al., 2018).

<sup>5</sup> Accounting measures incorporate variables regarding growth analysis, market measures contain CAR-analysis and BHAR-analysis which investigate either short-term or long-term effects of M&A activities, and other measures contain variables like Tobin's Q and describe absolute values and market values of the companies of interest.

For this study market measures are most appropriate, as it is best capable of capturing policy uncertainty effects on short-term shareholder value. A multi-country event study will be conducted to analyze the impact of policy uncertainty on cross-border M&A performance, measured as cumulative average abnormal returns (CAARs). Event study methodology enables the analysis of event announcement effects in marketed securities. The research will follow the principles laid out by Campbell, Cowan & Salotti (2010). Subsequently, potential abnormal returns can be identified through the following formula:

$$AR_{it} = R_{it} - E(X_t) \quad (2)$$

$AR_{it}$  represents the abnormal return of the security  $i$  at time  $t$ ,  $R_{it}$  is the captured return of the security  $i$  at time  $t$  and  $E(R_{it}|X_t)$  is the projected return of the stock  $i$  at time  $t$ .  $X_t$  represents the market return. In this research, natural logarithmic daily returns are computed to increase the probability of normally distributed return data. Meanwhile, the possibility that extreme values will influence the results is limited.

The market model focuses on the relationship between the return of the security and the market return (Boehmer & Poulsen, 1991). They proposed the following model to compute expected returns:

$$E(R_{it}|X_t) = \alpha_i + \beta_i * R_{MT} + \varepsilon_{it} \quad (3)$$

Where  $E(R_{it}|X_t)$  is the captured projected return of the security  $i$  at time  $t$ ,  $R_{MT}$  is the market return, represented by the return of the country specific index at time  $t$  and  $\varepsilon_{it}$  is the error term that is equal to zero. The model obtains the expected return values for the event window by regressing stock returns to respective market returns. In order to maximize the possibility to detect the actual effect of the event, the portion of returns related to the variation of market returns should be removed to reduce the variance of abnormal returns (MacKinlay, 1997). The market model incorporates exogenous market information as well as endogenous company specific dynamics. Ordinary least squares (OLS) regression is used to estimate the market model parameters as conducted in the research of Barber & Lyon (1996).

In order to determine the cumulative average abnormal returns, it is important to cumulate the abnormal returns for the event period and average the resulting CARs across all firms per

quarter in a country. The cumulative average abnormal returns from time  $t_1$  to time  $t_2$  for stock  $i$  can be computed by the following formula:

$$CAAR_{jt} = \frac{1}{N} \sum_{t_1}^{t_2} AR_{it} \quad (4)$$

Where  $CAAR_{jt}$  is the cumulative average abnormal return per country  $j$  in quarter  $t$ , representing the average of all cumulative abnormal returns for firms per country  $j$  in quarter  $t$ . The cumulative abnormal return for security  $i$  is the sum of all the returns obtained from  $t_1$  to time  $t_2$  for security  $i$ . The resulting values are winsorized at the 5% level to effectuate a balanced dataset.

This research will focus on the abnormal returns retrieved in the [-3,3] event window. The robustness checks incorporate four different event windows. Two event windows surround the announcement ([-5,5], [-1,1]) (Cao et al., 2019; Moeller, Schlingemann & Stulz, 2004) and two event windows capture possible insider trading or information spread surrounding the event ([-5,0], [-3,0]). The estimation windows for the event study will be 150 days long (Andrade, Mitchell & Stafford, 2001; Dong et al., 2006) and will cover the following window: [-155,-6]. This estimation window is close and in some cases directly connected to the event window because of the assumption of at least semi-strong market efficiency.

The second regression aims to formally test whether cross-border deal performance is affected with variations in WUI levels in the respective country. It investigates the performance of inbound cross-border deals for target countries and outbound cross-border deals for acquirer countries. Country  $j$  represents the country of origin where either the target or acquirer firm is located. Quarter  $t$  is the respective quarter for which deal volume is aggregated. This leads to the following regression:

$$CAAR_{jt}[t_1, t_2] = \beta_1 WUI_{jt} + \beta_2 Control_{jt} + \lambda_j + \eta_t + \varepsilon_{jt} \quad (5)$$

Where,  $\beta_1$ , and  $\beta_2$  represent the vectors of the parameters. The dependent variable is CAAR per country  $j$  and quarter  $t$ . The independent variable,  $WUI_{jt}$ , denotes the policy uncertainty level of country  $j$  in quarter  $t$ .  $Control_{jt}$  is the vector of the control variables that account for exogenous influences. Country-fixed effects that are included in the regression and represented

by  $\lambda$ . Time-fixed effects are represented by  $\eta$ . The standard errors are double clustered on quarter level and country level in order to account for within-country correlation.

### *Country-Pair Analysis*

The third regression is part of a country-pair analysis, equivalent to the study of Cao et al. (2015). It analyses the effect of policy uncertainty on the bilateral country pair-quarter deal volume, measured in number of deals and monetary deal value. The panel regression, including the interactive effect of policy uncertainty in the acquirer country and target country, is presented as follows:

$$\begin{aligned} \ln(\text{Cross} - \text{Border Deal Volume})_{pair_{jkt}} & \\ &= \beta_1 WUI_{acquirer_{jt}} + \beta_2 WUI_{acquirer_{jt}} * WUI_{target_{kt}} + \beta_3 WUI_{target_{kt}} \quad (6) \\ &+ \beta_4 Control_{jkt} + \lambda_{jk} + \eta_t + \varepsilon_{jkt} \end{aligned}$$

The dependent variable in this regression,  $\ln(\text{Cross} - \text{Border Deal Volume})_{pair_{jkt}}$ , is expressed in two-fold. Firstly, it is represented by the natural logarithm of the number of cross-border deals plus one where the acquirer originates from country  $j$  and the target originates from country  $k$ . The sample consists solely of observations that contain at least one deal between acquirer country  $j$  and target country  $k$  in quarter  $t$  and for which country  $j$  and  $k$  are two different countries. Secondly, it depicts the natural logarithm of the aggregated value of all cross-border deals between acquirer country  $j$  and target country  $k$  in quarter  $t$ . Here, only observations with at least one deal in quarter  $t$  will be included.  $WUI_{acquirer_{jt}}$  denotes the policy uncertainty level in acquirer country  $j$  at time of the announcement date in quarter  $t$ .  $WUI_{target_{kt}}$  represents the policy uncertainty level in target country  $k$  at time of the announcement date in quarter  $t$ .  $Control_{jkt}$  includes different control variables like the difference in economic variables, trade openness, legislative system, business environment, level of investor protection between acquirer country  $j$  and target country  $k$ . Additionally, few dummy variables act as a proxy for cultural proximity. These are similar language and similar religion from Rossi & Volpin (2004) and Similar Region from Ahir et al. (2018). Country-fixed effects that are included in the regression and represented by  $\lambda$ . Time-fixed effects are represented by  $\eta$ . The standard errors are double clustered on quarter level and country-pair level in order to account for within-country correlation.

The fourth regression aims to describe the impact of WUI-level in acquirer and target country on cross-border deal performance, measured as cumulative average abnormal return per country-pair  $jk$  in quarter  $t$ .

$$\begin{aligned}
CAAR_{jkt}[t_1, t_2] &= \beta_1 WUI_{acquirer_{jt}} + \beta_2 WUI_{acquirer_{jt}} * WUI_{target_{kt}} \\
&+ \beta_3 WUI_{target_{kt}} + \beta_4 Control_{jkt} + \lambda_{jk} + \eta_t + \varepsilon_{jkt}
\end{aligned} \tag{7}$$

The outcome explains the effect of policy uncertainty on acquirer announcement returns for outbound acquisitions.  $CAAR_{jk}[t_1, t_2]$  represents the cumulative average abnormal return of acquiring firms in country-pair  $jk$  in quarter  $t$  and indicates value creation through cross-border M&A. The computed CAARs are regressed in a multivariate model on  $WUI_t$ , which explains the policy uncertainty level in the acquiring country  $j$  or target country  $k$ , and the interaction effect of WUI levels in both acquiring and target country.  $Control_{jkt}$  represents multiple difference variables including: common law, economic performance, openness, business environment and quality of institutions. Country-fixed effects that are included in the regression and represented by  $\lambda$ . Time-fixed effects are represented by  $\eta$ . The standard errors are double clustered on quarter level and country-pair level in order to account for within-country-pair correlation.



## IV. Results

The findings of the research will be presented and interpreted in this chapter. The results of the research are interpreted by presenting both univariate and multivariate tests on the hypotheses of this study. Furthermore, several robustness checks will be discussed.

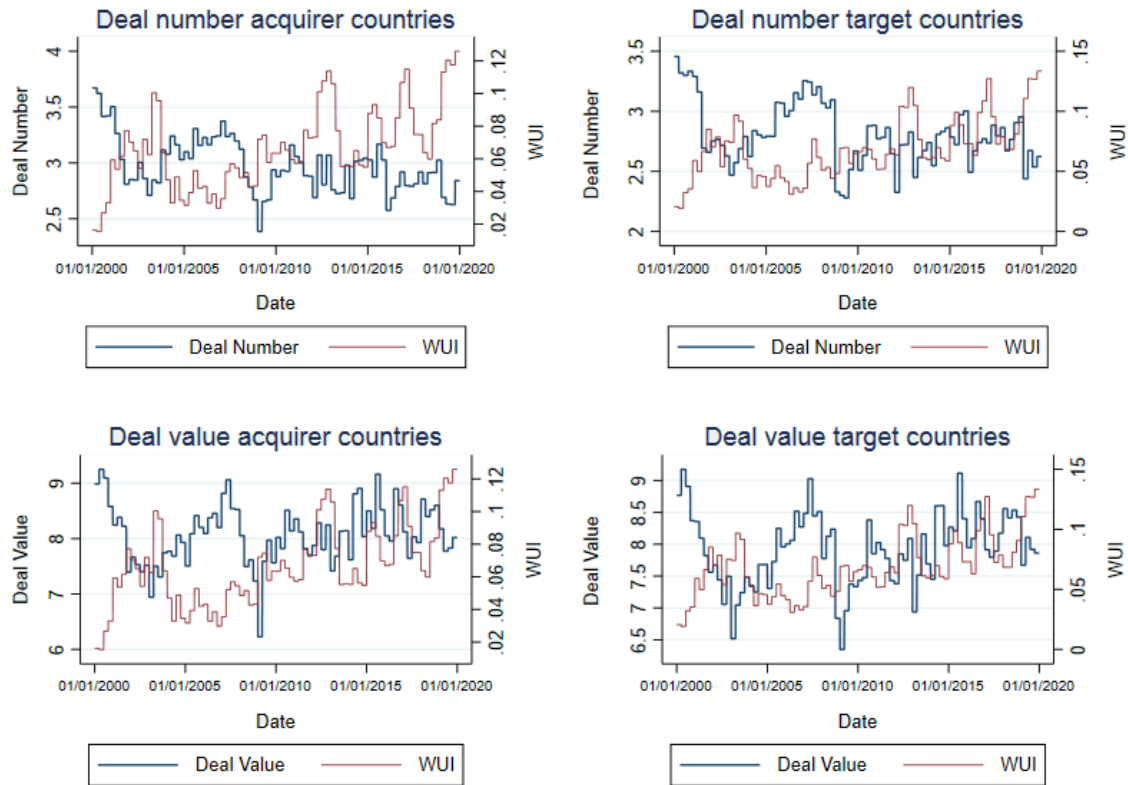
### 4.1 UNIVARIATE TESTS

#### *Deal volume*

Figure 2 depicts M&A volume fluctuations, including domestic and cross-border deals, in relation to policy uncertainty and suggests an inverse relationship for both acquirer and target countries. In domestic deals the acquirer country and target country represent the same nation. The inverse relation appears to be true for both the number of deals (top two panels) as well as in monetary terms (bottom two panels). This implies that higher uncertainty within a country discourages acquirers and targets to engage in mergers and acquisitions. The peaks for deal value are more extreme than the peaks for the number of deals. This suggests that transaction values are more susceptible to policy uncertainty with acquirers paying hefty premiums in times of political stability and modest transaction values in uncertain times. The first peak of the WUI is around 2001-2003, in times of the SARS outbreak, the 9/11 attacks, and the Gulf War II. The number and value of deals is relatively low after a steep decrease in 2001. This marks the end of a deal intensive period surrounding 2000. From 2005 to 2011 the WUI has been gradually increasing before reaching a new high in 2012 during the Eurozone debt crisis. The graphs describe an upward trend in deal volume in this period after plummeting in 2009 as a result of the financial crisis. Especially, deal value heavily undershoots in 2009 before making a strong recovery until the Eurozone debt crisis in 2012. The last period is marked by uncertainty surrounding US presidential elections and the Brexit referendum in 2016 and the run up to the Brexit and US trade policy at the end of 2019. The inverse relationship for both acquirer and target countries supports the deterrence hypothesis (Cao et al., 2015) and the delaying hypothesis (Bernanke, 1983), but contradicts the diversification hypothesis (Cao et al., 2015).

**Figure 2:** Univariate test – Graphical overview of WUI and deal volume development

Collection of four graphs that depict aggregate number and value of corporate acquisitions in acquirer and target countries together with the moving average of World Uncertainty Index (Ahir et al., 2018), from January 2000 to December 2019. The WUI represents the average WUI level in either acquirer or target countries in quarter  $t$ . The deal number (top panels) represents the average natural logarithm of aggregate number of deals in either the acquirer or target countries in quarter  $t$ . The deal value (bottom panels) represents the average natural logarithm of aggregate value of deals conducted in acquirer country or target country in quarter  $t$ . Deal number and value are depicted by the blue lines and the left axes, where the World Uncertainty Index are depicted by the red lines and the right axes.



### Deal performance

Table 5 presents the results of an event study with varying event windows. Panel A shows that the cumulative average abnormal returns are positive in all scenarios and significantly different from zero at the 1% level. The mean cumulative average abnormal return is the highest in the  $[-5,+5]$  and  $[-3,+3]$  event windows with a mean value of approximately 1.3%. The interval periods  $[-5,0]$  and  $[-3,0]$  appear to yield relatively low returns, signaling that information leakage is present however a significant amount of value creation is realized after the announcement date. Panel A provides evidence for the assumption that value is created during cross-border M&A transactions.

Panel B describes the mean values for all five announcement intervals for deals that are executed under either low or high uncertainty in the acquiring country. Comparing the means

of the two subsamples provides interesting insights. It appears that securities are traded at a premium in times of high uncertainty. In all five intervals the CAAR is higher for securities of firms that execute cross-border deals in times of high uncertainty compared to the low uncertainty subsample. The differences are only significant for the [-5,+5] and [-5,0] interval at the 10% level. Bartlett's test for equal variance only yields high chi-square results and significant p-values for these intervals. This is weak evidence for rejecting the null-hypothesis and concludes that there is a relationship between a relatively high uncertainty level and value creation.

**Table 5:** Univariate test - CAAR-analysis of acquirer country

CAAR represents the cumulative average abnormal return of the acquiring country during different intervals around the announcement dates of cross-border deals in a specific quarter. The number of days prior to or after the announcement date is stated between brackets. Panel A explains whether cumulative average abnormal returns are significantly different from zero during the announcement period of a cross-border deal. Panel B explains whether the level of uncertainty in the acquiring country has any effect on the cumulative average abnormal returns in the announcement period for acquiring firms in a cross-border deal.

