The Role of Behavioral Factors in the Success of Mergers and Acquisitions

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Summary

Mergers and acquisitions (M&As) are carried out to be competitive in the market and to grow rapidly by capitalizing on some kind of synergies. However, many mergers and acquisitions fail due to cultural dissimilarities, agency problems, and integration issues. I seek to add to the M&A-related literature in order to create better comprehension of the underlying reasons of frequent M&A failures, however, from a different viewpoint by taking into account 'behavioral' element. I strive to see through the investors' and managers' preferences to comprehend how their preferences affect post-merger takeover performance in the long run. I begin with investigating investors' preferences with respect to time, by employing cultural measure on long-term orientation (LTO), and the role of these preferences in defining takeover outcomes. By analyzing a large international sample on M&A deals, I offer a strong empirical evidence that investors' time preferences have a considerable impact on long-term takeover performance. I offer empirical evidence that investors' future orientation causes a significant improvement in takeover returns, on the other hand short-term orientation results in deteriorated takeover outcomes. I further observe that the significance of investors' long-term orientation is stronger in countries with higher level of investor protection and for domestic deals with lower level of cultural disparities. Next, I use national culture based characteristics of individualism, uncertainty avoidance, and masculinity to investigate managerial preferences and their likely impact on long-term post-acquisition performance for the acquirers. There are certain cultural characteristics that shape managerial preferences and by doing so may cast a substantial influence on takeover performance over an extended period. I analyze a large international sample on takeover deals and conclude that national culture has a significant impact of takeover outcomes in a long run. I witness that the higher level of individualism and uncertainty avoidance prevailing in the country result in reduced level of post-acquisition risk, suggesting the presence of managerial entrenchment that ultimately reduces takeover returns. Masculinity

is found to have a positive impact on deal size, signifying the presence of empire building, however, contrary to my expectations; it does not cast any damaging impact on takeover outcomes. It clearly suggests that the positive attributes connected with masculinity (e.g. assertiveness, competitiveness, and toughness) have more profound impact as compared to the negative impact of empire building. I further observe that my findings are stronger in the case of domestic deals and for less globalized firms due to lower level of cultural dissimilarities. Next, I analyze the use of positive and negative language in financial disclosures and the ability of such language to predict long-term gains to the acquirers. In order to predict long-term takeover performance, I apply textual analysis to the MD&A Section of SEC filings (10-K Form) for M&A deals taking place in the United States. My overall findings reveal that a negative managerial tone has a strong negative association with takeover performance, whereas a positive managerial tone indicates managerial confidence in merger success, and hence reflects an enhanced takeover performance over an extended period. The evidence clearly rejects the hypothesis that a positive managerial tone is interpreted as managerial 'overconfidence' in a merger's success. My findings also affirm that the predictive power of a negative tone is far more pronounced than that of a positive tone and of any other sentiment word lists. Moreover, stock returns do not adjust to the textual description immediately due to investors' general inattentiveness and inability to process subtle textual information more accurately. I also observe that the significance of predictive power of a negative managerial tone gains strength in the post-crisis period and for cross-border and for riskier deals due to the comparatively higher uncertainty associated with evaluating such deals on the basis of 'hard information'. Finally, I investigate the usage of virtuous language in the management discussion and analysis (MD&A) section of SEC filings (10-K Form) and the prognostic power of such language for takeover performance. The empirical results, based on textual analysis, reveal that trust is negatively associated with long-term takeover performance, suggesting that managerial virtuous talk is, in practicality, an indication of lower post-acquisition gains for the acquirers in

the long run. Furthermore, takeover returns are found to reflect textual information on trust with a delay, owing to general inattention and inability of investors to process soft cues inherent in textual content and to managers purposefully lulling investors to keep them from paying attention and identifying managerial misconduct. Quite interestingly, the significance of virtuous talk becomes more evident in the post-crisis period due to relatively higher uncertainty linked with evaluating such kind of deals on the basis of hard information alone. Finally, an inflated virtuous talk when coupled with pessimistic tone, the ability of managerial 'good talk' to create a trustworthy image and to distract investors reduces and the predictive power of managerial trust talk increases even more. Overall, it is concluded that managerial virtuous talk should not be regarded as a 'cheap talk'. It is, in fact, very pertinent for predicting future takeover returns in the long run.

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PART I: General Introduction and Overview

1. Introduction

In the age of globalization, many companies across the world have merged in order to reach new markets, access new technologies, boost inflows, and ultimately to be more competitive (Haspeslagh and Jemison, 1991). Merger takes place when two organizations choose to work together and form a combined organization by integrating their capital resources, liabilities, and cultural practices, while acquisition refers to buying and obtaining ownership control of another organization (Horwitz et al., 2002). I have used the terms mergers and acquisitions interchangeably since literature suggests both result in one company taking control over another (Waight, 2004). Mergers and acquisitions (M&As, henceforth) are generally aimed at creating value from some sort of synergies; however, first-hand evidence suggests that the gains that look so promising on paper mostly fail to materialize (Rosalind and Kirstie, 2004). Research on long-term performance of M&As (takeover performance, henceforth) clearly suggests that acquirers obtain little to no positive gains on takeover deals (e.g. Moeller et al., 2004; Andrade et al., 2001). Many studies report negative post-acquisition gains for the bidders in the long run (Mitchell and Stafford, 2000; Rau and Vermaelen, 1998; Agrawal et al., 1992). Bearing in mind the general underperformance of the acquiring companies, one might ask: What goes wrong in M&As? Why there is a lot of M&A activity despite negative outcomes for the acquirers? What are the determinants of long-term takeover success?

Even though there is a huge academic research dedicated to M&As, the factors defining takeover returns are not yet fully explored. Research suggests that product synergy, deal size, the nature of the deal (cross-border vs domestic), deal attitude (hostile vs friendly), the method of payment (all stock, all cash, or mixed offer), and takeover experience are important performance determinants (Alexandridis et al., 2013; Moeller and Schlingemann, 2005; Shleifer and Vishny, 2003; Servaes, 1991; Morck et al., 1990; Fowler and Schmidt, 1989). King et al. (2004), however, contend in their detailed review that many of the aforementioned deal-

related variables are not significant determinants of post-acquisition performance at all, and hence the authors accentuate the need to hunt for yet-to-be-disclosed factors of takeover performance. Recent literature regards behavioral elements as important drivers of financial decision-making in corporations (e.g. see Pevzner et al., 2015; Chen, 2013; Brown and Sarma 2007; Doukas and Petmezas, 2007).

The finance literature has generally relied upon firm fundamentals and accounting data to investigate stock price fluctuations. Researchers, however, have started incorporating qualitative behavioural factors, suggesting that quantitative information alone does not suffice to offer a complete explanation of stock price effects (e.g. Cutler et al., 1989; Roll, 1988; Shiller, 1981). According to Shiller (2003), the cooperation of financial theory and other social sciences originates behavioral finance that ultimately offers a comprehensive understanding of the financial markets. He further emphasizes the need to understand that financial markets do not necessarily work perfectly and the price changes might be due to behavioral factors of market participants. M&As have been widely studied in traditional finance literature, however, they have not been extensively investigated in context of behavioral finance that considers the implications of human behavior in financial markets. In my attempt to answer the above-mentioned questions and to add to the M&A literature in this direction, I, therefore, try to explore the 'softer' behavioral side of M&As and what consequences it may have for post-acquisition outcomes.

As the literature suggests lower long-term takeover gains, it is quite enticing to investigate time preferences in M&As and what implications they may have for post-acquisition performance over an extended period. Frederick (2003) and Anderhub et al. (2001) contend that economic choices regarding the selection between current and delayed gratification are largely dependent on the decision-makers' time orientation. It is argued that future orientation yields higher returns; even then organizations are observed to follow short-term objectives and sacrifice long-

term projects with higher future gains only because the later reduce short-term gains (Stout, 2012; Graham et al., 2005). A lot of the literature emphasizes the significance of time preferences in general economic decisions (e.g. Chen, 2013; Chang and Noorbakhsh, 2009); nonetheless, investors' time preferences and their impact on corporate strategies and M&A outcomes are not completely explored. Investors' preferences in the context of M&As are usually studied using investment turnover ratio (Chen et al., 2007; Gaspor et al., 2005), I on the other hand, try to offer a cultural explanation of the phenomenon.