		Obs	Mean	Std. Dev.				Δ Mean
<b>Panel A:</b> Different from zero								
C55	CAAR (-5,5)	1,978	1.340	4.218				1.340 ***
C33	CAAR (-3,3)	1,978	1.298	3.555				1.298 ***
C11	CAAR (-1,1)	1,978	1.165	2.663				1.165 ***
C50	CAAR (-5,0)	1,978	0.975	3.011				0.975 ***
C30	CAAR (-3,0)	1,978	0.882	2.525				0.882 ***
		Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Δ Mean
<b>Panel B:</b> Low-high uncertainty		Low uncertainty			High uncertainty			
C55	CAAR (-5,5)	1,043	1.174	4.091	935	1.525	4.349	-0.351 *
C33	CAAR (-3,3)	1,043	1.180	3.488	935	1.431	3.625	-0.251
C11	CAAR (-1,1)	1,043	1.141	2.604	935	1.192	2.729	-0.051
C50	CAAR (-5,0)	1,043	0.863	2.956	935	1.100	3.067	-0.237 *
C30	CAAR (-3,0)	1,043	0.806	2.506	935	0.967	2.545	-0.161

### Country-pair analysis

Table 6 compares the mean values of all variables in four different scenarios. The 8,027 deals for all country-pairs are divided into four subsamples, depending on the level of uncertainty in the respective acquirer and target country on the announcement date.

Scenario 1, where both acquirer and target country are certain, yields the highest mean number of deals per quarter (2.197 deals per quarter per country-pair). The mean differences

are highly significant at the 1% level. It appears that when only one of the participating countries is certain and the other is uncertain, the appetite for deals is relatively low. Acquirers in a certain country tend to obtain targets in a certain target country and acquirers in an uncertain country execute more cross-border deals with targets from uncertain target countries. The underlying explanation might be that if two countries, that have strong business relations, mutually affect market conditions in the other country. If then, uncertainty is high in one country; uncertainty in the other country automatically rises as well. This contradicts the hedging and diversification hypothesis for outbound cross-border acquisitions, where the acquiring firm actively hedges against political uncertainty in the home country by acquiring a target in a relatively politically certain host country. Deal value analysis does not yield significant mean differences. Deal performance appears to be positively influenced by uncertainty in the acquirer country. The mean value of cumulative average abnormal returns in scenario 3 and 4 show higher results, 1.432% and 1.442%, than the CAARs in scenario 1 and 2 with low uncertainty in the acquirer country. It is remarkable that uncertainty in the target country does not seem to have a hampering effect on value creation. This first indication tells that investors do appreciate cross-border acquisitions that have a diversifying effect because uncertainty is high in the acquirer country, irrespective of the uncertainty level in the target country.

Table 6 also describes the mean values for several country-specific variables. Countries that executed English common law are on average more certain and it is also apparent that GDP per capita and GDP growth are on average higher in certain countries. Additionally, cultural proximity does play an ambiguous role in the decision making for a suitable cross-border target. Mostly, cross-border deals between either two certain or two uncertain countries share the same language. However, acquirers from certain countries tend to favor targets from countries with the same religion, the second proxy for cultural proximity. The effect is more distinct than for acquirers from uncertain countries, where fewer deals are conducted with targets from countries with similar religious interests. For geographical proximity, certain acquirer countries conduct more deals with certain target countries and uncertain acquirer countries conduct more deals with uncertain countries. This might be a result of both relevant countries being heavily interlinked both in terms of political and business aspects, therefore the chance of both neighbor countries being either certain or uncertain is plausible. These mean differences are significant at the 1% level.

**Table 6:** Univariate test - Country-pair analysis

The table presents the country-pair analysis for four subsamples. The subsamples are created by determining the uncertainty level of both countries in the cross-border deal. A country is marked as certain when the WUI-level on the announcement date, time  $t$ , is equal or relatively low compared to the median WUI-level of the respective country. A country is marked as uncertain when the WUI-level on the announcement date was relatively high compared to the median WUI-level of that respective country. The significance is determined by Bartlett's test for equal variance between the four subsamples.

Variable		Certain acquirer			x			Certain target			Uncertain acquirer			x			Uncertain target			Sample Mean
		Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	Obs	Mean	Std. Dev.	
<b>Independent variables</b>																				
DN	Cross-border deal number pair	2,834	2.197	3.214	1,626	1.837	2.417	1,558	1.754	2.165	2,009	1.973	2.781	1.9821	***					
DV	Cross-border deal value pair (Million \$)	2,834	735.4	2,924	1,626	885.3	4,433	1,558	667.8	2,606	2,009	762.2	2,608	759.4						
CAAR	CAAR[-3,3] pair (%)	2,834	1.183	5.467	1,626	1.008	5.303	1,558	1.432	5.329	2,009	1.442	5.263	1.2606	**					
<b>Country-specific control variables</b>																				
CL	English Common Law $j-k$	2,834	0.189	1.473	1,626	0.186	1.330	1,558	0.108	1.227	2,009	0.141	1.200	0.1607	***					
GDP <sub>c</sub>	GDP per Capita $j-k$	2,834	0.250	1.360	1,626	0.325	1.267	1,558	0.262	1.323	2,009	0.190	1.349	0.2527	**					
GDP <sub>g</sub>	GDP Growth $j-k$	2,834	0.029	4.979	1,626	0.490	5.175	1,558	-0.393	4.149	2,009	-0.049	4.733	0.0208	***					
IP	Investment Profile $j-k$	2,834	0.382	3.507	1,626	0.591	2.951	1,558	0.362	3.058	2,009	0.404	3.867	0.4262						
IQ	Institutional Quality $j-k$	2,834	0.366	2.014	1,626	0.388	1.755	1,558	0.341	1.612	2,009	0.236	1.534	0.3330	**					
SL	Similar Language	2,834	0.976	3.361	1,626	0.672	2.520	1,558	0.642	2.277	2,009	0.917	2.966	0.8351	***					
SRG	Similar Region	2,834	1.064	2.535	1,626	0.742	1.849	1,558	0.700	1.639	2,009	0.974	2.594	0.9056	***					
SRL	Similar Religion	2,834	1.013	2.471	1,626	0.838	1.977	1,558	0.793	1.793	2,009	0.806	1.651	0.8831	***					
TTG	Trade-to-GDP $j-k$	2,834	2.106	148.1	1,626	-2.300	114.6	1,558	5.473	108.8	2,009	3.604	135.9	2.2421						

## 4.2 MULTIVARIATE TESTS

### *Target and Acquirer country analysis*

This subchapter formally tests whether variation of cross-border deal volume and performance of acquirer and target countries is coherent with variations in WUI-levels. The analysis is done through multiple OLS regressions.

#### Deal volume

Cross-border deal volume is expressed in terms of number of deals and deal value. Table 7 describes the results of the logit regressions for the number of inbound acquisitions by a target country in models (1) - (3). Model (1) incorporates dependent, independent variables and control variables without any fixed effects, but does not yield a significant impact of policy uncertainty on the number of completed inbound deals. Of all control variables, the natural logarithm of total deal number, including domestic and cross-border deals, has the largest and most significant effect on the number of inbound acquisitions. GDP per capita decreases inbound acquisitions by 5.4% and the effect is significant at the 1% level. Adding time-fixed effects and county-fixed effects in model (2) and model (3) does not result in a significant relation between policy uncertainty and inbound acquisitions. This study fails to provide evidence for the deterrence hypothesis of Nguyen & Phan (2017) and Gulen & Ion (2016), who find that high policy uncertainty does deteriorate the number of executed inbound deals.

Models (4) – (6) describe the effect of the WUI and control variables on the number of outbound acquisitions by the acquirer country. Model (4) incorporates dependent, independent and control variables in the equation without any fixed effects. The effect of WUI in acquiring countries on the number of outbound acquisitions becomes significant and the coefficient becomes positive. This supports the diversification hypothesis (Cao et al., 2015; Chen et al., 2018). An increase in WUI-level increases the number of outbound deals with 32.5% and is significant at the 1% level. The coefficient for the relationship of GDP per capita and the number of outbound acquisitions is 0.07 and highly significant. Also GDP growth significantly decreases the number of outbound acquisitions by 0.5%. The number of outbound acquisitions increases by 1.4% if the investment profile, a proxy for the business environment, increases. The total number of deals is also a great determinant for outbound acquisitions with a coefficient of 0.941. After adding fixed effects in model (5) and model (6) the effect of WUI on outbound acquisitions reduces. Time-fixed effects decrease the magnitude of the relation,

but the effect is still significant at the 5% level. The effect is not robust for country-fixed effects, thus claim that there is no heterogeneity across countries.

Table 8 presents the logic regression results for the effect of the WUI variable and control variables on the natural logarithm of the cross-border deal value for both the target country, model (1) – (3), as well as the acquiring county, model (4) – (6). Model (1) and (2) do not find evidence of any policy uncertainty effect on the monetary value of inbound acquisitions. Richer countries, open countries and countries with a good investment profile attract more inbound acquisitions in monetary terms. Model (3) includes country-fixed effects and this results in a significant negative relationship of policy uncertainty and inbound acquisitions for the target country. This proof is in accordance with the conclusions of Li et al. (2020) and Bhagwat et al. (2016). It is remarkable that the effect on deal value is significant and more distinct than for the number of inbound acquisitions. This indicates that acquiring firms negotiate lower deal premiums, possibly because of uncertain future revenue and costs expectations. Table 8 provides strong evidence of a negative relation between uncertainty and the value of inbound acquisitions, in line with the result of Chen et al. (2018), who find that corporate investment and transaction values are significantly lower during high uncertainty.

Models (4) to (6) shed light on the volume of outbound acquisitions in monetary value. These models fail to find evidence for any effect of policy uncertainty on the value of outbound acquisitions. In model (4), GDP per capita, Investment Profile, and the natural logarithm of total deal value have a significant positive effect on the dependent variable. Investment Profile increases the value of outbound acquisitions by 4.2%. This significance is interesting because it indicates that acquiring countries with good institutional quality provide their firms with a stable enough investment climate, so that firms increasingly invest through cross-border M&A. The total value of acquisitions plays a major role on the value of outbound acquisitions as the increase is almost 100%. In model (6) it is observable that acquirer countries with better institutional quality and better business environment provide support for more outbound monetary deal value. Additionally, acquiring countries that conduct many acquisitions in general also conduct more outbound acquisitions.

**Table 7:** Country-level analysis of policy uncertainty and number of cross-border acquisitions

The results of the panel regressions regarding cross-border deal number per country and quarter are presented in this table. The regression results for the inbound acquisitions per quarter of the target countries are displayed in columns (1)-(4). The dependent variable is  $\ln(\text{cross-border deal number by target country})$ , representing the natural logarithm of the cross-border deal number plus one in the target country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the target country. The regression estimates for the outbound acquisitions per quarter of the acquiring countries are presented in columns (5)-(8). The dependent variable is  $\ln(\text{cross-border deal number by acquirer country})$ , representing the natural logarithm of the cross-border deal number plus one in acquirer country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the acquirer country. The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* corresponding with 1%, 5%, and 10% significance-levels, respectively.

	Inbound Acquisitions Target			Outbound Acquisitions Acquirer		
	(1)	(2)	(3)	(4)	(5)	(6)
WUI	0.138 (1.56)	0.003 (0.02)	-0.114 (-1.40)	0.325 *** (3.07)	0.240 ** (2.45)	0.067 (0.66)
Common Law	0.010 (0.90)	0.003 (0.31)	0.000 (0.00)	0.018 (1.06)	0.016 (0.89)	0.000 (0.00)
GDP growth	-0.002 (-1.03)	-0.001 (-0.45)	-0.003 (-0.67)	-0.005 * (-1.85)	-0.008 * (-1.82)	-0.006 (-1.20)
Ln(GDP per capita)	0.054 *** (2.90)	0.035 ** (2.13)	0.098 ** (2.18)	0.070 *** (4.37)	0.042 (1.54)	0.063 (1.25)
Trade/GDP	0.000 (0.95)	0.000 (1.16)	0.001 (0.95)	0.000 (-0.24)	0.000 (-0.11)	0.000 (-0.36)
Institutional quality	-0.033 * (-1.84)	-0.022 (-1.50)	0.006 (0.21)	-0.011 (-0.54)	-0.006 (-0.31)	-0.008 (-0.18)
Investment Profile	0.011 ** (2.12)	0.011 *** (2.91)	0.010 ** (2.00)	0.014 ** (2.32)	0.023 *** (3.06)	0.017 ** (2.34)
Ln(Total Deal Number)	0.944 *** (96.78)	0.951 *** (92.98)	0.913 *** (64.13)	0.941 *** (87.03)	0.944 *** (71.23)	0.905 *** (41.82)
Constant	-0.544 *** (-3.79)	-0.404 *** (-3.36)	-1.090 ** (-2.36)	-0.838 *** (-6.23)	-0.660 *** (-2.93)	-0.694 (-1.31)
Time-fixed effects	No	Yes	Yes	No	Yes	Yes
Country-fixed effects	No	No	Yes	No	No	Yes
Observations	2,026	2,026	2,026	1,637	1,637	1,633
R-squared	0.968	0.970	0.972	0.967	0.968	0.971



**Table 8:** Country-level analysis of policy uncertainty and value of cross-border acquisitions

The results of the panel regressions regarding cross-border deal value per country and quarter are presented in this table. The regression results for the inbound acquisitions per quarter of the target countries are displayed in columns (1)-(4). The dependent variable is  $\ln(\text{cross-border deal value by target country})$ , representing the natural logarithm of the total cross-border deal value (million US dollars) plus one in target country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the target country. The regression estimates for the outbound acquisitions per quarter of the acquiring countries are presented in columns (5)-(8). The dependent variable is  $\ln(\text{cross-border deal number by acquirer country})$ , representing the natural logarithm of one plus the deal count in acquirer country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the acquirer country. The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	Inbound Acquisitions Target			Outbound Acquisitions Acquirer		
	(1)	(2)	(3)	(4)	(5)	(6)
WUI	-0.010 (-0.04)	-0.332 (-1.05)	-0.798 ** (-2.06)	0.500 (1.20)	0.335 (0.81)	0.213 (0.41)
Common Law	0.041 (1.41)	0.034 (1.09)	0.000 (0.00)	0.010 (0.26)	0.021 (0.48)	0.000 (0.00)
GDP growth	-0.005 (-0.76)	-0.003 (-0.25)	-0.009 (-0.60)	-0.006 (-0.93)	-0.020 * (-1.94)	-0.024 (-1.59)
Ln(GDP per capita)	0.114 ** (2.33)	0.073 (1.55)	0.104 (0.82)	0.080 * (1.78)	0.014 (0.22)	-0.028 (-0.20)
Trade/GDP	0.001 * (1.65)	0.001 * (1.79)	0.003 (1.29)	0.001 (0.96)	0.001 (1.05)	0.000 (0.00)
Institutional quality	-0.100 * (-1.82)	-0.073 (-1.58)	0.022 (0.23)	-0.027 (-0.74)	-0.013 (-0.28)	0.126 * (1.72)
Investment Profile	0.050 *** (2.90)	0.050 *** (4.03)	0.058 ** (2.37)	0.042 *** (3.27)	0.057 *** (2.93)	0.043 ** (2.40)
Ln(Total Deal Value)	0.974 *** (109.27)	0.978 *** (112.73)	0.968 *** (83.93)	0.988 *** (89.79)	0.988 *** (77.06)	0.983 *** (69.67)
Constant	-1.319 *** (-3.17)	-1.022 *** (-2.76)	-1.826 (-1.58)	-1.298 *** (-3.99)	-0.802 * (-1.66)	-0.720 (-0.45)
Time-fixed effects	No	Yes	Yes	No	Yes	Yes
Country-fixed effects	No	No	Yes	No	No	Yes
Observations	2,026	2,026	2,026	1,637	1,637	1,633
R-squared	0.941	0.945	0.946	0.942	0.944	0.946

### Deal performance

Cross-border deal performance is expressed as cumulative average abnormal returns per country per quarter. Models (1) to (3) in table 9 describe the results of the logit regressions for the performance of inbound acquisitions in the target country. The R-squared of all models is low; therefore the explanatory power of the models is weak. It does increase when adding control variables and fixed effects, but remains low. The models find no significant effect between policy uncertainty and deal performance of outbound deals in the acquirer countries. GDP growth does play a significant role, however the effect is marginal with a coefficient of 0.001.

Models (4) to (6) present the results of similar logic regressions for the performance of outbound acquisitions in an acquirer country. The models fail to provide evidence of any effect of policy uncertainty on the performance of outbound deals. Model (4) includes control variables and proves that outbound deals of firms located in countries with common law judiciary systems perform better at the 5% significance level. Deal performance appears to be positively influenced, however insignificantly, by economic policy uncertainty in the acquirer country. GDP per capita is now significantly affecting deal performance in the acquirer country with a coefficient of 0.026 at the 5% level, thus outbound deals in richer countries create more value for the shareholders.

**Table 9:** Country-level analysis of policy uncertainty and performance of cross-border acquisitions

The results of the panel regressions regarding cross-border deal performance per country and quarter are presented in this table. The regression results for the inbound acquisitions per quarter of the target countries are displayed in columns (1)-(4). The dependent variable is cumulative average abnormal returns with (-3,3) interval period in target country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the target country. The regression estimates for the outbound acquisitions per quarter of the acquiring countries are presented in columns (5)-(8). The dependent variable is cumulative average abnormal returns with (-3,3) interval period in acquirer country  $j$  in quarter  $t$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for policy uncertainty in the acquirer country. The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	CAAR[-3,+3] - Target Country			CAAR [-3,+3] - Acquirer Country		
	(1)	(2)	(3)	(4)	(5)	(6)
WUI	0.022 (0.86)	0.004 (0.18)	-0.006 (-0.22)	0.012 (0.69)	-0.003 (-0.20)	0.020 (0.94)
Common Law	-0.002 (-0.68)	-0.003 (-1.23)	0.000 (0.00)	0.009 ** (2.59)	0.008 ** (2.24)	0.000 (0.00)
GDP growth	0.000 (0.39)	0.001 * (1.90)	0.001 * (1.78)	0.000 (0.20)	0.001 * (1.66)	0.001 (0.70)
Ln(GDP per capita)	0.000 (0.05)	-0.002 (-0.58)	-0.010 (-1.49)	0.005 (1.19)	0.005 (1.20)	0.026 ** (2.20)
Trade/GDP	0.000 (0.21)	0.000 (-0.06)	0.000 * (1.77)	0.000 (0.46)	0.000 (0.34)	0.000 (1.35)
Institutional quality	0.001 (0.45)	0.003 (1.47)	0.007 (0.99)	0.001 (0.32)	0.001 (0.48)	-0.008 (-1.63)
Investment Profile	0.000 (0.43)	0.000 (0.15)	0.001 (0.67)	0.000 (-0.14)	0.000 (-0.19)	-0.001 (-0.70)
Constant	0.001 (0.04)	0.014 (0.54)	0.055 (0.70)	-0.042 (-1.33)	-0.046 (-1.40)	-0.233 * (-1.87)
Time-fixed effects	No	Yes	Yes	No	Yes	Yes
Country-fixed effects	No	No	Yes	No	No	Yes
Observations	2026	2026	2026	1637	1637	1633
R-squared	0.0018	0.0660	0.0931	0.0219	0.0808	0.1316

### *Country-pair analysis*

This subchapter formally tests whether variation of cross-border deal volume and performance of country-pairs is coherent with variations in WUI-levels. The analysis is done through multiple OLS regressions.

#### *Deal volume*

This subchapter formally tests whether uncertainty in the target country does have interactive effects with uncertainty in the acquirer country. The unit of observation is the aggregated number and value of acquisitions for a country-pair per quarter. The results are presented in table 10, country-pair deal number, and table 11, country-pair deal value per quarter.

In table 10, model (1), the natural logarithm of cross-border deal number is regressed with the WUI for the acquirer country and the control variables. Policy uncertainty in the acquirer country decreases the cross-border deal number per country-pair by 39.7%. This effect is highly significant at the 1% level and gains in magnitude after adding uncertainty in the target country and the interaction effect in model (3) and model (4). The results contradict the results of the country analysis, but appear to be stronger and more explanatory. Thus, country-pair analysis provides a valuable additional perspective on the effect of policy uncertainty. The results suggest that more acquisitions occur between countries that speak the same language and which are located in the same region. The models find no evidence of any effect of uncertainty in the target country on the number of deals per country-pair. Although the coefficients are negative, there appears to be no deterrence effect due to high uncertainty in the target country. The interaction effect is also insignificant in model (4).

Table 11 analyzes the impact of policy uncertainty on the value of cross-border deals for a country-pair. The WUI<sub>a</sub> is significant at the 10% level in models (1) and (3) with a strong negative effect on the value of acquisitions of the country-pair. The effect does get insignificant after adding the interaction effect. WUI<sub>t</sub> and the interaction effect, WUI<sub>at</sub>, are not significant. The difference in GDP per capita per country-pair has a negative effect on the cross-border deal value of the country-pair. Countries that speak the same language do have higher cross-country deal values, this is in line with the positive relationship that was depicted in table 10 between similar language and the number of cross-border acquisitions for the country-pair.

Overall, the country-pair analysis finds strong evidence of the cost irreversibility theory. Acquiring firms seem to limit their irreversible cross-border M&A investments. The

negative uncertainty effect in the acquirer country is stronger for deal value in comparison with the number of cross-border acquisitions, supporting the findings of Chen et al. (2018).

### Deal performance

Table 12 presents the results on the relationship between the level of policy uncertainty and cumulative average abnormal returns for every country-pair per quarter. The results of the [-3,+3] event window are presented. For readability purposes, the regressions are run for four additional event windows ([-5,+5], [-1,+1], [-5,0], [-3,0]) that will be covered in the robustness check section of this chapter. The CAARs are significantly higher when the acquirer country is uncertain and insignificantly higher when the target country is uncertain. The cumulative average abnormal returns are on average 3.1 % higher when the acquirer country's uncertainty level increases. Model (2) does not find a significant effect of policy uncertainty in the target country on the performance of cross-border deals. The effect of uncertainty in the acquirer country on CAAR development in the country-pair becomes stronger and significant at the 10% level if the interaction effect is incorporated in model (4). To conclude, the table presents evidence that investors react positively to cross-border deal announcements when uncertainty in the acquirer country increases, but fails to provide hard evidence for any influence of the level of uncertainty in the target country or the interaction between uncertainty levels in both countries. Investors do appreciate deals that occur between two countries with the same language, but adversely react to deals between two countries with the same religion.

**Table 10:** Country-pair analysis of policy uncertainty and number of cross-border acquisitions

The results of the panel regressions regarding cross-border deal number per country-pair and quarter are presented in this table. The natural logarithm of the number of cross-border deals plus one between acquirer country  $j$  and target country  $k$  acts as the dependent variable. Only quarters with at least one deal are considered as an observation. WUIa and WUIt represent the independent variables that proxy for policy uncertainty in the acquiring country  $j$  and target country  $k$ , respectively. WUIat is the interacting effect of policy uncertainty in the acquirer country  $j$  and target country  $k$ . The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. All regression models include year-, acquirer-, and target-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	Ln( Cross-border deal number) Pair			
	(1)	(2)	(3)	(4)
WUIa	-0.397 *** (-3.68)		-0.402 *** (-3.69)	-0.438 ** (-2.01)
WUIt		-0.120 (-1.19)	-0.132 (-1.29)	-0.168 (-0.80)
WUIat				0.614 (0.21)
Common Law $j-k$	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
GDP growth $j-k$	-0.002 (-0.66)	-0.001 (-0.33)	-0.001 (-0.55)	-0.001 (-0.55)
Ln(GDP per capita) $j-k$	-0.038 (-1.39)	-0.032 (-1.16)	-0.036 (-1.34)	-0.037 (-1.34)
Trade/GDP $j-k$	-0.001 (-1.17)	-0.001 (-1.33)	-0.001 (-1.24)	-0.001 (-1.24)
Institutional quality $j-k$	0.036 (1.51)	0.041 * (1.72)	0.037 (1.56)	0.037 (1.56)
Investment profile $j-k$	0.006 (1.34)	0.007 (1.37)	0.006 (1.33)	0.006 (1.33)
Similar language	0.440 *** (4.37)	0.440 *** (4.37)	0.440 *** (4.37)	0.440 *** (4.37)
Similar region	0.206 ** (2.79)	0.205 *** (2.77)	0.206 *** (2.79)	0.206 ** (2.79)
Similar religion	0.071 (1.58)	0.072 (1.58)	0.071 (1.57)	0.071 (1.57)
Constant	0.735 *** (23.08)	0.717 *** (21.04)	0.743 *** (22.34)	0.745 *** (22.37)
Time-fixed effects	Yes	Yes	Yes	Yes
Acquirer-fixed effects	Yes	Yes	Yes	Yes
Target-fixed effects	Yes	Yes	Yes	Yes
Observations	6,721	6,721	6,721	6,721
R-squared	0.472	0.471	0.472	0.472

**Table 11:** Country-pair analysis of policy uncertainty and value of cross-border acquisitions

The results of the panel regressions regarding cross-border deal value per country-pair and quarter are presented in this table. The natural logarithm of one plus the value of cross-border deals (million US dollars) between acquirer country  $j$  and target country  $k$  acts as the dependent variable. Only quarters with at least one deal are considered as an observation. WUIa and WUIt represent the independent variables that proxy for policy uncertainty in the acquiring country  $j$  and target country  $k$ , respectively. WUIat is the interaction effect of policy uncertainty in the acquirer country  $j$  and target country  $k$ . The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. All regression models include year-, acquirer-, and target-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	Ln( Cross-border deal value) Pair			
	(1)	(2)	(3)	(4)
WUIa	-1.225 *		-1.253 *	-1.546
	(-1.89)		(-1.94)	(-1.33)
WUIt		-0.776	-0.814	-1.097
		(-1.47)	(-1.55)	(-1.12)
WUIat				4.913
				(0.35)
Common Law $j-k$	0.000	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)
GDP growth $j-k$	0.000	0.003	0.00179	0.002
	(-0.00)	(0.19)	(0.10)	(0.10)
Ln(GDP per capita) $j-k$	-0.355 **	-0.331 **	-0.344 **	-0.345 **
	(-2.38)	(-2.23)	(-2.32)	(-2.32)
Trade/GDP $j-k$	-0.001	-0.001	-0.001	-0.001
	(-0.15)	(-0.26)	(-0.21)	(-0.21)
Institutional quality $j-k$	0.045	0.065	0.052	0.051
	(0.39)	(0.54)	(0.44)	(0.44)
Investment profile $j-k$	0.002	0.003	0.002	0.002
	(0.08)	(0.11)	(0.08)	(0.07)
Similar language	0.730 ***	0.729 ***	0.730 ***	0.730 ***
	(3.86)	(3.85)	(3.86)	(3.86)
Similar region	0.211	0.208	0.211	0.210
	(1.41)	(1.38)	(1.4)	(1.40)
Similar religion	0.107	0.108	0.106	0.106
	(1.06)	(1.07)	(1.05)	(1.05)
Constant	4.309 ***	4.274 ***	4.357 ***	4.373 ***
	(49.57)	(48.09)	(47.73)	(42.11)
Time-fixed effects	Yes	Yes	Yes	Yes
Acquirer-fixed effects	Yes	Yes	Yes	Yes
Target-fixed effects	Yes	Yes	Yes	Yes
Observations	6,721	6,721	6,721	6,721
R-squared	0.230	0.230	0.230	0.230

**Table 12:** Country-pair analysis of policy uncertainty and performance of cross-border acquisitions

This table summarizes a selection of the results of the panel regressions of acquirer country CAARs around acquisition announcements. The dependent variable is cumulative average abnormal return (in %) during the announcement period of three days prior until three days after the announcement date of security  $i$ , the stock of the respective acquiring firm. Daily abnormal returns are estimated by employing the market model approach with an event window of (-155, - 6) days. WUIa and WUIt represent the independent variables that proxy for policy uncertainty in the acquiring country  $j$  and target country  $k$ , respectively. WUIat is the interaction effect of policy uncertainty in the acquirer country  $j$  and target country  $k$ . The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. All regression models include year- and country-pair-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	CAARs [-3,+3]			
	(1)	(2)	(3)	(4)
WUIa	0.031 *		0.030	0.051 *
	(1.66)		(1.63)	(1.74)
WUIt		-0.015	-0.014	0.006
		(-0.79)	(-0.74)	(0.17)
WUIat				-0.353
				(-0.78)
Common Law $j-k$	0.000	0.000	0.000	0.000
	(0.00)	(0.00)	(0.00)	(0.00)
GDP growth $j-k$	0.000	0.000	0.000	0.000
	(0.07)	(0.06)	(0.13)	(0.13)
Ln(GDP per capita) $j-k$	0.012 ***	0.011 **	0.012 ***	0.012 ***
	(2.66)	(2.65)	(2.71)	(2.70)
Trade/GDP $j-k$	0.000	0.000	0.000	0.000
	(-0.41)	(-0.41)	(-0.45)	(-0.45)
Institutional Quality $j-k$	-0.002	-0.002	-0.002	-0.002
	(-0.91)	(-1.00)	(-0.86)	(-0.85)
Investment Profile $j-k$	-0.001	-0.001	-0.001	-0.001
	(-1.25)	(-1.28)	(-1.26)	(-1.24)
Similar Language	0.007 ***	0.007 ***	0.007 ***	0.007 ***
	(3.90)	(3.91)	(3.91)	(3.93)
Similar Religion	-0.004 **	-0.004 **	-0.004 **	-0.004 **
	(-2.34)	(-2.37)	(-2.35)	(-2.34)
Similar Region	0.002	0.002	0.002	0.002
	(1.44)	(1.48)	(1.43)	(1.45)
Constant	0.009 ***	0.012 ***	0.010 ***	0.008 ***
	(4.41)	(7.19)	(4.37)	(3.06)
Time-fixed effects	Yes	Yes	Yes	Yes
Country-fixed effects	Yes	Yes	Yes	Yes
Observations	6,721	6,721	6,721	6,721
R-squared	0.0488	0.0485	0.0489	0.0490



### 4.3 ROBUSTNESS CHECKS

To test the robustness of the results, several additional tests with alternative variables and sample constructions are implemented. Firstly, the data is tested for heteroskedasticity and autocorrelation and subsequently standard errors are employed. These approaches are further described in Appendix F accompanied with the corresponding correlation matrices.