Furthermore, recent M&A-related literature stresses the significance of CEOs' preferences in deal-related decisions (e.g. see Breuer et al., 2018a; Billett and Qian, 2008; Brown and Sarma 2007; Doukas and Petmezas, 2007). Managerial personal interests cast a significant influence on corporate decisions, e.g. in M&As, managers may choose to enlarge corporate size for personal benefit (Marris, 1964; Baumol, 1959). Furthermore, managers may opt to take less than optimal level of risk or may actively engage in excessive risk reduction activities to save themselves from negative repercussions (Smith and Stulz, 1985; Amihud and Lev, 1981). I also try to investigate such managerial preferences and their takeover performance implications in an international context by employing cultural data.

Moreover, the finance literature has acknowledged the impact of qualitative textual information on stock values (e.g. Li, 2008; Tetlock, 2007; Antweiler and Frank, 2004), it has become even more vital to investigate the corporate language and managerial discourse used in the financial disclosures in order to foresee post-acquisition takeover outcomes. I also postulate that the qualitative discussion by management in financial reports may provide some additional insights of post-acquisition takeover outcomes that quantitative information may not offer. The innate complications of opportunism, susceptibility, and riskiness make the management of M&As very challenging (Lander and Kooning, 2013; Graebner, 2009; Cording et al., 2008), and hence the softer and more qualitative elements of managerial 'sentiment' and 'trust' become even

more significant in predicting merger success (Trąpczyński at al., 2018; Yan, 2015). I therefore seek to decrypt managerial sentiment and trust talk and investigate whether these are sheer 'cheap talks' or they have some implications for long-term takeover gains to the bidders.

The prevailing M&A related literature does not comprehensively explain the above-mentioned behavioral aspects of investors' and managers' beliefs, despite their having imperative implications for the financial outcomes and corporate policies. My research is the first large-scale study to investigate investors' and managers' preferences with the help of cultural values and textual analysis and the association of such preferences with acquirers' long-term post-acquisition performance. Next in this introduction, I discuss the aspects of national culture and textual analysis, their relevance for investors' and managers' preferences and takeover preferences, and an overview of four research papers included in the dissertation.

2. National Culture and Takeover Performance

Earlier, economists believed in general that culture had no role in shaping human preferences (Stigler and Becker, 1977). More recent literature, however, concedes that culture does make a great contribution to formulating and influencing preferences (Eugster et al., 2011; Fehr and Hoff, 2011; Henrich, 2000). Hofstede (2001) also suggests that cultural background has a crucial role in defining individual choices. In particular, cultural diversity exerts a significant impact on individual preferences concerning management and leadership (House et al., 2004). Culture is also regarded as an important determinant of financial decision making (e.g. see Aggarwal et al., 2016; Karolyi, 2016; Zingales, 2015). Since culture has significant implications for shaping individual preferences and making financial decisions, cultural characteristics are likely to be critical for understanding outcomes of mergers and acquisitions. According to Nadler and Breuer (2017), financial research is generally conducted at four levels: informal institutions (culture), formal institutions (capital markets), the corporate level, and the individual level (managers and investors). The literature also probes the influence of culture

(level 1) on the choices of individual investors and managers (level 4) and ultimately on financial results (Aggarwal et al., 2016).

Following Aggarwal et al. (2016), I also try to expand cultural research to a financial context in order to investigate the possible financial outcomes of cultural beliefs. A cultural clarification can add to the overall comprehension of takeover performance. Since national culture is claimed to have a substantial role in forming individual preferences (Eugster et. al., 2011; Henrich, 2000), national cultural characteristics can hence be used as reasonable proxies for investors' and managers' preferences. Geert Hofstede conducted pioneering cross-national research on culture and put forward six core cultural dimensions (Hofstede et al., 2010). For the purpose of my study, I refer to the cultural dimensions of individualism (IDV), uncertainty avoidance (UAI), and masculinity (MAS) in order to proxy managerial preferences, and to the cultural dimension of long-term orientation (LTO) in order to investigate investors' preferences.

2.1. National Culture, Investors' Time Preferences and Takeover Performance

Research considers culture to be a pivotal factor in determining time preferences (Wang et al., 2016; Becker and Mulligan, 1997). According to Hofstede (1991), people from long-term oriented cultures are more patient, while those from short-term-oriented societies are relatively impatient. Frederick (2003) and Anderhub et al. (2001) suggest that economic selection between current or future gratification is largely explained by decision-makers' time orientation. Further, in this direction, Hofstede et al. (2010) relate short-term orientation to economic behavior motivated by spending and current consumption, while long-term orientation to savings and funding for investments. They also claim that long-term orientation enhances, while short-term orientation reduces economic growth of societies.

There are numerous studies emphasizing the significance of the futuristic perspective and highlighting the deteriorating impact of short-term orientation (e.g. see Bebchuk and Stole,

1993; Porter, 1992; Stein, 1989, 1988). Research in this context mainly exhibits the general applicability of time orientation for economic conduct (e.g. Chang and Noorbakhsh, 2009; Newman and Nollen, 1996). The relevance of time preferences of individual investors in context of M&As is yet to be investigated extensively. However, one might ask why I consider investors' time preferences instead of managerial time orientation. Generally, I may postulate that managers from more patient societies would improve takeover performance but only if the managers act in a patient manner instead of being short-termist. Managers, being motivated to receive higher short-term compensations, are observed to pursue short-term goals even if they cause poor long-term gains (Stein, 1988; Narayanan, 1985). I do not expect managerial time preferences to drive takeover performance even if the managers have a cultural background (shaping the time attitude) similar to that of the investors, as all managers follow more or less short-term goals instead of sticking to their real time preferences.

I therefore try to investigate that how investors' time preferences cast an impact on long-term takeover performance. I particularly hypothesize that investors' long-term orientation result in improved takeover performance over an extended period. I posit that future-oriented investors urge management to assign more time and resources to future-oriented projects that increase firm value. I acknowledge the possibility of two market scenarios: perfectly integrated capital markets or sufficiently segregated markets. In perfectly integrated markets, it would not make any difference if there exist comparatively more investors that are patient in one national market than another. The takeover performance implications of investors' time orientation would be the same in all transnational markets. In reality, however, markets are categorized as being more or less integrated with each other and they have performance differences (e.g. Croci et al., 2010; Petmezas, 2009), hence making the investors' time preferences more relevant for evaluating gains to the acquirers. I expect investors' future orientation to enhance takeover performance in segmented or partially integrated markets.

My findings from paper 1, as discussed later in Section 5.1., reveal that investors' time preferences exert a significant influence on the long-term post-acquisition gains to the acquirers. I offer a strong empirical evidence that investors' future orientation causes higher takeover returns, on the other hand short-term orientation results in poor takeover outcomes.

2.2. National Culture, Managerial Preferences, and Takeover Performance

National culture is argued to exert a significant impact on managerial opinions, strategic orientation, and ultimately on managers' decisions (Geletkanycz, 1997; Hambrick and Mason, 1984). Therefore, I employ the cultural scores of Hofstede et al. (2010) as proxies for managerial preferences in order to determine takeover performance. Managers from cultures with a higher level of *individualism* are expected to indulge in risk mitigation strategies or *entrenchment* more frequently in order to reduce their job risk. Since managers from individualistic societies do not have that social circle readily available to act as a cushion in case some risk situation arises, they are more likely to indulge in diversifying mergers. Such diversifying mergers may not necessarily be value enhancing for the individual investors, as they can diversify their portfolios at their individual level without having to bear merger-related costs. Moreover, people from cultures with a higher level of *uncertainty avoidance* are less tolerant to risk and ambiguity and hence take less than optimal risk in their dealings (Beugelsdijk and Frijns, 2010; Fidrmuc and Jacob, 2010). I expect managers with higher level of uncertainty avoidance to become involved in risk-diversifying mergers in order to aggressively reduce the overall firm risk, even if it is not desirable for investors. Both individualism and uncertainty avoidance are connected to risk mitigation or entrenchment and thus are expected to result in reduced long-term takeover performance.