The robustness check for the deal volume tests incorporate alternative independent variables to test for the appropriateness of the moving average of the World Uncertainty Index (WUI) as a measure of political and economic uncertainty. The first alternative measure is the volatility index (VIX) computed by Chicago Board Options Exchange and is applicable for US, Canadian and European deals only. The second alternative measure is the standalone WUI, which is the WUI score that is attributed to a country for the specific quarter in which the deal is announced. Table 13 describes the results of these robustness tests. In models (1), (3), (5), and (7), the VIX is added to the equation with the original WUI metric. It appears that adding the VIX has a marginal effect on the cross-border deal number and value in both the acquiring and target country and is not significant either. In models (2), (4), (6), and (8), the moving average of the WUI is replaced by the standalone WUI levels per country per quarter. The significant relation between the alternative independent variable, the standalone WUI, and cross-border deal value is equally significant, but less distinct than the relation between the originally used WUI and deal volume. This underlines that the decision by firms to engage in cross-border M&A is affected by uncertainty over a longer time-span than just a quarter.

The first robustness check for the country-pair analysis excludes the common law variable. After including country-fixed effects the common law variable appears to be omitted as countries did not change legislative systems in the research period. The second robustness check for the country-pair analysis excludes deals conducted among firms from the United States and the United Kingdom. This test provides insight in whether the results are mainly driven by the most dominant countries that are investigated. Table 14 describes the results of this robustness test. Model (1) - (8) describe the alternative results if the common law variable is excluded from the equation. The findings regarding deal volume among country-pairs are equally strong and statistically significant than the results presented in table 11 and therefore indicate that the common law variable does not raise any collinearity issues. Model (9) – (16) explains the results of the regressions without deals from the United States and the United Kingdom. The regression results differ from the original results presented in table 10 and table 11 and have lost explanatory power. The relation between WUI in the acquiring country and

deal volume altered from significantly negative to insignificantly positive after the modification. Parallely, the relation between the WUI in the target country and deal volume has gained magnitude and becomes significant at the 10% level in model (14) and (15). It is apparent that deals from the United States and United Kingdom weigh heavy on the deal sample selection and biases the original sample.

The robustness checks for the deal performance analysis consist of different event windows and an additional CAR-analysis at deal level. The alternative event windows [-5,+5], [-5,0], and [-3,0] provide a more elaborate picture of value creation in cross-border acquisitions. The 3-day event window [-1,+1] tests for deals with relatively short run-up as a result of insider trading. Lastly, the deal-level CAR-analysis functions as a robustness check to test whether engaging in cross-border acquisitions in uncertain times leads to value creation for the acquiring firms. Table 15 describes the results of the multi-event window CAAR-analysis. The findings are predictable and show equally explanatory power as the models in table 12. CAAR [-5,+5] and the original event window CAAR [-3,+3] yield similar outcomes. The magnitude of the relation between uncertainty in the acquirer country and cumulative average abnormal returns has remained equal, however the effect has become less significant. This relation has increased in model 10, where WUIa is solely regressed with the control variables against CAAR [-3,0]. Table 16 presents the findings of the deal-level CAR-analysis and does not provide surprising results either. The relation between uncertainty in the acquiring country and deal performance is positive, with a coefficient of 0.042 and significant at the 10% level. Uncertainty in the target country and the interaction term play an unimportant role with insignificant coefficients. The explanatory power of the model increases as industry-time-fixed effects (model 5) are included, but does not yield significant results for the policy uncertainty variables.

**Table 13: Robustness check - Deal volume country-level**

This table reports the robustness checks for the deal volume analysis. The regression results for the inbound acquisitions per quarter of the target countries are displayed in columns (1)-(4). The regression estimates for the outbound acquisitions per quarter of the acquiring countries are presented in columns (5)-(8). The dependent variable is  $\ln(\text{cross-border deal number}(\text{value}) \text{ by target country})$ . Only quarters with at least one deal are considered as an observation. WUI represents the independent variable that proxies for weighted average of policy uncertainty in the target country in the last three quarters. WUI *adjusted* represents the standalone WUI-level in the target country and quarter in which the deal was announced. VIX represents the volatility index of the specific quarter in which the deal was announced. Models (1), (3), (5), and (7) only incorporate deals in the US, Canada or Europe. The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	Inbound target				Outbound Acquirer			
	Ln (Deal Number)		Ln (Deal Value)		Ln (Deal Number)		Ln (Deal Value)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
WUI	-0.080 (-0.61)		-0.097 (-0.19)		0.108 (0.91)		0.021 (0.03)	
WUI <i>adjusted</i>		-0.0257 (-1.18)		-0.202** (-2.10)		0.0323 (1.28)		0.111 (1.24)
VIX	-0.002 (-1.12)		-0.011 (-1.11)		0.000846 (0.39)		0.002 (0.36)	
Common Law	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
GDPg	-0.007 (-1.20)	-0.00242 (-0.64)	-0.005 (-0.25)	-0.00896 (-0.57)	0.00593 (1.13)	-0.00582 (-1.17)	0.011 (1.09)	-0.0237 (-1.52)
GDPc	0.062 (1.54)	0.0973** (2.17)	0.043 (0.23)	0.104 (0.81)	-0.00528 (-0.06)	0.0637 (1.27)	-0.062 (-0.24)	-0.0243 (-0.18)
TTG	0.00126* (1.73)	0.000776 (0.91)	0.001 (0.27)	0.00292 (1.25)	-0.00236 (-1.56)	-0.000480 (-0.37)	-0.002 (-0.54)	-0.0000531 (-0.02)
IQ	0.016 (0.68)	0.00630 (0.22)	-0.040 (-0.54)	0.0225 (0.23)	0.0145 (0.27)	-0.00831 (-0.18)	0.119* (1.95)	0.126* (1.72)
IP	0.006 (1.09)	0.00991* (2.01)	0.0631*** (2.95)	0.0576** (2.37)	0.0151 (1.73)	0.0173** (2.32)	0.027 (1.46)	0.0432** (2.41)
Ln (Total Deal Number)	0.828*** (29.70)	0.914*** (64.33)			0.935*** (68.39)	0.906*** (41.79)		
Ln( Total Deal Value)			0.945*** (50.22)	0.968*** (83.33)			0.995*** (74.77)	0.984*** (70.09)
Constant	-0.658 (-1.66)	-1.089** (-2.36)	-0.786 (-0.43)	-1.830 (-1.57)	0.00602 (0.01)	-0.704 (-1.32)	-0.156 (-0.06)	-0.759 (-0.47)
Time-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	1798	2026	1798	2026	1109	1633	1109	1633
R-squared	0.9453	0.9463	0.9717	0.9716	0.9638	0.9460	0.9809	0.9715

**Table 14:** Robustness check - Deal volume country-pair-level

This table presents the robustness checks for the country-pair analysis. Models (1)-(8) present the results of the regressions without incorporating the common law variable. Models (9)-(16) present the results of the regressions without incorporating the deals conducted in the United Kingdom and the United States. The sample covers a time period of between January 2000 and December 2019. All regression models include year-, acquirer-, and target-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	No Common Law variable								No UK & US observations							
	Ln (Deal Number)				Ln (Deal Value)				Ln (Deal Number)				Ln (Deal Value)			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
WUIa	-0.395*** (-3.66)		-0.400*** (-3.68)	-0.436** (-2.00)	-1.221* (-1.89)		-1.249* (-1.94)	-1.543 (-1.32)	0.00473 (0.05)		0.00225 (0.02)	-0.100 (-0.55)	0.602 (0.92)		0.579 (0.90)	1.826 (1.26)
WUIt		-0.120 (-1.19)	-0.132 (-1.29)	-0.167 (-0.80)		-0.774 (-1.46)	-0.812 (-1.55)	-1.096 (-1.12)		-0.145 (-1.22)	-0.145 (-1.21)	-0.241 (-1.44)		-1.310* (-1.73)	-1.301* (-1.72)	-0.137 (-0.10)
WUIat				0.615 (0.21)				4.919 (0.35)				1.825 (0.76)				-22.16 (-1.15)
CL <i>j-k</i>									0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (.)	0 (0.00)	0 (0.00)
GDPg <i>j-k</i>	-0.00164 (-0.71)	-0.000855 (-0.38)	-0.00134 (-0.59)	-0.00135 (-0.59)	-0.000226 (-0.01)	0.00312 (0.18)	0.00159 (0.09)	0.00158 (0.09)	-0.00326* (-1.73)	-0.00292 (-1.46)	-0.00292 (-1.47)	-0.00295 (-1.48)	-0.00619 (-0.30)	-0.00387 (-0.19)	-0.00312 (-0.15)	-0.00273 (-0.13)
GDPc <i>j-k</i>	-0.0365 (-1.33)	-0.0304 (-1.10)	-0.0348 (-1.28)	-0.0349 (-1.28)	-0.354** (-2.36)	-0.329** (-2.22)	-0.343** (-2.31)	-0.343** (-2.31)	-0.0382 (-1.35)	-0.0368 (-1.31)	-0.0368 (-1.31)	-0.0371 (-1.32)	-0.442* (-1.99)	-0.429* (-1.94)	-0.429* (-1.94)	-0.426* (-1.93)
TTG <i>j-k</i>	-0.000853 (-1.16)	-0.000979 (-1.33)	-0.000901 (-1.24)	-0.000899 (-1.23)	-0.000700 (-0.15)	-0.00124 (-0.26)	-0.000994 (-0.21)	-0.000975 (-0.21)	-0.00107** (-2.04)	-0.00112** (-2.07)	-0.00112** (-2.07)	-0.00111** (-2.04)	-0.00219 (-0.43)	-0.00260 (-0.51)	-0.00267 (-0.52)	-0.00283 (-0.55)
IQ <i>j-k</i>	0.0360 (1.51)	0.0414* (1.71)	0.0370 (1.56)	0.0370 (1.56)	0.0454 (0.39)	0.0654 (0.55)	0.0519 (0.44)	0.0516 (0.44)	0.00736 (0.49)	0.00690 (0.47)	0.00690 (0.47)	0.00674 (0.46)	-0.148 (-0.96)	-0.152 (-1.00)	-0.152 (-1.00)	-0.150 (-0.99)
IP <i>j-k</i>	0.00633 (1.35)	0.00657 (1.38)	0.00631 (1.34)	0.00629 (1.33)	0.00215 (0.08)	0.00281 (0.11)	0.00199 (0.08)	0.00189 (0.07)	0.00596* (1.75)	0.00587* (1.73)	0.00587* (1.71)	0.00582* (1.70)	0.0527 (1.44)	0.0523 (1.44)	0.0519 (1.42)	0.0525 (1.44)
SimilarLanguage	0.441*** (4.37)	0.440*** (4.37)	0.441*** (4.37)	0.441*** (4.38)	0.731*** (3.86)	0.730*** (3.85)	0.731*** (3.86)	0.731*** (3.86)	0.0808*** (4.43)	0.0807*** (4.44)	0.0807*** (4.44)	0.0805*** (4.43)	0.128 (0.89)	0.126 (0.88)	0.127 (0.88)	0.129 (0.89)
SimilarRegion	0.206*** (2.79)	0.205*** (2.77)	0.206*** (2.78)	0.205*** (2.78)	0.211 (1.41)	0.208 (1.38)	0.211 (1.40)	0.210 (1.40)	0.0748*** (6.48)	0.0747*** (6.42)	0.0747*** (6.43)	0.0745*** (6.43)	0.0469 (0.52)	0.0482 (0.54)	0.0461 (0.52)	0.0489 (0.55)
SimilarReligion	0.0715 (1.58)	0.0718 (1.58)	0.0713 (1.57)	0.0713 (1.57)	0.107 (1.06)	0.108 (1.07)	0.106 (1.05)	0.106 (1.05)	0.0338*** (3.21)	0.0337*** (3.17)	0.0337*** (3.18)	0.0337*** (3.18)	0.0254 (0.28)	0.0222 (0.24)	0.0240 (0.26)	0.0241 (0.27)
Constant	0.735*** (23.06)	0.716*** (21.03)	0.743*** (22.32)	0.745*** (22.35)	4.308*** (49.59)	4.273*** (48.10)	4.356*** (47.72)	4.372*** (42.10)	0.702*** (52.58)	0.710*** (42.37)	0.710*** (39.86)	0.716*** (37.82)	4.073*** (32.63)	4.180*** (32.21)	4.150*** (32.41)	4.086*** (29.57)
Time-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Acquirer-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Target-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6721	6721	6721	6721	6721	6721	6721	6721	3376	3376	3376	3376	3376	3376	3376	3376
R-squared	0.4716	0.4710	0.4717	0.4717	0.2296	0.2294	0.2298	0.2298	0.1563	0.1569	0.1569	0.1571	0.1532	0.1536	0.1537	0.1540

**Table 15: Robustness check - Deal performance country-pair-level**

This table reports the results of the robustness checks for the deal-performance analysis with alternative event windows. The sample covers a time period of between January 2000 and December 2019. All regression models include year- and country-pair-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	CAAR [-5,+5]			CAAR [-1,+1]			CAAR [-5,0]			CAAR [-3,0]		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
WUIa	0.0327 (1.34)		0.0346 (0.86)	0.00951 (0.70)		0.0229 (0.91)	0.0267 (1.61)		0.0150 (0.56)	0.0255** (2.00)		0.0218 (0.93)
WUIt		-0.0269 (-1.40)	-0.0233 (-0.64)		-0.00785 (-0.51)	0.00558 (0.22)		-0.0137 (-1.07)	-0.0238 (-0.92)		-0.00768 (-0.67)	-0.0103 (-0.42)
WUIat			-0.0466 (-0.09)			-0.228 (-0.67)			0.188 (0.48)			0.0585 (0.16)
Common Law $j-k$	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)	0.000 (0.00)
GDP growth $j-k$	-0.000356 (-0.57)	-0.000337 (-0.54)	-0.000298 (-0.47)	0.000257 (0.66)	0.000262 (0.68)	0.000274 (0.72)	-0.0000992 (-0.23)	-0.000102 (-0.24)	-0.0000708 (-0.17)	0.0000559 (0.16)	0.0000404 (0.11)	0.0000712 (0.20)
Ln(GDP per capita) $j-k$	0.0118** (2.43)	0.0118** (2.43)	0.0121** (2.49)	0.00500 (1.32)	0.00500 (1.34)	0.00512 (1.36)	0.00393 (0.97)	0.00382 (0.94)	0.00409 (1.00)	0.00614* (1.86)	0.00595* (1.80)	0.00622* (1.88)
Trade/GDP $j-k$	0.0000108 (0.07)	0.0000755 (0.05)	0.0000117 (0.01)	-0.0000660 (-0.65)	-0.0000669 (-0.65)	-0.0000696 (-0.67)	-0.0000128 (-0.13)	-0.0000124 (-0.12)	-0.0000168 (-0.16)	-0.0000138 (-0.15)	-0.0000114 (-0.12)	-0.0000161 (-0.17)
Institutional Quality $j-k$	-0.00213 (-0.83)	-0.00227 (-0.88)	-0.010192 (-0.74)	-0.000569 (-0.26)	-0.000610 (-0.27)	-0.000499 (-0.23)	0.000291 (0.11)	0.000108 (0.04)	0.000385 (0.14)	-0.000174 (-0.08)	-0.000394 (-0.18)	-0.000122 (-0.06)
Investment Profile $j-k$	-0.000644 (-0.98)	-0.000670 (-1.02)	-0.000648 (-0.99)	-0.000265 (-0.56)	-0.000273 (-0.57)	-0.000262 (-0.55)	-0.000550 (-0.93)	-0.000570 (-0.96)	-0.000557 (-0.94)	-0.000446 (-1.01)	-0.000464 (-1.04)	-0.000449 (-1.01)
Similar Language	0.00807*** (3.98)	0.00811*** (3.98)	0.00808*** (4.00)	0.000948 (0.62)	0.000960 (0.63)	0.000965 (0.63)	0.00537*** (3.16)	0.00541*** (3.19)	0.00537*** (3.17)	0.00479*** (3.33)	0.00482*** (3.36)	0.00479*** (3.34)
Similar Religion	-0.00586*** (-3.54)	-0.00592*** (-3.58)	-0.00588*** (-3.57)	-0.00120 (-1.01)	-0.00122 (-1.03)	-0.00120 (-1.01)	-0.00208* (-1.72)	-0.00212* (-1.76)	-0.00210* (-1.75)	-0.00148 (-1.42)	-0.00152 (-1.45)	-0.00149 (-1.43)
Similar Region	0.00228 (1.41)	0.00233 (1.44)	0.00226 (1.40)	0.00136 (1.20)	0.00137 (1.21)	0.00137 (1.21)	0.00279** (2.45)	0.00284** (2.50)	0.00277** (2.45)	0.00154 (1.42)	0.00159 (1.46)	0.00153 (1.42)
Constant	0.00951*** (3.89)	0.0131*** (7.23)	0.0109*** (3.35)	0.0101*** (7.07)	0.0112*** (8.56)	0.00980*** (4.82)	0.00612*** (4.13)	0.00860*** (8.14)	0.00750*** (4.28)	0.00511*** (4.08)	0.00718*** (7.03)	0.00570*** (3.42)
Time-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Country-fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	6721	6721	6721	6721	6721	6721	6721	6721	6721	6721	6721	6721
R-squared	0.0506	0.0505	0.0508	0.0456	0.0456	0.0457	0.0458	0.0455	0.0459	0.0422	0.0418	0.0422