Furthermore, cultures with a higher level of *masculinity* are associated with striving for higher earnings, recognition, and progress, with managers being more decisive, competitive and

aggressive in their strategies (Kanagaretnam et al., 2011; Hofstede et al., 2010). It is argued that when not properly monitored, managers are more likely to enhance the firm size by opting for mergers and acquisitions (Tosi et al., 1999). It is mainly the desire for power that drives managers to indulge in *empire building* by using takeovers (Schneider and Dunbar, 1992; Rhoades, 1983), even if it is not profitable for investors. Since empire building is more likely to occur in masculine cultures, I expect the level of masculinity to cast a negative impact on takeover performance in the long run.

My findings from paper 2, as discussed in Section 5.2., suggest that national culture has a significant impact on long-term takeover performance. They further reveal that the higher level of individualism and uncertainty avoidance (i.e. entrenchment) in any society has a significant negative affect on takeover performance over an extended period. On the other hand, the level of masculinity (eliciting empire building), contrary to prevalent expectations, exerts a significant positive impact on takeover performance possibly due to certain positive traits of masculinity (e.g. tenderness, compassion, aggressiveness etc.) that contribute to improved performance (Connell and Wood, 2005; Niva, 1998)

>>>>> Figure 1 goes about here <<<<<

3. Textual Analysis and Takeover Performance

Textual analysis of financial disclosures is gaining prominence in the recent finance literature. Rogers and Grant (1997) suggest that the descriptive parts of financial statements (e.g. the president's letter, and management discussion and analysis) deliver more information as compared to basic annual reports. Research suggests that the qualitative discussion in financial disclosures is not random, meaningless talk; in fact, it provides significant information to all kinds of users (Breuer et al., 2018b; Loughran and McDolald, 2011; Tetlock et al., 2008). This additional information is considered to be helpful for understanding certain aspects of firm fundamentals that traditional financial measures are unable to explain. A textual analysis of

financial disclosures of M&As is therefore expected to offer new explanations of the determinants of long-term takeover performance. It may answer some important yet not so well addressed questions such as, does the managerial tone used in financial discussions has some implications for long-term takeover performance? Does managerial virtuous talk help us to predict long-term post-acquisition gains to the acquirers? Textual analysis can offer answers to these queries and add to the overall literature on determinants of takeover performance.

Additionally, I try to create a clear understanding of how textual information on managerial tone and managerial virtuous talk is associated with the takeover performance. Generally, there are two possible transmission ways: First textual information on managerial tone and managerial virtuous language may cast a direct impact on investor behavior inducing an immediate price affects. Second, managerial tone and virtuous language correlates with the takeover performance and predicts performance only gradually after more obvious (quantitative) information is evaluated by market participants. My findings from papers 3 and 4 (as discussed in Section 5.3. and 5.4.) do not indicate any short-term market reactions, my findings rather endorse the second possibility where tone acts as a predictor of long-term takeover performance, which investors fail to notice.

3.1. Managerial Sentiment and Takeover Performance

Analyzing the sentiment or tone of financial disclosures has gained huge importance in the textual analysis literature. Numerous studies have examined the positive and the negative tone of financial documents in order to explain current and future stock returns (e.g. see Loughran and McDonald, 2011; Demers and Vega, 2010; Davis et al., 2008; Henry, 2008; Tetlock et al., 2008; Tetlock, 2007). Most of the earlier studies were carried out using a general-purpose dictionary definition of positive and negative words. Henry (2008) and Loughran and McDonald (2011), however, gave new direction to sentiment analysis by rejecting the Harvard Dictionary and introducing finance-specific sentiment word lists suitable for accounting and

finance-related documents. The most comprehensive finance-specific sentiment word lists to date are proposed by Loughran and McDonald (2011), who thoroughly studied 10-K reports and formulated tone-based lists.

The above-mentioned studies use qualitative information, quantify it in terms of managerial sentiment, and investigate how it describes firm equity in a general context. I, however, do not observe any meaningful work in the context of M&As, Yan (2015) and Morgan (2018) being two notable exceptions. They examine managerial sentiment with the help of M&A-related SEC filings and they produce contradicting research outcomes with each other that instigated me to probe managerial sentiment and its prediction for takeover performance furthermore. I reason that M&A-related documents are prepared by lawyers rather than management and hence may not be a true depiction of managerial sentiment. It is rather the MD&A section of financial reports that is considered to be a true demonstration of managerial tone (Loughran and McDonald, 2011).

I therefore analyze managerial tone employing both positive and negative words used in the MD&A section, and follow Tetlock (2008) in postulating that negative managerial tone may indicate negative takeover performance in the long run. In addition, I posit that positive managerial tone may either reflect managerial confidence in merger success or be a mere indication of managerial overconfidence about merger gains. Overall, I expect textual analysis of managerial tone to add to our understanding of takeover performance. However, one might argue that managers could be deceptive in their discussions and may choose to avoid negative language and opt for positive speech only, but I use managerial sentiment word lists from Loughran and McDonald (2018), which are the most comprehensive financial word lists available to date and it would be difficult to avoid their usage. I also reason that managers cannot afford to be overly positive as it may be perceived as overconfidence and overconfidence certainly has negative performance implications (e.g. see Breuer et al., 2018a). In any case, I

believe that the qualitative discussion by management in the MD&A section holds a clarification of certain aspects of takeovers that firm fundamentals are unable to explain.

As elaborated in Section 5.3., my findings from paper 3 advocate that negative managerial tone is correlated with bad takeover outcomes, while positive managerial tone is associated with enhanced takeover performance in the long run. The results further suggest that the explanatory power of negative tone is far more pronounced than that of positive tone. Furthermore, the textual information on managerial tone takes some time before it is reflected in stock returns, owing to investors' overall negligence and incompetence to process subtle textual information more accurately.

3.2. Managerial Virtuous Talk and Takeover Performance

M&A-related research is gradually paying more consideration to softer, qualitative information and to human characteristics for determining post-acquisition takeover gains (e.g. see Morgan, 2018; Yan, 2015; Stahl et al., 2011). Due to the added complexities and huge uncertainties associated with M&As, the softer, human side of 'trust' has gained a greater significance (Trąpczyński at al., 2018). It is argued that the most important element in the formulation of trust in any relationship is communication (Flores and Solomon, 1997). Marks and Mirvis (1998) and Buono and Bowditch (1989) contend that in the absence of fair communication, there arise mistrust, job uncertainty, and uneasiness, which ultimately lead to negative financial results. A lot of research explores the role of trust in M&As by employing different approaches, such as case studies, surveys, and interviews. I, however, try to examine the role of trust in M&As by dissecting managerial communication in the financial disclosures. It is suggested that managers carefully draft these descriptive parts of their financial statements (McConnell et al., 1986) in order to flaunt themselves and their organizations (Ingram and Frazier, 1983).

Trust-related research in M&As usually targets employees' trust in their management or in their overall organization (Stahl et al., 2011; Ozag, 2006); however, investors' trust in the acquiring

management is generally less explored. Hence, I postulate that trust is a critical determinant of takeover outcomes and I opt for textual analysis to analyze managerial trust in M&As from the investors' perspective and what prediction it offers for long-term gains to the acquirers. There are two competing ideas surrounding managerial trust: Some researchers believe that managers avoid using inflated language that is full of deception and bluff (Davis et al., 2015; Akerlof and Kranton, 2000), while others contend that management speeches are carefully formulated to create a desired image (Craig and Amernic, 2018). Hence, the need to analyze managerial use of trust language and its implication for takeover performance has become even more crucial.