**Table 16:** Robustness check - Deal performance deal-level

This table summarizes a selection of the deal-level results of the panel regressions of acquirer CARs around acquisition announcements. The dependent variable is cumulative abnormal return (in %) during the announcement period of three days prior until three days after the announcement date of security  $i$ , the stock of the respective acquiring firm. Daily abnormal returns are estimated by employing the market model approach with an event window of (-155, - 6) days. WUIa and WUIt represent the independent variables that proxy for policy uncertainty in the acquiring country  $j$  and target country  $k$ , respectively. WUIat is the interaction effect of policy uncertainty in the acquirer country  $j$  and target country  $k$ . The control variables are explained in the variable list in appendix A. The sample covers a time period of between January 2000 and December 2019. All regression models include year-, country-, and industry-fixed effects. Model (5) includes additional industry-time-fixed effects. The robust standard errors, to correct for autocorrelation and heteroskedasticity, are clustered at the country-level and quarter-level. The table displays both the coefficients as well as t-statistic, between parentheses, for all variables. The significance-level is represented by \*\*\*, \*\*, and \* respectively corresponding with significance-levels 1%, 5%, and 10%.

	CARs[-3,3]				
	(1)	(2)	(3)	(4)	(5)
WUIa	0.042 *		0.042 *	0.049	0.053
	(1.90)		(1.87)	(1.20)	(1.00)
WUIt		-0.002	0.000	0.007	0.032
		(-0.08)	(0.00)	(0.14)	(0.64)
WUIat				-0.11	-0.314
				(-0.17)	(-0.34)
Common Law $j-k$	0.002	0.002	0.002	0.002	0.002
	(0.93)	(0.97)	(0.92)	(0.93)	(0.78)
GDP growth $j-k$	0.000	-0.001	0.000	0.000	0.000
	(-0.01)	(-0.07)	(-0.01)	(-0.01)	(-0.59)
Ln(GDP per capita) $j-k$	0.002	0.002	0.002	0.002	0.001
	(0.97)	(0.95)	(0.95)	(0.95)	(0.30)
Trade/GDP $j-k$	0.000	0.000	0.000	0.000	0.000
	(0.72)	(0.81)	(0.72)	(0.73)	(0.82)
Institutional Quality $j-k$	-0.003 *	-0.003 *	-0.003 *	-0.003 *	-0.002
	(-1.98)	(-1.91)	(-1.86)	(-1.85)	(-1.05)
Investment Profile $j-k$	-0.001	-0.001	-0.001	-0.001	-0.001
	(-0.90)	(-0.93)	(-0.89)	(-0.90)	(-1.21)
Ln(Deal Value)	-0.001 **	-0.001 **	-0.001 **	-0.001 **	-0.001
	(-2.34)	(-2.35)	(-2.34)	(-2.34)	(-1.29)
Diversifying Deal	0.000	0.000	0.000	0.000	-0.002
	(-0.15)	(-0.15)	(-0.15)	(-0.15)	(-1.31)
Public Target	-0.017 ***	-0.017 ***	-0.017 ***	-0.017 ***	-0.022 ***
	(-3.96)	(-3.94)	(-3.95)	(-3.94)	(-4.23)
Related Deal	0.015 ***	0.015 ***	0.015 ***	0.015 ***	0.015 ***
	(4.85)	(4.81)	(4.84)	(4.83)	(3.85)
Constant	0.0182 ***	0.0208 ***	0.0182 ***	0.0178 ***	0.0166 ***
	(9.61)	(8.41)	(6.39)	(5.10)	(3.99)
Time-fixed effects	Yes	Yes	Yes	Yes	Yes
Country-fixed effects	Yes	Yes	Yes	Yes	Yes
Industry-fixed effects	Yes	Yes	Yes	Yes	Yes
Industry-time-fixed effects	No	No	No	No	Yes
Observations	13,567	13,567	13,567	13,567	12,627
R-squared	0.038	0.038	0.038	0.038	0.1569

## V. Conclusion

### Concluding remarks

Cross-border mergers and acquisitions are crucial in the economic climate. They are, however, subject to additional inherent risk factors when compared to domestic acquisitions, which makes them perceived as more risky. During periods of crises, wars, natural disasters or the shift of power, it is increasingly difficult for companies to predict economic and political conditions for their future business practices. This uncertainty is referred to as economic policy uncertainty and has gained attention of economic scholars in the last few years (Baker et al., 2016). In the light of economic policy uncertainty, firms become cautious and significantly reduce corporate spending (Bernanke, 1983; Pastor & Veronesi, 2010). The US presidential elections, developments around Brexit and the current COVID-19 crisis demonstrate the relevance of this thesis' research question. The empirical analysis was executed with a sample of 15,910 cross-border M&A deals from 41 different countries from multiple continents, representing a total value of 6.1 trillion USD. The study investigated the impact of policy uncertainty on deal volume, expressed as number and value of deals, and deal performance, expressed as cumulative average abnormal returns, over the period of January 2000 to December 2019. The deal data, as input for the dependent variables, was retrieved from the Thomson Financials database. The data of independent and control variables was obtained from the Datastream financial database, Thomson Financials, The World Bank, and ICRG reports. The deal volume analysis was conducted through multiple OLS regressions. The deal performance analysis was conducted with event study methodology, to obtain the CAARs, which were subsequently used as dependent variables in the following OLS regressions. Robustness checks were executed with alternative dependent variable specifications, sample constructions and time intervals. Furthermore, the data was tested for heterogeneity, autocorrelation and multicollinearity, which lead to the utilization of robust standard errors.

### Summary of empirical results

The empirical results on the outbound acquisitions in the acquirer country suggest a positive impact of policy uncertainty on firm acquisitiveness and provide support for the diversification hypothesis of Cao et al. (2015), which states that policy uncertainty in the acquirer country stimulates firms to engage in cross-border acquisitions and subsequently leads to an increase in deal performance.

The effect of policy uncertainty on inbound acquisitions in the target country appears to be negative. The empirical results find a significant decrease in the value of deals, and an insignificant decrease in the number and performance of deals when policy uncertainty is high in the target country. Since only deal value is significantly affected, these results can be considered limited evidence of the deterrence hypothesis (Cao et al., 2015; Chen et al., 2018; Gulen & Ion, 2016), which states a negative relationship between policy uncertainty in the target country and firm acquisitiveness.

The country-pair analysis yields different results than the previous analyses, as the number of deals is significantly decreased by policy uncertainty in the acquirer country. This is proof of a limiting impact of policy uncertainty on the level of corporate investments in the form of cross-border mergers and acquisitions. When deals from and to the US and UK are omitted in the robustness checks, it is observable that the effect of policy uncertainty in the acquirer country on deal activity is insignificantly positive, similar to the single country-analyses. This signals that the great magnitude of UK and US deals in the deal sample does influence the results and that the effects presented in the country-pair-analyses can largely be assigned to policy uncertainty fluctuations in the UK and US. This study finds no evidence of an relation between policy uncertainty in the target country and country-pair volume. The insignificantly positive interaction effect hints at possible alternative explanations for cross-border acquisitions. The coefficients for Similar Language and Similar Region are positive and highly significant, which suggests that firms might rather choose targets based on those criteria than seeking investment opportunities in countries that have relatively low policy uncertainty. Deal performance of country-pair cross-border acquisitions significantly increases if policy uncertainty is high in the acquirer country. The results prove that investors approve these investments in times of high domestic policy uncertainty. The relationship between policy uncertainty in target country and country-pair deal performance is insignificantly increasing and the interaction effect is insignificantly negative. These findings do not provide evidence for risk averse character of investors and the value destroying effect of cross-border deals into uncertain target countries as suggested by Julio & Yook (2012).

### Practical implications

Based on the results yielded by this thesis, it is possible to provide advice for both investors and policymakers. Several tools to check for policy uncertainty developments are the WUI and EPU-index, provided by the IMF. Also Blackrock has created a policy uncertainty index with special insights for investors. Furthermore, for more in-depth information, interested parties



can read the Economics Intelligence Unit (EIU) reports that were used as input for the World Uncertainty Index of Ahir et al. (2018).

Investors seek the highest possible return for their assets. It is therefore advisable to follow and consider economic and policy developments in acquirer countries. This market research appears to be useful, as the country-pair analysis indicates that investors can make a positive return when uncertainty is high in the acquirer country. Investors should therefore not exit before the announcement of outbound cross-border M&As as the research finds that cumulative average abnormal returns are positive around the announcement date. The investor does not have to deeply consider policy uncertainty in the target country as this study does not find proof of a significantly reducing impact on the cumulative average abnormal returns of cross-border M&As.

It is in the interest of policymakers to educate themselves on perceived uncertainty by economic agents as spikes in the uncertainty metrics foreshadow a decrease in economic activity (Ahir et al., 2018). This thesis provides additional use of the WUI, because it hints at an increase in outbound cross-border M&A, an outflow of capital, in times of high uncertainty. For US and UK policymakers, it appears that policy uncertainty does negatively influence cross-border M&A. It is advisable that policy makers invest in the market for corporate control as countries with stronger shareholder protection, judiciary systems and business environments suffer less from policy uncertainty shocks.

#### Limitations and future research

Finally, this section will elaborate on several limitations of this thesis and will raise suggestions for further research to improve general understanding of the impact of policy uncertainty on cross-border acquisitions.

Firstly, the sample and variable selection is limited due to the restrictions of data availability. The WUI has proven to be a useful metric for comparing worldwide uncertainty and facilitates global examination of cross-border acquisitions trends. However, it is hardly possible to collect stock market data and firm information from companies in every country, since this information is not well documented or publicly available in every country. This limited the scope of this research to 41 countries as it is not possible to collect for all 143 countries that the WUI encompasses. Global documenting and reporting standards do increase over time, therefore it will be possible to investigate this topic more thoroughly in the future. Furthermore, future research can put additional focus on inter-country differences to explain differences in cross-border M&A behavior.

Secondly, the Thomson Financials database provided limited information on individual firm characteristics, obstructing firm-level analysis. The database did not provide ISIN codes, therefore it was not possible to include firm specific information from other databases. It is possible that this research might capture an effect of policy uncertainty that may actually be assigned to omitted variables. For further research on cross-border deal activity and performance it would be interesting to include more firm-related variables to account for endogeneity issues as cross-border acquisitions are not solely a result of exogenous shocks. The effect might vary across different industries, thus can be an interesting aspect to add to the analysis.

Thirdly, this study focuses on cross-border mergers and acquisitions that were executed between 2000 and 2020. It only captures the merger wave between 2003 and 2007 and is possibly susceptible to time specific trends. For further investigation it might be interesting to broaden the scope and research earlier merger activities as well to provide multi-century evidence of cross-border acquisition influences. Possibly, additional WUI-lags can shed a light on long-term uncertainty influences. Additionally, new research can divert from mergers and acquisitions and rather dive deeper into the influence of policy uncertainty on cross-border deal type and method of payment decisions, or the decision to acquirer multinational targets or domestically focused targets.

Fourthly, the event study captures short term effects of policy uncertainty and deal performance. Extrapolation of the event study to longer term effects can offer an interesting new research topic. The estimations for the event period as well as the estimation period are subjectively determined and can offer room for discussion and alternative research designs. Also, this event study determines abnormal returns based on expected return calculations, whereas it might be insightful to determine abnormal returns based on general market or country wide returns.

Lastly, the independent control variables utilized are partly computed on the basis of subjective indices. The ICRG reports are generally accepted as well reviewed index measures for the institutional quality and investment profile, but using different sources like the World Institutional Quality Ranking (Kunčič, 2014) might possibly lead to different outcomes and new insights. This thesis used religion as a proxy for cultural proximity and, although this has been an accepted measure, it is also possible for future research to include the five cultural dimensions of Hofstede (1984).