I therefore follow Breuer et al. (2018b) and strive to decipher managerial virtuous talk by formulating the following two contending propositions. My first presumption argues that managerial virtuous talk is honest and dependable and not a fabricated speech (Karpoff et al., 2008), and that it consequently predicts improved post-acquisition performance in the long-run. My second proposition, in contrast, tries to capture the opportunistic side of managerial behavior that managers try to hide under the cover of 'sweet' trust talk (Loughran et al., 2009), which may cause poor takeover outcomes. My findings from fourth research paper, as explained in Section 5.4., offer a strong evidence that managerial trust talk predicts deteriorated takeover performance over an extended period. Similar to textual information on managerial tone, my findings further reveal that managerial virtuous talk is not immediately reflected in takeover returns as investors overlook soft cues in subtle textual information.

>>>>>> Figure 2 goes about here <<<<<

4. Measures of Takeover Performance

Most of the research generally provides evidence of the success and failure of M&As in terms of accounting and financial outcomes (e.g. see Frijns et al., 2013; Chakrabarti et al., 2009). The research focus has been mainly on short-term takeover returns (i.e. announcement effects) and less on long-term outcomes. I, however, posit that these announcement effects fail to capture

the overall value creation of takeover deals, as the success of many deal-related factors (i.e. synergy and integration) is not apparent in the short-run (Malmendier et al., 2018). I therefore, mainly employ long-term takeover performance measures in my study in addition to checking for announcement effects and medium term outcomes. I specifically employ the most commonly used methods of the Fama-French three-factor model and buy-and-hold abnormal returns (BHAR) in order to evaluate the success of M&A deals.

I employ the Fama and French (1993) three-factor model to compute abnormal returns (ARs). Following Mitchell and Stafford (2000), I estimate daily abnormal returns by computing intercepts from the time-series regression of daily returns. I compute regression estimates based on 36-month daily return data before a merger deal and then use these estimates to compute daily expected returns for a post-acquisition period of 36 months. I take the difference of expected returns from realized returns to calculate daily abnormal returns. More specifically, I employ the following model:

$$AR_{ijt} = R_{ijt} - R_{fjt} - \beta_{ij1}{\cdot}(R_{mjt} - R_{fjt}) - \beta_{ij2}{\cdot}SMB_{jt} - \beta_{ij3}{\cdot}HML_{jt} + \varepsilon_{ijt}. \tag{1}$$

AR_{ijt} is the daily abnormal return for acquirer i from country j at time t, calculated from the announcement date until 36 months after the deal has taken place. R_{ijt} is the daily realized return for acquirer i from country j, R_{fjt} is the corresponding daily risk-free rate, $R_{mjt} - R_{fjt}$ is the daily excess market return for country j, where R_{mjt} is the daily CRSP value-weighted return of the market portfolio in country j, SMB_{jt} and HML_{jt} are the corresponding daily size and book-to-market factor returns of Fama and French (1993), β_{ij1}, β_{ij2}, and β_{ij3}, are regression coefficients, while ε_{ijt} is the error term. Finally, I accumulate the daily abnormal returns over 36 months.

Furthermore, just as for short-term announcement returns, many have opted to follow the simplest and prevalent cross-sectional method of measuring cumulative abnormal returns

(CARs) as the sum of daily abnormal returns across the event window in order to compute long-term abnormal returns for the acquirers. However, this approach has been disapproved for being a simple arithmetic addition of abnormal returns without considering the concept of the time value of money. Buy-and-hold abnormal returns (BHARs) emerged as an alternative approach that considers compounding by geometrically aggregating abnormal returns. There are numerous long-term event studies that employ BHARs to capture abnormal returns for a specific time period, as real investors hold their investments and earn returns for their holding period instead of making day-to-day abnormal returns (Barber and Lyon, 1997). I therefore, follow Chakrabarti et al. (2009) and Lehn and Zhao (2006) and use the BHAR approach to analyze long-term takeover performance. I compute BHARs for a window length of 36 months using the following equation,

$$BHAR_{ijt} = \prod_{\tau=t-d+1}^{t}(1 + R_{ij\tau}) - \prod_{\tau=t-d+1}^{t}(1 + R_{mj\tau}). \tag{2}$$

where $BHAR_{ijt}$ is the buy-and-hold abnormal return of acquirer i from country j at time t, $R_{ij\tau}$ is the daily return of the acquirer at time τ, and $R_{mj\tau}$ is the respective daily market return for $t-(t-d+1)+1 = d$ trading days over the 36 months post acquisition.

Despite the inherent problem of being unable to account for risk, BHAR is regarded as the preferred methodology to carry out long-term analysis as it perfectly captures investors' investment experience (Lyon et al., 1999). I additionally control for risk to be sure that my models are well constructed and they take into account the important aspect of firm risk.

5. Overview of the Research Papers

5.1. Executive Summary of Paper No. 1 - Investors' Time Preferences and Takeover Performance

By Wolfgang Breuer, Bushra Ghufran, and Astrid Juliane Salzmann

Published in the *International Review of Financial Analysis Journal*, 2018; Presented at the International Finance and Banking Society (IFABS), 2018, the Academy of International Business (AIB) Annual Meeting 2019, the AIB Doctoral Consortium 2019, and the INFINITI Conference on International Finance 2019.

In this study, I investigate the time preferences of individual investors and that what implications such preferences may have concerning the long-term takeover performance. I examine takeover outcomes over a post-acquisition time period of three years for 38,153 M&A deals from 54 acquiring countries occurring between January 2000 and May 2015. My dependent variable, cumulative abnormal returns for the acquirers for a 36-month time window, is based on the Fama and French (1993) three-factor model. My main independent variable, future orientation, is based on cultural scores of long-term orientation (LTO) that vary from 0 to 100. I obtain these scores from the Hofstede et al. (2010) framework, where higher values indicate a higher level of patience and future orientation. Since culture is assumed to shape individual's preferences (Eugster et al., 2011; Henrich, 2000), I assume the cultural dimension of LTO to be a reasonable approximation for investors' time preferences.

In order to investigate the possible association between investors' future orientation and long-term takeover outcomes, I estimate multivariate regression models by sequentially controlling for numerous deal-, firm-, and country-specific variables. I account for data disparities arising due to the mismatch between the number of deals (>30,000) and LTO values (for 54 countries), and I define my sample into 54 clusters at the country level. Additionally, I control for

unobserved heterogeneities by employing industry and year fixed effects. Findings from all the estimated regression models suggest that future orientation has a significant positive impact on long-term post-acquisition gains to the acquirers. I obtain strong empirical evidence that countries with higher long-term orientation scores demonstrate better takeover performance. It clearly endorses my proposition that in the case of segmented or partially integrated, markets investors' future orientation significantly improves long-term takeover gains.

I conduct a number of *robustness tests* to ensure that my primary results are valid. I test for *alternative return measures* based on the CAPM and the Fama-French five-factor model and *alternate measures of investors' time preferences*, based on language and alternative cultural measures, and I observe that future orientation continues to load significantly in a positive way throughout the regression models. My results also approve that future orientation has a strong positive influence on takeover performance for the 24- and 12-month *time windows,* although with relatively lower determination power, suggesting that it takes some time before capital market processes all the information concerning a certain takeover event. In fact, this inference gets more confirmation if I further reduce the time frame to a 9-, 6-, 3-, and 1-month time window.

Future orientation has a strong positive impact on acquirers' long-term post-acquisition performance for both the *pre-crisis and the post-crisis time period,* and my results are not affected by financial crisis. Further, the regression outcomes for all three subsamples, based on non-US, both non-US and non-UK, and non-EU (including UK) initiated mergers and acquisitions deals, suggest that my earlier results are not driven by a *sample composition bias*. Finally, in order to address the potential problem of endogeneity, I follow Guiso et al. (2006) and conduct an *instrumental variable (IV) analysis*. My findings from the regression models based on the IV analysis suggest that my coefficient estimates from the instrumented variable

(LTO) are significant and retain the expected sign. Hence, all of the above-mentioned robustness tests ensure the strength of my initial findings.

Earlier discussion suggests a strong positive association between investors' future orientation and takeover performance. However, the extent to which investors' time preferences may determine takeover outcomes depends on the strength of the *investor protection* framework. Due to the presence of agency issues, there arises the need to have a proper investor protection system in order to ensure that investors' (time) preferences are considered when taking strategic decisions. Hence, I also try to examine whether better investor protection (proxied by the revised and the corrected anti-director rights index) enhances the impact of investors' time preferences on takeover performance. Convincingly, investors' future orientation is observed to have a significant positive impact on takeover performance in countries with strong investor protection, while the effect becomes weak and insignificant in countries with poor investor protection. Hence, it may be concluded that a better investor protection system enhances the determining power of investors' time preferences for takeover performance by curbing opportunistic managerial behavior.

5.2. Executive Summary of Paper No. 2 - National Culture, Managerial Preferences, and Takeover Performance

By Wolfgang Breuer, Bushra Ghufran, and Astrid Juliane Salzmann

Published in the *International Business Review*, 2018; Presented at the Annual Meeting of the German Finance Association (DGF) 2017.

In this study, I examine potential entrenchment behavior by analyzing the managerial preference to 'play it safe' or to actively engage in excessive risk mitigation by carrying out diversifying mergers. Moreover, I also try to unveil empire building behavior by probing the managerial propensity to carry out mergers in order to expand the firm size for their private

benefit. Both entrenchment and empire building are agency issues representing managerial conflicts of interests and are hence expected to negatively impact firm value. In order to investigate my propositions as outlined in Section 2.2., I obtain a large international sample comprising 32,856 M&A deals from 53 countries taking place between 1983 and 2011. My main dependent variable regarding takeover performance is based on BHARs for a 36-month-long time window. My main independent variables are the cultural scores of individualism, uncertainty avoidance, and masculinity from the most established cultural model of Hofstede et al. (2010). These country-level cultural scores are suitable proxies for managerial preferences as cultural regions are argued to have a significant influence on managerial choices (Ahern et al., 2015; Jha and Cox, 2015). I therefore ascertain the country of the acquiring firm and employ the corresponding cultural scores.

I estimate multivariate regression models in order to investigate the impact of managerial preferences (proxied by national culture) on takeover performance, while keeping the effect of a number of deal-, firm-, and country-level factors controlled. The level of individualism and uncertainty avoidance are found to have a strong negative association with BHARs. These findings provide a clear empirical confirmation of my proposition that managerial entrenchment negatively impacts long-term takeover performance. The level of masculinity, however, has a strong positive relationship with takeover performance. It contradicts my earlier proposition, implying that empire building does not hamper post-acquisition takeover gains in the long run possibly due to certain positive aspects of masculinity that improve performance (Connell and Wood, 2005; Niva, 1998). Overall, my findings offer clear evidence that national culture is an important determinant of long-term takeover gains to the acquirers.

I carry out a number of *robustness tests* to validate my results. First, I examine the cultural effects for an *alternative time window* of 24 months, and I observe that cultural factors continue to explain long-term takeover performance. Next, I test my findings for *time effects* (pre-crisis

and post-crisis) and observe that cultural effects remain intact. Furthermore, I apply Hofstede's original scores as *alternative cultural measures* (Hofstede, 2001) and find slightly weakened results but they still endorse my earlier findings. Furthermore, in order to account for *sample composition bias,* I analyze several sub-samples: non-US, non-US and non-UK, G20 and G8+5, and receive confirmation of my primary results. Moreover, to be sure that *heterogeneity*, *heteroscedasticity*, the mismatch between my deal-specific dependent variable and the country-specific independent variables, and *endogeneity* do not impact my findings, I examine fixed effects, weighted least squares, clustered least squares, and instrumental variables analysis, respectively. My findings concerning afore-mentioned econometric concerns offer further evidence regarding the strength of my initial results.

I carry out several *additional tests* in order to support my earlier findings and to unveil some relevant new aspects. I seek to offer the *evidence of the presence of entrenchment and empire building* to support my corresponding hypotheses. For this purpose, I establish a model to investigate how cultural characteristics of individualism and uncertainty avoidance relate to post-acquisition risk of the acquiring firm. I obtain empirical proof that both the level of individualism and the level of uncertainty avoidance have a significant negative impact on the acquiring firm's risk in the long run, suggesting that managers opt for diversifying mergers (i.e. entrenchment) to their private benefit. Further, I examine the association between masculinity and deal size to substantiate the presence of empire building. I observe a strong positive association between masculinity and deal size, suggesting that a higher level of masculinity results in larger deals (i.e. empire building).

Additionally, I carry out a *short-term* to *medium-term* analysis of takeover performance, observe that the phenomena of entrenchment and empire building are non-existent in the short-term, start showing up in the medium-term, and then gain strength as I increase the size of the time windows. I further observe that the impact of cultural factors is weakened in the case of

cross-border deals and with a higher level of *globalization* owing to a higher level of associated cultural disparity that dilutes the original cultural effects.

5.3. Executive Summary of Paper No. 3 - The Predictive Power of Managerial Tone: A Text-Based Analysis of Takeover Performance

By Wolfgang Breuer and Bushra Ghufran

I analyze positive and negative tone used in the MD&A section and its ability to foresee long-term takeover outcomes. I retrieve the 10-K filings from SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system and obtain the MD&A section for 10,343 M&A deals from the United States occurring between January 2000 and March 2016. My main dependent variable is BHAR; I however add systematic firm risk to my regression model to keep my model construction risk-adjusted. My main independent variables, negative managerial tone (LMneg) and positive managerial tone (LMpos), are based on finance-specific negative and positive word lists from Loughran and McDonal (2018). Following Loughran and McDonald (2011), I standardize the fraction of negative and positive words. I also control for other sentiment word lists formulated by Loughran and McDonald (2011) in addition to numerous deal-, acquirer-, and country-specific variables. I cluster standard errors at the acquirer's industry level and control for industry and year fixed effects.

The regression results reveal that LMneg has a strong negative relationship, while LMpos has a significant positive association with long-term takeover performance. It confirms my earlier proposition that negative managerial tone signals poor post-acquisition gains to the acquirers, while positive managerial tone has a prediction for better takeover performance. My findings do not offer any evidence for managerial overconfidence. The predictive power of managerial negative tone is far more pronounced than that of positive tone.

In order to authenticate the validity of my results, I conduct many *robustness* tests. First, I use positive and negative word lists proposed by Henry (2008) as an *alternative measure of managerial tone* and I revise my estimates. The results based on Henry's word lists are significant, however relatively weak, as the word lists of Henry (2008) are comparatively less comprehensive. Overall, these results confirm the robustness of my initial inferences. Further, I replace the BHAR with *alternate performance measures* of return on assets (ROA) and market to book ratio (MTBR), and my revised results validate my earlier inferences. My findings regarding an *alternative time window* of 24 months also endorse that negative tone signals negative takeover outcomes, while positive tone signals enhanced takeover performance. My findings further reveal that the predictive power of managerial tone is relatively insignificant over the *short-term* and becomes relevant and gains strength as I increase the window length. These findings suggest that managerial tone has no direct impact on takeover outcomes as investor fail to notice subtle textual cues; in fact, tone has some predictive power for takeover performance only gradually after more obvious (quantitative) information is available. My findings are also robust for *post-crisis vs pre-crisis* time effects analysis, although results are relatively more pronounced for the post-crisis period. Overall, my sensitivity analyses offer support for my initial interpretations.

Additionally, the results suggest that managerial tone has a significant predictive power for post-acquisition performance in the case of both *domestic and cross-border* mergers. The predictive power of managerial tone is relatively more pronounced in the case of cross-border deals, possibly due to the added uncertainty involved with such kinds of deals. Furthermore, as observed in case of cross-border and post-crisis period deals, I witness managerial tone to be more pronounced in the case of *riskier M&A deals* due to the presence of high risk, firm fundamentals alone is not sufficient and tone becomes more relevant. Finally, I use *managerial tone as a function of performance* and conclude that if managers are able to forecast takeover

outcomes, they adopt their tone accordingly and use a more positive tone if higher takeover outcomes are expected and a more negative tone in the case where poor performance is anticipated.