## REFERENCES

- Adra, S., Barbopoulos, L. G., & Saunders, A. (2020). The impact of monetary policy on M&A outcomes. *Journal of Corporate Finance*, 62(February 2019). <https://doi.org/10.1016/j.jcorpfin.2019.101529>
- Ahern, K. R., Daminelli, D., & Fracassi, C. (2012). Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*, 117(1), 165–189. <https://doi.org/10.1016/j.jfineco.2012.08.006>
- Ahir, H., Bloom, N., & Furceri, D. (2018). The World Uncertainty Index. *SSRN Electronic Journal*, 19. <https://doi.org/10.2139/ssrn.3275033>
- Akerlof, G. A., & Shiller, R. J. (2010). Animal Spirits: How Human Psychology Drives the Economy, and Why it Matters for Global Capitalism. In *Princeton University Press*. Princeton University Press.
- Altman, J. (2015). *Managing Risk in Infrastructure: Qualifying and Quantifying the Impact of External Risk Factors, and Strategies for Mitigating Them*. Private Equity International.
- Andrade, G., Mitchell, M., & Stafford, E. (2001). New evidence and perspectives on mergers. *Journal of Economic Perspectives*, 15(2), 103–120. <https://doi.org/10.1257/jep.15.2.103>
- Baker, S. R., Bloom, N., & Davis, S. J. (2016). Measuring Economic Policy Uncertainty. *The Quarterly Journal of Economics*, 131(4), 0–52. <https://doi.org/10.1093/qje/qjw024>. Advance
- Barber, B. M., & Lyon, J. D. (1996). Detecting abnormal operating performance: The empirical power and specification of test statistics. *Journal of Financial Economics*, 41(3), 359–399. [https://doi.org/10.1016/0304-405X\(96\)84701-5](https://doi.org/10.1016/0304-405X(96)84701-5)
- Barkema, H. G., Bell, J. H. J., & Pennings, J. M. (1996). Foreign Entry , Cultural Barriers , and Learning Author. *Strategic Management Journal*, 17(2), 151–166.
- Bekaert, G., Harvey, C. R., & Lundblad, C. (2005). Does financial liberalization spur growth? *Journal of Financial Economics*, 77(1), 3–55. <https://doi.org/10.1016/j.jfineco.2004.05.007>
- Berger, P. G., & Ofek, E. (1995). Diversification's effect on firm value. *Journal of Financial Economics*, 37(1), 39–65.
- Bernanke, B. S. (1983). Irreversibility, Uncertainty, and Cyclical Investment. *The Quarterly Journal of Economics*, 98(1), 85–106.
- Bhagwat, V., Dam, R., & Harford, J. (2016). The real effects of uncertainty on merger activity. *Review of Financial Studies*, 29(11), 3000–3034. <https://doi.org/10.1093/rfs/hhw061>
- Bloom, N. (2009). The Impact of Uncertainty Shocks. *Econometrica*, 77(3), 623–685. <https://doi.org/10.4337/9781781953518.00018>
- Bobasu, A., Geis, A., Quaglietti, L., & Ricci, M. (2020). Tracking global economic uncertainty: implications for global investment and trade. *ECB Economic Bulletin*, 1(1).
- Boehmer, Musumeci, & Poulsen. (1991). of Spfits. *Journal of Financial Economics*, 30(2), 253–272. [https://doi.org/10.1016/0304-405X\(91\)90032-F](https://doi.org/10.1016/0304-405X(91)90032-F)
- Bonaime, A., Gulen, H., & Ion, M. (2018). Does policy uncertainty affect mergers and acquisitions? *Journal of Financial Economics*, 129(3), 531–558. <https://doi.org/10.1016/j.jfineco.2018.05.007>
- Boutchkova, M., Durnev, A., & Molchanov, A. (2012). *The Society for Financial Studies Precarious Politics and Return Volatility Author ( s ): Maria Boutchkova , Hitesh Doshi , Art Durnev and Alexander Molchanov Published by : Oxford University Press . Sponsor : The Society for Financial Studies . Stable UR. 25(4), 1111–1154.*
- Breinlich, H., Leromain, E., Novy, D., & Sampson, T. (2017). The Brexit Vote and Inflation. *Center for Economic Performance*, 11. <http://ukandeu.ac.uk/wp-content/uploads/2017/11/The-Brexit-Vote-Inflation-and-UK-Living-Standards.pdf>
- Brewer, H. L. (1981). Investor Benefits from Corporate International Diversification. *The Journal of Financial and Quantitative Analysis*, 16(1), 113–126.

- Bris, A., Brisley, N., & Cabolis, C. (2008). Adopting better corporate governance: Evidence from cross-border mergers. *Journal of Corporate Finance*, 14(3), 224–240. <https://doi.org/10.1016/j.jcorpfin.2008.03.005>
- Bris, A., & Cabolis, C. (2008). The value of investor protection: Firm evidence from cross-border mergers. *Review of Financial Studies*, 21(2), 605–648. <https://doi.org/10.1093/rfs/hhm089>
- Brockman, P., Rui, O. M., & Zou, H. (2013). Institutions and the performance of politically connected MandAs. *Journal of International Business Studies*, 44(8), 833–852. <https://doi.org/10.1057/jibs.2013.37>
- Brouthers, K. D., Van Hastenburg, P., & Van Den Ven, J. (1998). If most mergers fail why are they so popular? *Long Range Planning*, 31(3), 347–353. [https://doi.org/10.1016/S0024-6301\(98\)80002-2](https://doi.org/10.1016/S0024-6301(98)80002-2)
- Calipha, R., Tarba, S., & Brock, D. (2010). Mergers and acquisitions: A review of phases, motives, and success factors. In *Advances in Mergers and Acquisitions* (Vol. 9, Issue 2010). Elsevier. [https://doi.org/10.1108/S1479-361X\(2010\)0000009004](https://doi.org/10.1108/S1479-361X(2010)0000009004)
- Campbell, C. J., Cowan, A. R., & Salotti, V. (2010). Multi-country event-study methods. *Journal of Banking and Finance*, 34(12), 3078–3090. <https://doi.org/10.1016/j.jbankfin.2010.07.016>
- Cao, C., Li, X., & Liu, G. (2015). Political Uncertainty and Cross-Border Acquisitions. *Review of Finance*, 23(2), 439–470. <https://doi.org/10.1093/rof/rfx055>
- Chalençon, L., Colovic, A., Lamotte, O., & Mayrhofer, U. (2017). Reputation, E-Reputation, and Value-Creation of Mergers and Acquisitions. *International Studies of Management and Organization*, 47(1), 4–22. <https://doi.org/10.1080/00208825.2017.1241086>
- Chan, A. W. H., & Cheung, H. Y. (2016). Extraversion, individualism and M&A activities. *International Business Review*, 25(1), 356–369. <https://doi.org/10.1016/j.ibusrev.2015.05.011>
- Chen, Z., Cihan, M., Jens, C., & Page, T. B. (2018). Political Uncertainty and Firm Investment: Project-Level Evidence from M&A Activity. *SSRN Electronic Journal*, July. <https://doi.org/10.2139/ssrn.2807242>
- Chowdhury, R. H., & Maung, M. (2018). Historical ties between nations: How do they matter in cross-border mergers and acquisitions? *International Review of Economics and Finance*, 58(February), 30–48. <https://doi.org/10.1016/j.iref.2018.02.022>
- Coles, J. L., Daniel, N. D., & Naveen, L. (2006). Managerial incentives and risk-taking. *Journal of Financial Economics*, 79(2), 431–468. <https://doi.org/10.1016/j.jfineco.2004.09.004>
- Das, A., & Kapil, S. (2012). Explaining M&A performance: a review of empirical research. *Journal of Strategy and Management*, 5(3), 284–330. <https://doi.org/10.1108/17554251211247580>
- Davis, G. F., & Cobb, J. A. (2010). Chapter 2: Resource dependence theory: Past and future. In *Research in the Sociology of Organizations* (Vol. 28, Issue 2010). Elsevier. [https://doi.org/10.1108/s0733-558x\(2010\)0000028006](https://doi.org/10.1108/s0733-558x(2010)0000028006)
- Desai, M. A., Fritz Foley, C., & Hines, J. R. (2004). A multinational perspective on capital structure choice and internal capital markets. *Journal of Finance*, 59(6), 2451–2487. <https://doi.org/10.1111/j.1540-6261.2004.00706.x>
- Dong, M., Hirshleifer, D., Richardson, S., & Teoh, S. H. (2006). Does investor misvaluation drive the takeover market? *Journal of Finance*, 61(2), 725–762. <https://doi.org/10.1111/j.1540-6261.2006.00853.x>
- Durnev, A. (2012). The Real Effects of Political Uncertainty: Elections and Investment Sensitivity to Stock Prices. *SSRN Electronic Journal*, 514. <https://doi.org/10.2139/ssrn.1695382>
- Eckbo, B. E. (2009). Bidding strategies and takeover premiums: A review. *Journal of Corporate Finance*, 15(1), 149–178. <https://doi.org/10.1016/j.jcorpfin.2008.09.016>
- El-Khatib, R., Fogel, K., & Jandik, T. (2015). CEO network centrality and merger performance. *Journal of Financial Economics*, 116(2), 349–382. <https://doi.org/10.1016/j.jfineco.2015.01.001>
- Ellis, J., Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2011). Globalization, Governance, and the Returns to Cross-border Acquisitions. In *NBER Working Paper* (Vol. 16676).
- Erel, I., Liao, R. C., & Weisbach, M. S. (2012). American Finance Association Determinants of Cross-Border

Mergers and Acquisitions Authors ( s ): ISIL EREL , ROSE C . LIAO and MICHAEL S . WEISBACH  
Source : The Journal of Finance , Vol . 67 , No . 3 ( JUNE 2012 ) , pp . 1045-1082 Published by : Wiley  
for. *The Journal of Finance*, 67(3), 1045–1082.

- Fatemi, A. M. (1984). American Finance Association Shareholder Benefits from Corporate International Diversification. *The Journal of Finance*, 39(5), 1325–1344.
- Franklin, J. (2020). Covid-19: M&A market stalls amid uncertainty. *International Financial Law Review*, 1–5. [https://search.proquest.com/docview/2391745077?accountid=26724%0Ahttp://sfx.library.cdc.gov/cdc/?url\\_ver=Z39.88-2004&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aabiglobal&atitle=Covid-19%3A+M%26amp%3Bamp%3BA+market+stalls+amid+u](https://search.proquest.com/docview/2391745077?accountid=26724%0Ahttp://sfx.library.cdc.gov/cdc/?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:journal&genre=article&sid=ProQ:ProQ%3Aabiglobal&atitle=Covid-19%3A+M%26amp%3Bamp%3BA+market+stalls+amid+u)
- Galí, J., & Gambetti, L. (2015). The Effects of Monetary Policy on Stock Market Bubbles: Some Evidence. *American Economic Journal*, 7(1), 233–257.
- Garfinkel, J. A., & Hankins, K. W. (2011). The role of risk management in mergers and merger waves. *Journal of Financial Economics*, 101(3), 515–532. <https://doi.org/10.1016/j.jfineco.2011.03.011>
- Gaughan, P. A. (2002). *Mergers, Acquisitions, and Corporate Restructurings* (Third). John Wiley & Sons.
- Gulen, H., & Ion, M. (2016). Policy uncertainty and corporate investment. *Review of Financial Studies*, 29(3), 523–564. <https://doi.org/10.1093/rfs/hhv050>
- Harford, J. (1999). Corporate Cash Reserves and Acquisitions. *The Journal of Finance*, 54(6), 1969–1997.
- Hassan, I., Ghauri, P. N., & Mayrhofer, U. (2018). Merger and acquisition motives and outcome assessment. *Thunderbird International Business Review*, 60(4), 709–718. <https://doi.org/10.1002/tie.21967>
- Henisz, W. J., & Zelner, B. A. (1999). Political Risk and Infrastructure Investment. *Infrastructure for Development: Confronting Political and Regulatory Risks The Government of Italy and The World Bank Group September 8-10, 1999 Rome, Italy*. <http://knowledge.emory.edu/papers/838.pdf>
- Hoberg, G., & Phillips, G. (2010). Product Market Synergies and Competition in Mergers and Acquisitions : A Text-Based Analysis Author ( s ): Gerard Hoberg and Gordon Phillips Published by : Oxford University Press . Sponsor : The Society for Financial Stu. *Review of Financial Studies*, 23(10), 3773–3811.
- Hofstede, G. (1984). Cultural dimensions in management and planning. *Asia Pacific Journal of Management*, 1(2), 81–99. <https://doi.org/10.1007/BF01733682>
- IMF. (2019). *World Economic Outlook*. World Economic Outlook.
- Jensen, M. C. (1986). American Economic Association Agency Costs of Free Cash Flow , Corporate Finance , and Takeovers. *The American Economic Review*, 76(2), 323–329.
- Jenter, D., & Lewellen, K. (2015). CEO Preferences and Acquisitions. *The American Finance Association*, 70(6), 2813–2851. <https://doi.org/10.1111/jofi.12283>
- Jovanovic, B., & Braguinsky, S. (2002). American Economic Association Bidder Discounts and Target Premia in Takeovers. *The American Economic Review*, 94(1), 46–56.
- Julio, B., & Yook, Y. (2012). Political Uncertainty and Corporate Investment Cycles Published by : Wiley for the American Finance Association Stable URL : <https://www.jstor.org/stable/41419671> Political Uncertainty and Corporate Investment Cycles. *The Journal of Finance*, 67(1), 45–83.
- Kunčič, A. (2014). Institutional quality dataset. *Journal of Institutional Economics*, 10(1), 135–161. <https://doi.org/10.1017/S1744137413000192>
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (1998). Law and Finace. In *NBER Working Paper* (Issue 5661). <http://www.sciencedirect.com/science/article/pii/S0304405X00000659>
- Leahy, J. V., & Whited, T. M. (1996). The Effect of Uncertainty on Investment: Some Stylized Facts. *Journal of Money, Credit and Banking*, 28(1), 64. <https://doi.org/10.2307/2077967>
- Lin, H.-C., & Chou, Y.-Y. (2016). The Impact of Industry Commonality on Post-merger Performance. *Advances in Economics and Business*, 4(6), 297–305. <https://doi.org/10.13189/aeb.2016.040604>

- Lubatkin, M. (1987). *Merger Strategies and Stockholder Value*. 8(1), 39–53.
- Ludvigson Sydney C., Sai Ma, & Ng, S. (2018). Uncertainty and business cycles: exogenous impulse or endogenous response? *Working Paper*.
- MacKinlay, A. C. (1997). Event Studies in Economics and Finance. *Journal of Economic Literature*, 35(1), 13–39.
- Martynova, M., & Renneboog, L. (2008). A century of corporate takeovers: What have we learned and where do we stand? *Journal of Banking and Finance*, 32(10), 2148–2177.  
<https://doi.org/10.1016/j.jbankfin.2007.12.038>
- Mclaughlin, R. M., & Mehran, H. (1995). Regulation and the market for corporate control: Hostile tender offers for electric and gas utilities. *Journal of Regulatory Economics*, 8(2), 181–204.  
<https://doi.org/10.1007/BF01072589>
- Mitchell, M. L., & Mulherin, J. H. (1996). The impact of industry shocks on takeover and restructuring activity. *Journal of Financial Economics*, 41(2), 193–229. [https://doi.org/10.1016/0304-405X\(95\)00860-H](https://doi.org/10.1016/0304-405X(95)00860-H)
- Moeller, S. B., Schlingemann, F. P., & Stulz, R. M. (2004). Firm size and the gains from acquisitions. *Journal of Financial Economics*, 73(2), 201–228. <https://doi.org/10.1016/j.jfineco.2003.07.002>
- Morck, R., & Yeung, B. (1990). *Why investors value multinationality* (No. 607R).
- Morosini, P., Shane, S., & Singh, H. (1998). National Cultural Distance and Cross-Border Acquisition Performance. *Journal of International Business Studies*, 29(1), 137–158.
- Mukherjee, T. K., Kiyamaz, H., & Kent Baker, H. (2004). Merger Motives and Target Valuation: A Survey of Evidence from CFOs. *Journal of Applied Finance*, 130(2), 556.  
<http://dx.doi.org/10.1016/j.jaci.2012.05.050>
- Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. *Journal of Financial Economics*, 13(2), 187–221.  
[https://doi.org/10.1016/0304-405X\(84\)90023-0](https://doi.org/10.1016/0304-405X(84)90023-0)
- Nguyen, N. H., & Phan, H. V. (2017). Policy Uncertainty and Mergers and Acquisitions. In *Journal of Financial and Quantitative Analysis* (Vol. 52, Issue 2). <https://doi.org/10.1017/S0022109017000175>
- Nowzohour, L., & Stracca, L. (2017). More than a feeling: Confidence, uncertainty and macroeconomic fluctuations. *ECB Working Paper*, 2100. <https://doi.org/10.2866/796782>
- Pastor, L., & Veronesi, P. (2010). *Uncertainty About Government Policy and Stock Returns*. 1–60.
- Rajan, R. S., & Marwah, S. (1998). The Effects of Policy Uncertainty on the Choice and Timing of Foreign Direct Investment : An Exploratory Firm-Level Assessment. *Journal of Economic Development*, 23(1), 37–58.
- Rhodes-kropf, A. M., & Viswanathan, S. (2016). Market Valuation and Merger Waves. *The American Finance Association*, 59(6), 2685–2718.
- Roll, R. (1986). The Hubris Hypothesis of Corporate Takeovers. *The Journal of Business*, 59(2), 197.  
<https://doi.org/10.1086/296325>
- Rossi, S., & Volpin, P. F. (2004). Cross-country determinants of mergers and acquisitions. *Journal of Financial Economics*, 74(2), 277–304. <https://doi.org/10.1016/j.jfineco.2003.10.001>
- Rostagno, M., Altavilla, C., Carboni, G., Lemke, W., Motto, R., Saint Guilhem, A., & Yiangou, J. (2019). A Tale of Two Decades: the ECB’s Monetary Policy at 20. *ECB Working Paper Series*, December(2346).  
<https://doi.org/10.20955/r.85.67>
- Severn, A. K. (1974). Investor Evaluation of Foreign and Domestic Risk. *The Journal of Finance*, 29(2), 545–550.
- Shleifer, A., & Vishny, R. W. (1992). American Finance Association Liquidation Values and Debt Capacity : A Market Equilibrium Approach Authors ( s ): Andrei Shleifer and Robert W . Vishny Source : The Journal of Finance , Vol . 47 , No . 4 ( Sep . , 1992 ) , pp . 1343-1366 Published by : Wiley. *The Journal of*

*Finance*, 47(4), 1343–1366.