5.4. Executive Summary of Paper No. 4 - Managerial Talk of Trust and Takeover Performance

By Bushra Ghufran

I analyze managerial trust in M&As from the investors' perspective and what prediction it offers for long-term gains to the acquirers. The current study examines a sample comprised of 10,765 M&A deals from the United States that occurred between January 2000 and October 2016. I retrieve the 10-K filings for all the deals from the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) system and I obtain the MD&A section for the purpose of the current study. Same as in Breuer et al. (2018b), my main independent variable 'trust' is based on the summation of a frequency count of 21 unique words from Audi et al. (2016). The key dependent variable is BHAR and in order to account for risk, I add systematic risk to the regression model apart from accounting for several relevant deal-, firm-, and country-specific variables. The results are formulated by clustering standard errors at the level of acquirer's industry and controlling for industry and year fixed effects.

The current study offers clear evidence of a negative association between managerial virtuous talk and post-acquisition gains to the acquirers in the long run. It confirms my proposition that managerial virtuous talk is a mere representation of managerial opportunistic behavior that ultimately signals poor performance. There is no evidence that managerial virtuous talk is an honest display of managerial discourse; on the contrary, it is used to mask poor performance.

I strive to authenticate my inferences with the help of the subsequent *robustness tests*. First, I use *alternative measures of takeover performance* based on return on assets (ROA) and market

to book ratios (MTBR), and I find that managerial virtuous talk still has a significant prediction for poor takeover outcomes. In the case of an *alternative time window* of 24 months as well, managerial trust talk continues to signal negative takeover performance. There is no evidence for the predictive power of managerial virtuous talk over short-term takeover gains. The implications of managerial virtuous talk for takeover performance become relevant only over a long time period. My findings do not endorse any direct and immediate impact of managerial virtuous talk on market participants and in turn on takeover outcomes. The empirical results rather highlight the correlation of managerial virtuous talk with takeover performance suggesting that managerial virtuous talk predicts long-term takeover performance that investors ignore mistakenly. It maybe because investors miss such delicate textual cues owing to their inattention and incapacities and in part due to managers' lulling investors into inattention with the help of deceptive language (as observed by Breuer et al., 2018b). I further observe that the predictive power of managerial virtuous talk is significantly correlated with takeover returns during the *post-crisis* period owing to added financial uncertainties.

I conduct some *additional analyses* to further explore the matter at hand. First, my findings regarding both *cross-border and domestic deals* suggest that managerial virtuous talk signals reduced long-term post-acquisition gains to the acquirers. Further, I try to substantiate the predictive power of the *interaction between managerial virtuous talk and pessimistic tone.* I observe that both managerial trust and pessimistic tone exhibit a unique negative prediction for takeover performance, and very interestingly, the interaction term of managerial trust with pessimistic tone is also found to signal poor takeover performance. It suggests that the negative predictive power of managerial virtuous talk gains strength in the presence of pessimistic tone.

6. Concluding Remarks, Suggestions, and Limitations

My findings from papers 1 and 2 add to the culture-related M&A literature by stressing the importance of understanding investors' time preferences and managerial preferences for

entrenchment and empire building. They offer a clear evidence that investors' future orientation significantly improves takeover gains, while entrenchment and empire building considerably reduce long-term gains to the acquirers. The results emphasize the need to establish and implement a strong governance system in order to safeguard investors' preferences and to reduce any conflicts of interests. I urge policy makers and boards of directors to monitor managerial behavior and to align management compensations with long-term goals in order to curb managers' myopic behavior. Moreover, although I observe managers 'playing it safe' by opting for diversifying mergers, any managerial preferences and the motives behind their choices are not easy to perceive because of prevailing informational asymmetries.

Boards must design a proper governance system in order to detect the real motives behind relevant agency issues of playing it safe and building large empires and how these conflicts of interest develop over time. Only with precise knowledge of the real conflicts and managerial motives can boards develop an appropriate incentive system to motivate their managers to take optimal risks in order to enhance firm value. Contrary to common belief, empire building has no implications for poor takeover performance. It suggests the need to further probe the issue more cautiously and to decipher how Hofstede's cultural values determine post-acquisition gains to the acquirers. The current findings regarding investors' time preferences and managerial preferences for entrenchment and empire building are quite convincing, however, they should be interpreted by considering the drawback of my reliance on a country-level measure of investors' and managers' preferences. It would have been preferable to obtain such measures at the individual-level; nevertheless, that is not easy to achieve. Overall, I have confidence that my empirical findings offer adequate evidence for boards and policy makers to help them improve their takeover performance.

My findings from papers 3 and 4 suggest that managerial discourse is not random cheap talk; in reality, it has clear implications for takeover outcomes over an extended time period. The

results reveal that negative managerial tone predicts poor takeover outcomes while positive tone signals improved takeover performance. Investors who carefully read the cues that managerial sentiment and tone conveys may benefit by investing in stocks with a positive managerial tone while disinvesting or shorting stocks with a negative managerial tone. However, one cannot completely rule out the possibility of managerial deceptive speech. In order to account for this, I particularly employ the most comprehensive word lists on managerial tone with minimal chances of avoiding certain tonal aspects or of camouflaging certain aspects when analyzing and discussing firm prospects.

Furthermore, managerial trust talk is found to have negative long-term prediction for takeover performance. There are, however, certain limitations that should be taken into consideration when interpreting these findings. The current study revolves around managerial trust talk only; it does not capture market participants' characteristics and their ability to trust. Future research may try to add to the M&A literature in this direction. Nevertheless, the current study does have important implications for investors and for policy makers. Investors should read managerial virtuous talk more cautiously and might decide to short stocks whose management engages in overly virtuous language. Policy makers and boards may benefit from these findings and may devise certain compensation plans to overcome such managerial behavior of creating an honest image in order to hide performance issues. I urge boards and policy makers to establish embedded relationships that are based on trust and faith, as these may work even in the absence of external control mechanisms.

Overall, cultural values (papers 1 and 2) and textual analysis (papers 3 and 4) unveil certain aspects of investors' and managers' preferences that have not been adressed so far. I urge the future researchers to keep exploring such soft aspects in determining takeover outcomes and in decrypting other issues in corporate finance.

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Figure 1: National Culture and Takeover Performance

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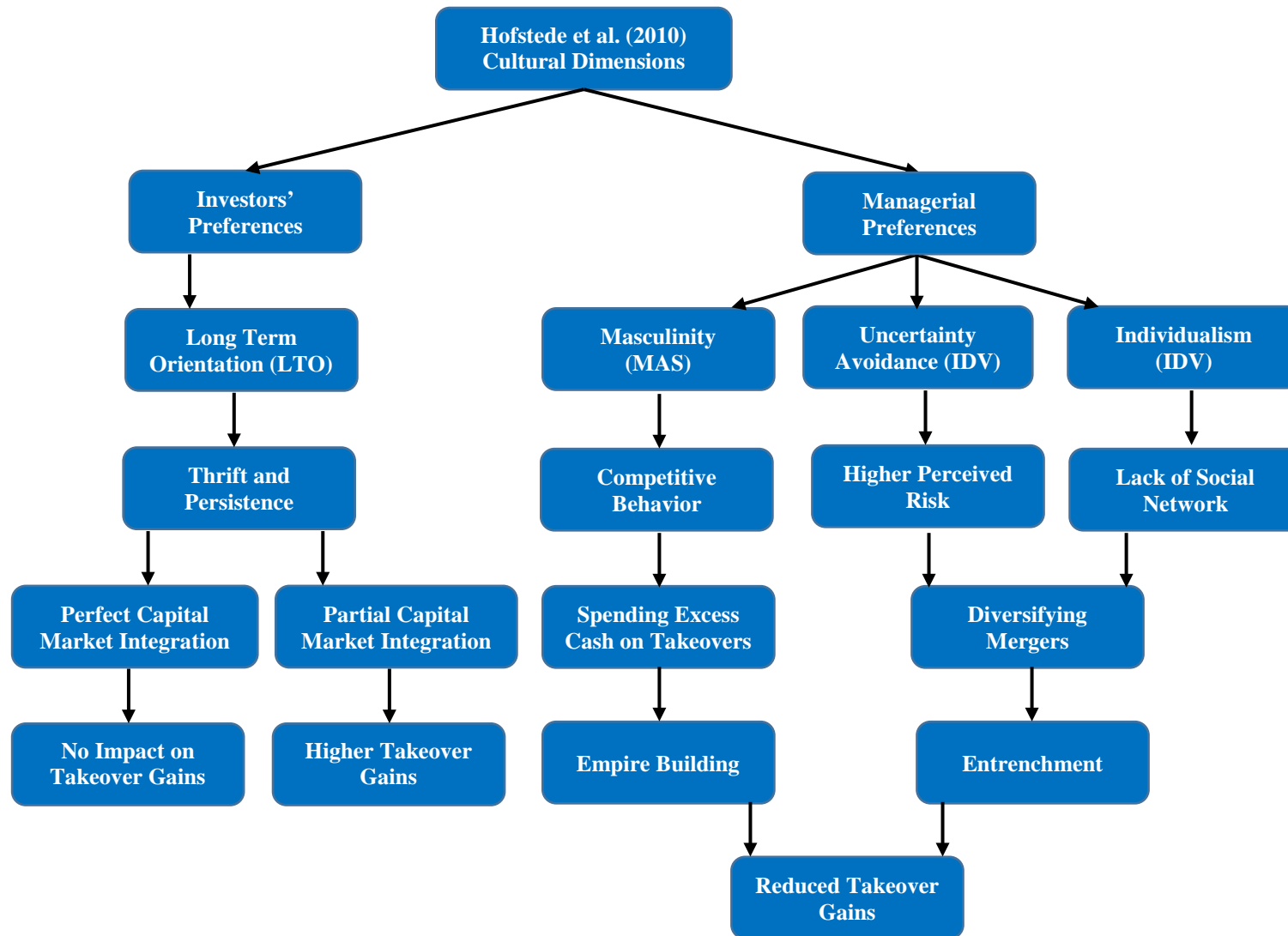
Figure 2: Textual Analysis and Takeover Performance
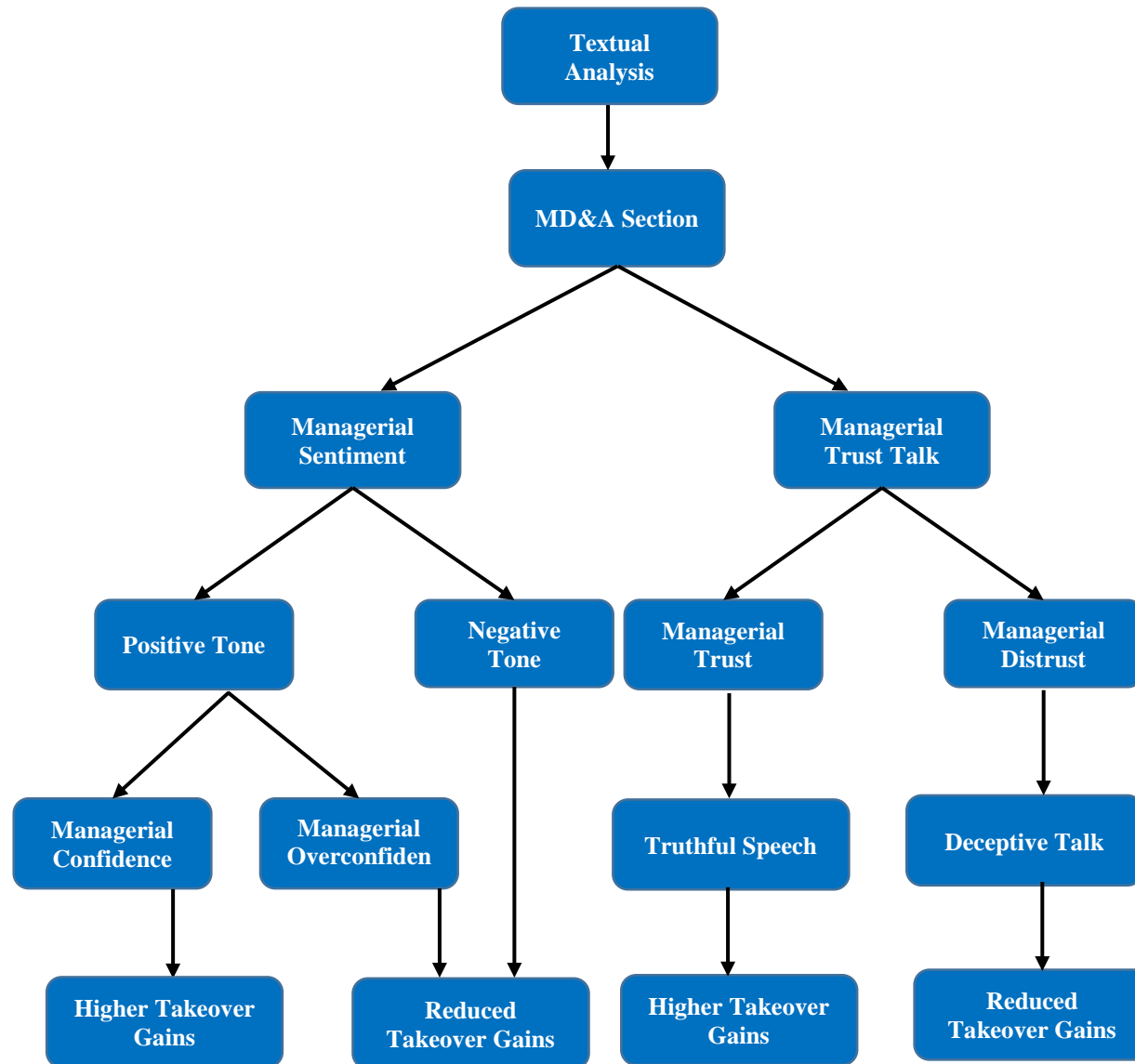
PART 2: Research Papers

Investors' Time Preferences and Takeover Performance

By Wolfgang Breuer[a], Bushra Ghufran[b], and Astrid Juliane Salzmann[c*]

Abstract: We investigate investors' time preferences and takeover outcomes in a cross-disciplinary international study. We use a cultural measure on long-term orientation (LTO) to capture investors' time preferences. Additionally, we study how investor protection and the nature of the deal (cross-border vs domestic) in connection with investors' time preferences come into play in explaining long-term takeover performance. Evaluating data on 38,153 M&A deals from 54 countries, over the period from 2000 to 2015, we offer empirical evidence that investors' future orientation significantly improves post-M&A performance, while short-term oriented behavior deteriorates takeover performance. Our findings further suggest that the positive impact of investors' future orientation on takeover performance is more pronounced in countries with strong investor protection. Moreover, the impact of investors' time preferences is stronger for domestic deals where the confounding impact of cultural differences is almost non-existent.

Keywords: future orientation, investors' time preferences, mergers and acquisitions, takeover performance, investor protection

JEL Classifications: D22, G34, G38, K10, Z10

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1. INTRODUCTION

In the era of global competition, mergers and acquisitions (M&As) are among the fastest strategic choices opted for to be competitive in the market. However, we observe a high rate of mergers and acquisitions failure owing to cultural differences, post-merger integration problems, and agency issues mainly. We try to add to the current literature in this direction to better ascertain the underlying reasons for poor M&As outcomes, however, from a somewhat different perspective. Our goal is to see through the temporal lenses of the acquiring companies' investors [hereafter termed as 'investor(s)'] to better comprehend how their time preferences affect post-merger takeover performance.

The notion of *'time'* – no matter how abstract it may sound – has gained extensive attention in the literature regarding corporate theory and strategy. Time has been considered one of the main concepts that shape human behavior in general (Galor and Özak, 2016), and economic behavior in particular (Chen, 2013). The selection between current consumption and delayed gratification outlines many human choices ranging from personal to managerial level decisions and consequently exerts a great impact on related outcomes. Probing into time preferences is therefore of utmost importance not only to understand individual decision-making, but also to comprehend how individual decision-making consequently affects corporate behavior and strategy formulation.