- Stulz, R. M., & Williamson, R. (2003). Culture, openness, and finance. *Journal of Financial Economics*, 70(3), 313–349. [https://doi.org/10.1016/S0304-405X\(03\)00173-9](https://doi.org/10.1016/S0304-405X(03)00173-9)
- Tichy, G. (2001). What Do We Know about Success and Failure of Mergers?—Rejoinder. *Journal of Industry, Competition and Trade*, 1(4), 431–440. <https://doi.org/10.1023/A:1019575127113>
- Trautwein, F. (1990). *Merger Motives and Merger Prescriptions Author*. 11(4), 283–295.
- Travlos, N. G. . (1987). American Finance Association Corporate Takeover Bids , Methods of Payment , and Bidding Firms ' Stock Returns Author ( s ): Nickolaos G . Travlos Source : The Journal of Finance , Vol . 42 , No . 4 ( Sep . , 1987 ) , pp . 943-963 Published by : Wiley for th. *The Journal of Finance*, 42(4), 943–963.
- Trichterborn, A., Knyphausen-Aufsess, D. Z., & Schweizer, L. (2016). How to improve acquisition performance: The role of dedicated M&A function, M&A learning process, and M&A capability. *Strategic Management Journal*, 37, 763–773. <https://doi.org/10.1002/smj.2364>
- Vermeulen, F., & Barkema, H. (2001). Learning through Acquisitions. *The Academy of Management Journal*, 44(3), 457–476.
- Walter, G. A., & Barney, J. A. Y. B. (1990). Management Objectives in Mergers and Acquisitions. *Strategic Management Journal*, 11(1), 79–86.
- Wang, Q., & Boateng, A. (2007). Cross-border M&As by chinese firms: An analysis of strategic motivation and performance. *Proceedings of China Private Economy Innovation International Forum 2007*, 18–27.
- Wooldridge, J. W. (2009). *Introductory Econometrics: a modern approach* (4th ed.). Nelson Education.
- Xie, E., Reddy, K. S., & Liang, J. (2017). Country-specific determinants of cross-border mergers and acquisitions: A comprehensive review and future research directions. *Journal of World Business*, 52(2), 127–183. <https://doi.org/10.1016/j.jwb.2016.12.005>
- Yim, S. (2013). The acquisitiveness of youth: CEO age and acquisition behavior. *Journal of Financial Economics*, 108(1), 250–273. <https://doi.org/10.1016/j.jfineco.2012.11.003>

## APPENDIX



## Appendix A: Variable list

Denotation	Name	Type	Definition / Computation	Description	Source
<b>Panel A: Dependent Variables</b>					
lnNUM_a	Ln( Deal Number Acquirer )	Continuous	Deal activity acquirer	Natural logarithm of total number of cross-border deals plus one in quarter $t$ with acquirer from country $j$	SDC
lnNUM_t	Ln( Deal Number Target )	Continuous	Deal activity target	Natural logarithm of total number of cross-border deals plus one in quarter $t$ with target from country $j$	SDC
lnVAL_a	Ln( Deal Value Acquirer )	Continuous	Monetary deal value acquirer	Natural logarithm of the total cross-border transaction value plus one in quarter $t$ with acquirer from Country $j$	SDC
lnVAL_t	Ln( Deal Value Target )	Continuous	Monetary deal value target	Natural logarithm of the total cross-border transaction value plus one in quarter $t$ with target from Country $j$	SDC
lnNUM_jk	Ln( Deal Number ) pair	Continuous	Deal activity between country $j$ and $k$	Natural logarithm of the total number of cross-border deals plus one in quarter $t$ with acquirer from country $j$ and target from country $k$ (where $j \neq k$ )	SDC
lnVAL_jk	Ln( Deal Value ) pair	Continuous	Monetary deal value between country $j$ and $k$	Natural logarithm of the total value of cross-border deals plus one in quarter $t$ with acquirer from country $j$ and target from country $k$ (where $j \neq k$ )	SDC
CAAR	CAARs ( $t1, t2$ )	Continuous	$1/N * \text{SUM}( \text{CAR}(t1, t2) )$	Cumulative average abnormal return of listed acquirers for country $j$ in quarter $t$	Datastream
CAAR_jk	CAARs ( $t1, t2$ ) pair	Continuous	$1/N * \text{SUM}( \text{CAR}(t1, t2) )$	Cumulative average abnormal return of listed acquirers engaged in cross-border M&A between countries $j$ and $k$ in quarter $t$	Datastream
<b>Panel B: Independent Variables</b>					
WUIa	World Uncertainty Index Acquirer	Continuous	World Uncertainty Index for Acquirer Country $j$	Weighted WUI value for each acquirer country $j$ in quarter $t$	Ahir, Bloom, & Furceri (2018)
WUIt	World Uncertainty Index Target	Continuous	World Uncertainty Index for Target Country $j$	Weighted WUI value for each target country $j$ in quarter $t$	Ahir, Bloom, & Furceri (2018)
WUIat	Interaction WUI Acquirer Target	Continuous	WUI Acquirer * WUI Target	The interaction effect of the weighted WUI in acquirer country $j$ and target country $k$	Ahir, Bloom, & Furceri (2018)
WUI_adj	Adjusted World Uncertainty Index	Continuous	Alternative Uncertainty measure	Standalone WUI value for each country $j$ in quarter $t$	Ahir, Bloom, & Furceri (2018)
VIX	CBOE Volatility Index	Continuous	Alternative Uncertainty measure	VIX value for each country $j$ in quarter $t$	CBOE

**Variable list (Continued)**

Denotation	Name	Type	Definition / Value	Description	Source
<b>Panel C: Country-level Control Variables</b>					
CL	Common Law	Dummy	1 = English common law 0 = Different legal system	Dummy variable that equals one when country $j$ practices english common law and zero otherwise	SDC
GDPc	GDP per Capita	Continuous	ln( GDP per Capita )	Natural logarithm of annual GDP per inhabitant of country $j$	World Bank
GDPg	GDP Growth	Continuous	Economic growth	Annual growth rate as a percentage of gross domestic product in country $j$ as a proxy for economic growth	World Bank
IP	Investment Profile	Continuous	Business environment	Proxy for business enirvoment in country $j$	ICRG
IQ	Institutional Quality	Continuous	Political risk	Sum of ICRG Political Risk subcomponents - law and order, corruption, and bureaucratic quality - for country $j$	ICRG
TTG	Trade-to-GDP	Continuous	International orientation	Aggregate of exports and imports as a percentage of GDP in country $j$	World Bank
WUI_lag	Lagged WUI	Continuous	Intra-country effect	Lagged variable which describes WUI index level in country $j$ in quarter $t-1$	Ahir, Bloom, & Furceri (2018)
Tot_Num	Ln(Total Deal Number)	Continuous	Total deal activity including domestic deals	Natural logarithm of total number of cross-border deals plus one including domestic deals quarter $t$ in which the acquirer is from	SDC
Tot_Val	Ln(Total Deal Value)	Continuous	Total monetary deal value including domestic deals	Natural logarithm of the total cross-border transaction value plus one including domestic deals in quarter $t$ in which the acquirer is from Country $j$	SDC

**Variable list (Continued)**

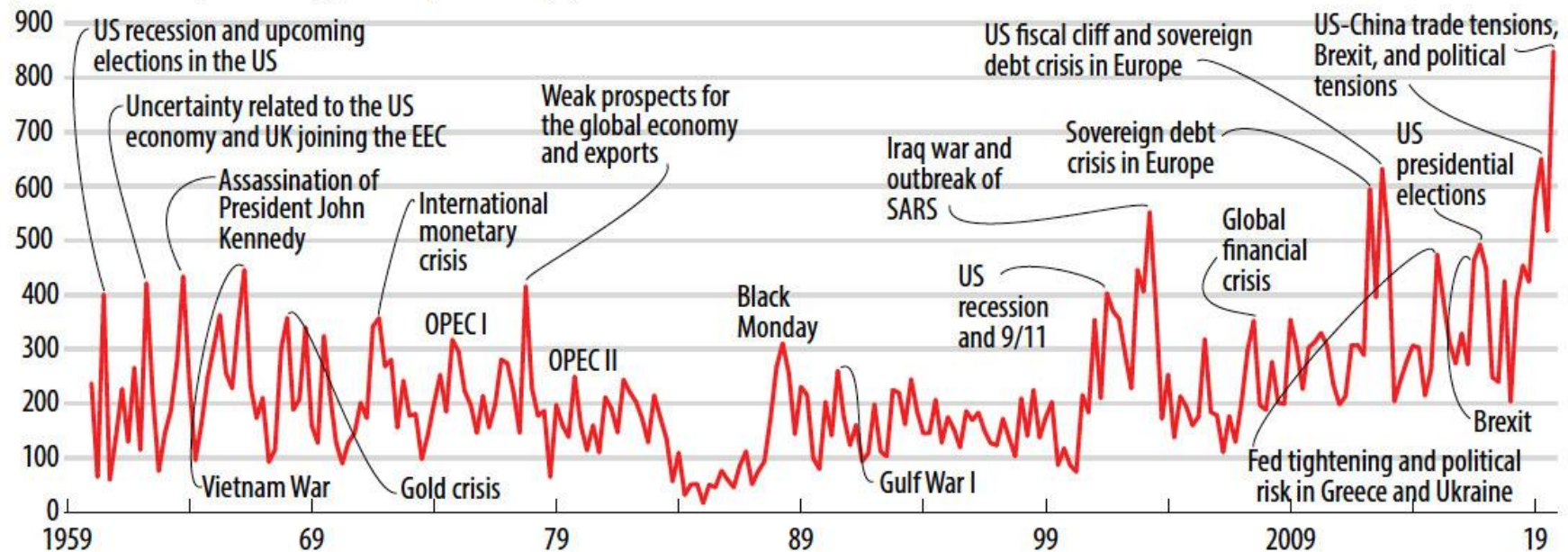
Denotation	Name	Type	Definition / Value	Description	Source
<b>Panel D: Country-Pair Control Variables</b>					
SL	Similar Language	Dummy	1 = Similar language 0 = Different language	Describes official language similarities as a proxy for cultural similarity	Stulz & Williamson (2003)
SRG	Similar Region	Dummy	1 = Similar Region 0 = Different Region	Dummy variable that is one with both acquirer country $j$ and target country $k$ are located in the same hemisphere, to proxy for geographical proximity	Ahir, Bloom, & Furceri (2018)
SRL	Similar Religion	Dummy	1 = Similar dominant religion 0 = Different dominant religion	Describes primary religion similarities as a proxy for cultural similarity	Stulz & Williamson (2003)
CL_jk	Common Law $j-k$	Dummy	1 = English common law 0 = Different legal system	Common law difference between acquirer country $j$ and target country $k$	La porta et al. (1998)
GDPc_jk	GDP per Capita $j-k$	Continuous	ln( GDP per Capita )	GDP per capita difference between acquirer country $j$ and target country $k$	World Bank
GDPg_jk	GDP Growth $j-k$	Continuous	Economic growth	GDP growth difference between acquirer country $j$ and target country $k$	World Bank
IP_jk	Investment Profile $j-k$	Continuous	Business environment	Investment Profile index difference between acquirer country $j$ and target country $k$	ICRG
IQ_jk	Institutional Quality $j-k$	Continuous	Political risk	Institutional Quality index difference between acquirer country $j$ and target country $k$	ICRG
TTG_jk	Trade-to-GDP $j-k$	Continuous	International orientation	Trade-to-GDP level difference between acquirer country $j$ and target country $k$	World Bank

Appendix B: World Uncertainty Index overview obtained from (Ahir et al., 2018)

### Uncertain times

Global uncertainty has surged to a record high.

(WUI index: 1959 Q1 to 2019 Q4, GDP weighted average)



Sources: Ahir, H., N. Bloom and D. Furceri (2018), World Uncertainty Index (WUI), mimeo.

Note: The WUI is computed by counting the frequency of the word "uncertain" (or the variant) in Economist Intelligence Unit country reports. The WUI is then normalized by total number of words and rescaled by multiplying by 1,000. A higher number means higher uncertainty and vice versa. The aggregate and disaggregate data by country and regions are available at [www.worlduncertaintyindex.com](http://www.worlduncertaintyindex.com).

**Appendix C:** Per country overview of all subcomponents of the deal database, consisting of deals conducted between from 2000 to 2019. The four subcomponents describe (1) the total volume and total value of deals in which the acquirer originated from country  $j$  in the research period, (2) the volume and value of outbound deals in which the acquirer originated from country  $j$ , (3) the total volume and total value of deals in which the target originated from country  $j$  in the research period, (2) the volume and value of inbound deals in which the target originated from country  $j$ .

Country	All deals by acquirer nation		Cross-border deals by acquirer nation		All deals by target nation		Cross-border deals by target nation	
	Number	Value (\$ Million)	Number	Value (\$ Million)	Number	Value (\$ Million)	Number	Value (\$ Million)
Argentina	73	15,729	12	3,927	210	25,720	130	15,258
Australia	4,708	506,990	957	141,822	4,469	536,324	761	174,950
Austria	103	22,254	63	12,008	131	42,687	88	32,090
Belgium	322	276,702	184	234,466	341	144,879	206	101,732
Brazil	580	284,164	67	45,123	869	353,474	340	99,111
Canada	7,304	1,144,088	2,313	533,081	5,910	975,960	1,135	373,417
Chile	121	22,960	35	9,794	214	42,836	119	27,606
Colombia	64	14,927	28	7,431	132	21,176	93	13,499
Denmark	294	71,233	145	41,687	400	72,770	242	45,856
Egypt	39	2,008	3	457	72	25,646	37	24,132
Finland	455	95,742	236	72,712	430	63,171	197	38,533
France	1,270	984,363	663	614,456	1,321	585,160	696	219,948
Germany	905	666,368	471	438,464	1,469	565,351	999	335,184
Greece	149	24,497	30	7,588	149	24,475	26	6,667
India	968	153,193	319	41,774	824	165,185	199	56,688
Indonesia	157	15,485	5	867	265	24,875	111	9,459
Ireland-Rep	459	147,739	347	141,429	347	170,285	237	154,721
Israel	405	105,584	230	92,583	338	65,882	180	52,300
Italy	915	310,850	242	94,495	1,020	362,055	365	125,962
Japan	5,369	919,287	651	352,642	4,812	589,180	94	25,097
Malaysia	809	47,189	73	3,503	816	50,708	75	6,973
Mexico	277	137,711	83	50,114	452	145,247	242	56,404
Netherlands	500	373,473	352	309,227	699	310,117	550	265,630
New Zealand	302	13,889	94	4,634	435	29,171	213	17,036
Nigeria	11	1,978	2	765	27	15,875	15	12,772
Norway	567	111,971	233	46,803	584	118,233	276	54,169
Pakistan	14	1,078	1	10	18	1,367	5	299
Peru	58	5,885	14	611	149	19,026	98	11,708
Philippines	183	17,582	31	3,566	191	17,894	35	3,795
Portugal	88	20,102	24	9,027	146	21,239	77	10,565
South Africa	508	69,699	132	31,301	538	70,646	155	28,691
South Korea	1,946	208,089	134	28,706	1,938	209,285	123	30,176
Spain	670	320,807	273	195,676	828	196,822	418	94,491
Sri Lanka	47	400	1	15	53	613	7	228
Sweden	1,494	179,849	682	115,636	1,193	163,289	421	105,446
Switzerland	495	557,191	376	335,864	397	386,803	279	167,315
Thailand	261	53,143	27	11,586	284	45,834	50	4,371
Turkey	169	10,330	13	1,183	246	40,624	85	29,315
United Kingdom	8,341	1,408,690	2,636	764,279	7,500	1,701,416	1,846	1,048,501
United States	25,707	11,595,767	3,727	1,299,003	26,863	12,511,699	4,657	2,212,663
Uruguay	4	16	1	7	31	6,001	28	5,561
TOTAL	67,111	20,919,001	15,910	6,098,319	67,111	20,919,001	15,910	6,098,319



AcquirorNation	TargetNation																															Total										
	Argentina	Australia	Austria	Belgium	Brazil	Canada	Chile	Colombia	Denmark	Egypt	Finland	France	Germany	Greece	India	Indonesia	Ireland-Rep	Israel	Italy	Japan	Malaysia	Mexico	Netherlands	New Zealand	Nigeria	Norway	Pakistan	Peru	Philippines	Portugal	South Africa		South Korea	Spain	Sri Lanka	Sweden	Switzerland	Thailand	Turkey	United Kingdom	United States	Uruguay
Mexico	5	2		17	2	3	7					1					1				1	189	1				4	1					8				1	1	31	2	277	
Netherlands	1	7	5	18	7	11	1		7	3	39	32	1	5		2		14	2			3	122	1		8	1	1		3		4	20	17	4	6	44	111		500		
New Zealand		66				2	1		1		1	2				1		1				1	2	193									1				9	20		302		
Nigeria																									9						1						1				11	
Norway		9		2	10	4	3		33	14	14	17		2		1		6						1		285			1		1	13		73	6	1	27	38		567		
Pakistan																											13			1											14	
Peru	2					2	5	4																				44									1				58	
Philippines		4			1	2	1					1								1	6	2		1					152				1				2	8		183		
Portugal				6					1		2	2	1																62			10				1	1	2		88		
South Africa	1	27	2	1	4	7	1		1	1	1	3	4		2	1		1			1		6	1	3				369	1	2			1	1	48	18		508			
South Korea	1	5		2	6				1		1	6		8	13	2		2	13	4		2	1			2	2		1	1	1	1806	1		2	2	7	54		1946		
Spain	6	5	2	2	30	3	10	9	1		1	22	17	1	4	1	1	32				15	7					6	1	25	4	1	373					25	55	5	670	
Sri Lanka															1																		46								47	
Sweden	5	12	6	9	3	11	1		71	1	88	37	62	3	4	1	4	2	11		1	4	36	2		95			4	8	3	23		740	14	1	3	96	131	2	1494	
Switzerland	2	14	6	5	10	20	1		2		6	24	42	2	2	2	3	2	13	1	1	1	13	1		2	1	2		2	4	9	10	100		1	37	153	1	495		
Thailand		2				1						2			2	3				1	1								5	1					1	231	4	7		261		
Turkey			1									1				1																					156	1	3		169	
United Kingdom	17	182	12	39	33	133	11	7	37	9	25	139	221	4	25	12	109	12	69	12	7	15	135	17	5	46	1	7	3	17	61	10	95	1	82	43	4	14	5510	1159	1	8341
United States	32	242	16	47	80	810	24	8	53	9	32	230	337	4	76	6	78	132	101	50	6	84	147	33	1	55		14	8	9	12	52	94		101	94	6	14	848	21760	2	25707
Uruguay						2	1																																		1	4
<b>Total</b>	<b>210</b>	<b>4469</b>	<b>131</b>	<b>341</b>	<b>869</b>	<b>5910</b>	<b>214</b>	<b>132</b>	<b>400</b>	<b>72</b>	<b>430</b>	<b>1321</b>	<b>1469</b>	<b>149</b>	<b>824</b>	<b>265</b>	<b>347</b>	<b>338</b>	<b>1020</b>	<b>4812</b>	<b>816</b>	<b>452</b>	<b>699</b>	<b>435</b>	<b>27</b>	<b>584</b>	<b>18</b>	<b>149</b>	<b>191</b>	<b>146</b>	<b>538</b>	<b>1938</b>	<b>828</b>	<b>53</b>	<b>1193</b>	<b>397</b>	<b>284</b>	<b>246</b>	<b>7500</b>	<b>26863</b>	<b>31</b>	<b>67111</b>

**Appendix E:** Descriptive statistics of the WUI distribution over all included countries in the research period January 1<sup>st</sup>, 2000 (Q1) to December 31<sup>st</sup>, 2019 (Q4). The WUI variable represents a moving average of the per country quarterly WUI level. The weighted moving average is computed as follows:  $2020Q4 = ((2020Q4*0.6) + (2020Q3*0.3) + (2020Q2*0.1))/3$ .

Country	Obs	Mean	Median	Std. Dev.	Min	Max
Argentina	84	0.1087	0.0972	0.0635	0.0138	0.3179
Australia	84	0.0506	0.0476	0.0348	0.0000	0.1461
Austria	84	0.0549	0.0413	0.0463	0.0000	0.1666
Belgium	84	0.0415	0.0324	0.0350	0.0000	0.1697
Brazil	84	0.1080	0.0912	0.0841	0.0000	0.4905
Canada	84	0.0582	0.0538	0.0430	0.0000	0.2484
Chile	84	0.0421	0.0290	0.0478	0.0000	0.2303
Colombia	84	0.0891	0.0785	0.0653	0.0157	0.4231
Denmark	84	0.0730	0.0630	0.0509	0.0048	0.2264
Egypt	84	0.0460	0.0292	0.0553	0.0000	0.2994
Finland	84	0.0439	0.0288	0.0459	0.0000	0.2064
France	84	0.0701	0.0599	0.0423	0.0115	0.1989
Germany	84	0.0711	0.0567	0.0540	0.0035	0.2288
Greece	84	0.0588	0.0472	0.0518	0.0000	0.1864
India	84	0.0335	0.0305	0.0261	0.0000	0.1178
Indonesia	84	0.0671	0.0492	0.0516	0.0000	0.2132
Ireland	84	0.0902	0.0688	0.0913	0.0000	0.4395
Israel	84	0.0638	0.0611	0.0334	0.0020	0.1674
Italy	84	0.0812	0.0726	0.0533	0.0000	0.2147
Japan	84	0.0580	0.0556	0.0321	0.0040	0.1302
Malaysia	84	0.0403	0.0327	0.0409	0.0000	0.1964
Mexico	84	0.0945	0.0820	0.0581	0.0000	0.2841
Netherlands	84	0.0623	0.0560	0.0500	0.0000	0.2013
New Zealand	84	0.0534	0.0448	0.0433	0.0000	0.1795
Nigeria	84	0.1080	0.1020	0.0679	0.0019	0.2681
Norway	84	0.0653	0.0497	0.0571	0.0000	0.2973
Pakistan	84	0.0271	0.0222	0.0265	0.0000	0.1339
Peru	84	0.0855	0.0769	0.0648	0.0000	0.3115
Philippines	84	0.0574	0.0477	0.0409	0.0000	0.2208
Portugal	84	0.0658	0.0621	0.0433	0.0000	0.1687
South Africa	84	0.1624	0.1431	0.1250	0.0045	0.5400
South Korea	84	0.0785	0.0691	0.0512	0.0000	0.2346
Spain	84	0.0768	0.0717	0.0443	0.0022	0.2063
Sri Lanka	84	0.0422	0.0361	0.0327	0.0000	0.1387
Sweden	84	0.0665	0.0595	0.0439	0.0019	0.1733
Switzerland	84	0.0862	0.0531	0.0806	0.0000	0.3317
Thailand	84	0.0691	0.0539	0.0516	0.0019	0.2187
Turkey	84	0.1047	0.0880	0.0516	0.0220	0.2786
United Kingdom	84	0.1261	0.0927	0.1051	0.0113	0.4897
United States	84	0.0749	0.0609	0.0478	0.0000	0.2422
Uruguay	84	0.0655	0.0579	0.0472	0.0000	0.2216



## Appendix F: Testing for multicollinearity, heteroskedasticity and autocorrelation

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In order to conduct a reliable research the data must suffice several OLS assumptions. The residuals that are produced by the model should have a mean of zero, show a constant variance and should be uncorrelated to themselves or other variables. In this thesis, potential concerns around the reliability of the data are accounted for by testing for multicollinearity, heteroskedasticity and autocorrelation.

Multicollinearity is a potential concern as it violates the assumption that all independent variables are independent, and thus uncorrelated. The absence of multicollinearity is of importance in testing for the true effect of a specific independent variable on the dependent variable. If an independent variable is correlated or heavily influenced by another variable it causes an overestimation of goodness of fit of the regression model. Correlation matrices and respective variance inflation factor (VIF) scores investigate and expose potential correlation among independent variables.

To ensure that the variances of the errors are consistent for all observations it is important to test for heteroskedasticity. This phenomenon is a direct result of crises periods or variance across different countries. The study investigates deal characteristics in multiple countries over a period of twenty years and additionally, the distributions for deal number data, deal value data and CAAR data are non-normal. It is therefore useful to question the validity of the standard errors and conduct a Breusch-Pagan/Cook-Weisberg test for each of the regressions.

Autocorrelation is traced by conducting Durbin-Watson tests. The potentially misleading residuals are defused by including robust standard errors, which are clustered at the quarter and country or country-pair level.

**Deal Volume Target**

	WUIt	CL	GDPg	GDPc	TTG	IQ	IP	TN	TV
WUIt	1.0000								
CL	-0.0563	1.0000							
GDPg	-0.1692	0.2251	1.0000						
GDPc	-0.0444	-0.0575	-0.4296	1.0000					
TTG	-0.1387	-0.0877	-0.0666	0.3848	1.0000				
IQ	-0.1924	0.0225	-0.2664	0.7833	0.4631	1.0000			
IP	-0.1944	0.0695	-0.2097	0.5932	0.2174	0.6150	1.0000		
Tot Number	-0.0384	0.1841	-0.1113	0.3699	-0.0960	0.3278	0.3711	1.0000	
Tot Value	-0.0133	0.0979	-0.1406	0.3581	-0.0705	0.2591	0.2858		1.0000
VIF (Number)	1.13	1.2	1.43	5.27	1.4	4.65	2.01	1.59	
VIF (Value)	1.13	1.11	1.43	5.26	1.27	4.66	1.99		1.27

**Deal Volume Acquirer**

	WUIa	CL	GDPg	GDPc	TTG	IQ	IP	TN	TV
WUIa	1.0000								
CL	0.0111	1.0000							
GDPg	-0.1975	0.2995	1.0000						
GDPc	0.0031	-0.1205	-0.3531	1.0000					
TTG	-0.0947	-0.1578	-0.0018	0.3014	1.0000				
IQ	-0.1176	-0.0865	-0.1896	0.6865	0.3834	1.0000			
IP	-0.1276	-0.0212	-0.1508	0.4759	0.0527	0.5027	1.0000		
Tot Number	-0.0446	0.2915	-0.0042	0.3294	-0.2263	0.2594	0.3564	1.0000	
Tot Value	0.0221	0.0678	-0.0747	0.2861	-0.1764	0.1641	0.2821		1.0000
VIF (Number)	1.08	1.40	1.45	3.55	1.43	2.93	1.72	1.87	
VIF (Value)	1.08	1.13	1.44	3.45	1.26	2.93	1.71		1.25

**Deal Volume Country-pair**

	WUIa	WUIt	WUIat	CL	GDPg	GDPc	TTG	IQ	IP	SL	SRg	SRI
WUIa	1.0000											
WUIt	0.2116	1.0000										
WUIat	0.7586	0.7637	1.0000									
CL	0.0535	-0.0120	0.0211	1.0000								
GDPg	-0.1015	0.1018	0.0025	0.1530	1.0000							
GDPc	0.0192	0.0498	0.0397	0.1798	-0.2710	1.0000						
TTG	-0.0800	0.1010	0.0133	-0.3984	0.0882	0.0333	1.0000					
IQ	-0.0369	0.1117	0.0469	0.1200	-0.1488	0.7174	0.2702	1.0000				
IP	0.0402	0.0862	0.0811	0.2324	-0.1680	0.5690	-0.0946	0.5433	1.0000			
SL	0.0398	0.0142	0.0351	-0.1047	0.0008	-0.0618	0.0390	-0.0774	-0.0769	1.0000		
SRg	-0.0216	-0.0360	-0.0350	0.0322	0.0095	0.0278	0.0202	0.0445	0.0213	-0.1518	1.0000	
SRI	-0.0193	-0.0090	-0.0121	-0.0186	0.0178	-0.0027	0.0712	0.0058	0.0028	0.1268	0.0910	1.0000
VIF	3.80	3.85	7.62	1.40	1.29	4.40	1.20	3.78	2.13	1.06	1.00	1.04

**CAAR Analysis**

	WUIa	WUIt	WUIat	CL	GDPg	GDPc	TTG	IQ	IP	SL	SRg	SRI
WUIa	1.0000											
WUIt	0.2116	1.0000										
WUIat	0.7586	0.7637	1.0000									
CL	0.0535	-0.0121	0.0211	1.0000								
GDPg	-0.1015	0.1018	0.0025	0.1530	1.0000							
GDPc	0.0192	0.0498	0.0397	0.1798	-0.2710	1.0000						
TTG	-0.0800	0.1010	0.0133	-0.3984	0.0882	0.0333	1.0000					
IQ	-0.0369	0.1117	0.0469	0.1200	-0.1488	0.7174	0.2702	1.0000				
IP	0.0402	0.0862	0.0811	0.2324	-0.1680	0.5690	-0.0946	0.5433	1.0000			
SL	0.0398	0.0142	0.0351	-0.1047	0.0008	-0.0618	0.0390	-0.0774	-0.0769	1.0000		
SRg	-0.0216	-0.0360	-0.0350	0.0322	0.0095	0.0278	0.0202	0.0445	0.0213	-0.1518	1.0000	
SRI	-0.0193	-0.0090	-0.0121	-0.0186	0.0178	-0.0027	0.0712	0.0058	0.0028	0.1268	0.0910	1.0000
VIF	3.81	3.85	7.62	1.40	1.42	4.40	1.48	3.86	2.14	1.06	1.04	1.04