The literature in this regard mainly shows the general relevance of time preferences for economic behavior (e.g. Chang and Noorbakhsh, 2009; Newman and Nollen, 1996). We find evidence with respect to time preferences at the organizational level (Harris and Siebert, 2017; Antonczyk et al., 2014; Buck et al., 2010), however, to some degree, investors' time preferences have been neglected in the empirical corporate finance literature in general (exceptions are Flammer and Bansal, 2017, and Howlett et al., 2008) and in the mergers and acquisitions related literature in particular with Chen et al. (2007) and Gaspor et al. (2005) being notable exceptions.

Chen et al. (2007) and Gaspor et al. (2005) have studied the impact of institutional investors' investment horizons mainly in connection with corporate control and monitoring. Their results also link long-term underperformance of acquirers to short-term oriented shareholders. However, both studies are restricted to the US and are considering mainly institutional investors with an ability to exert corporate control. The impact of the temporal preferences of a general investor base is not studied extensively. This is because investors' temporal orientation is difficult to observe, thus making it very challenging to substantiate the likely impact of time orientation on firm performance empirically. The current study takes on the challenge and tries to establish a vigorous research design to investigate the potential influence of investors' time preferences on long-term takeover performance in an international context.

It is argued that economic choices are largely dependent on the selection between current and future gratification, which is determined by decision-makers' time preferences (Frederick, 2003; Anderhub et al., 2001). Stout (2012) points out that though long-term orientation is assumed to be associated with greater gains, organizations are still found to pursue short-term goals and forgo projects yielding positive net present values only because they may cause a reduction in short-term profits (Graham et al., 2005). It is quite a contrasting and intriguing finding at the same time that even though theory claims long-term orientation to be generally value-maximizing, organizations still focus on short-term gains. This difference between theory and practice may not only be due to the lack of some convincing empirical validation of benefits associated with long-term orientation, but also due to the absence of proper investor protection prohibiting managers from indulging in value destroying short-term strategies.

Against this background, we mainly seek to provide clear evidence of a positive impact of investors' long-term orientation on an acquirer's post-acquisition performance. In additional analyses, we address the issue of investor protection in connection with investors' time

preferences and show that the positive impact of investors' time preferences on takeover performance is stronger for higher levels of investor protection.

The rest of the paper is organized as follows. We discuss the theoretical framework and hypotheses development in Section 2. Data and research methods employed are described in Section 3, while empirical findings are presented in Section 4. Several robustness checks are carried out in Section 5, whereas in Section 6 we additionally investigate the impact of investor protection and the differences between cross-border and domestic deals in explaining the impact of time preferences. Finally, conclusions are delineated in the closing section.

2. THEORETICAL FRAMEWORK AND HYPOTHESES DEVELOPMENT

2.1. Culture and Time Preferences

Though economists had a long held belief that preferences are not shaped by culture or society (Stigler and Becker, 1977), more recent studies have acknowledged that culture exerts a great influence on formulating preferences (Eugster et al., 2011; Fehr and Hoff, 2011; Henrich, 2000). Culture is found to have a profound impact on the perception of time. In fact, the perception of time is regarded as part of culture itself. Becker and Mulligan (1997) suggest culture to be among the most important factors that determine time preferences. Wang et al. (2016), in their extensive survey-based study on time preferences across different cultures, also provide a clear evidence on a strong connection between temporal preferences and cultural background.

Long considered as vague and abstract by economists, however, sociologists and psychologists – most notably Geert Hofstede – conducted pioneering cross-national research on culture over different time periods and put forward six core cultural dimensions (Hofstede et al., 2010). For the purpose of our study, we refer to the cultural dimension of long-term orientation (LTO) that specifically addresses time preferences.

Hofstede (1991) argues that long-term oriented cultures display the characteristics of thrift and persistence that induce future-oriented behavior, whereas short-term oriented cultures focus more on the past and the present, following traditions, preserving 'face', and satisfying societal responsibilities. Short-term orientation emphasizes immediate fulfillment of needs, while long-term orientation acknowledges delayed gratification. When relating time preferences to economic behavior, Hofstede et al. (2010) argue that short-term orientation induces spending and consuming, however, long-term orientation implies larger savings and ensures availability of funds for investments. They further suggest in contrast to future-oriented behavior, short-term orientation slows down economic growth of countries.

This concept of long-term orientation in comparison to short-term orientation helps us understand how different cultures perceive time, and what the relative importance of the past, the present, and the future is. Hence, we also build on the idea put forward by Hofstede (1991) that people in cultures with higher scores on LTO are more patient and give more value to the future, and therefore we use LTO as a proxy for investors' time preferences.

2.2. Investors' Time Preferences and Firm Value

Previous literature has shown increased attention on postulating the impact of culture on financial decision-making (e.g. see Aggarwal et al., 2016; Karolyi, 2016; Zingales, 2015). Reviewing the recent literature on cultural finance, Nadler and Breuer (2017) suggest that research is carried out on four levels: informal institutions (culture), formal institutions (capital markets), the corporate level (e.g. corporate control and ownership structure), and the individual level (managers and private investors). Literature further investigates the impact of culture (level 1) on the decisions of managers and individual investors (level 4) in determining financial outcomes (Aggarwal et al., 2016). We also build our rationale on these lines and expand cultural research to a financial context and seek to substantiate the financial effects of cultural preferences.

We witness a lot of research suggesting a significant association between time preferences and economic undertakings (e.g. Chen, 2013; Chang and Noorbakhsh, 2009). Nevertheless, we generally do not find much literature on investors' time preferences and their likely impact on corporate strategies and outcomes. Our research is the first large scale study that focuses explicitly on investors' intertemporal preferences, measured with the help of cultural values, and their impact on acquirers' long-term post-merger performance.

The literature in corporate finance emphasizes the need of a long-term perspective and reveals that many corporate decisions are influenced by short-term orientation causing suboptimal outcomes (see Bebchuk and Stole, 1993; Porter, 1992; Stein, 1989, 1988). It is argued that corporate strategies should rather be designed to enhance long-term firm value (Financial Times, 2009). Likewise, Galor and Özak (2016) point out that long-term orientation is crucial for the formation of human and physical capital, technological and economic progression, and wealth of the nations.

We build on the line of argumentation that investors' time preferences play an important role in maximizing firm value. To be more specific, we posit that future-oriented investors urge corporate decision makers devote more time and resources to developing long-term oriented strategies and forward-looking plans that maximize firm value. In order to present this idea in a more formal way, consider a (national) perfect capital market with a representative entrepreneur who has to decide between two alternative (i.e. mutually exclusive) investments (e.g. different kinds of acquisitions). At time $t = 0$ both of them require an initial capital outlay of I. Project 1 leads to certain cash inflow CF_1 at time $t = 1$, whereas project 2 offers a payoff amounting to CF_2 only at time $t = 2$. The entrepreneur's time preferences are described by a discount rate r and are identical to the time preferences of all other (national) capital market participants. Small values of r correspond with a high future orientation and thus higher patience, while high values of r imply a low future orientation and thus a higher impatience.

Let r_h denote the discount rate in the latter case, and r_l in the former. We further assume $CF_1 \cdot (1+r_l) < CF_2 < CF_1 \cdot (1+r_h)$ and hence a preference for project 2 if patience is high (i.e. $r = r_l$), while it is the other way round for $r = r_h$. To be more precise, with $NPV_i(r = r_l)$ as the net present value of project $i = 1, 2$ for discount rate $r = r_l$, we get $NPV_1(r = r_l) = -I + CF_1/(1+r_l) < NPV_2(r = r_l) = -I + CF_2/(1+r_l)^2$, whereas we have $NPV_1(r = r_h) > NPV_2(r = r_h)$ for a capital market with rather impatient subjects and thus a higher market discount rate r_h.

At time $t = 0$, when the decision is made, there will be an immediate reaction in the capital market regarding the value of the entrepreneur's firm which is identical to the net present value of the realized project. In case of project 1 being chosen, this price reaction will be $CF_1/(1+r)-I$, while the price reaction for selecting project 2 will amount to $CF_2/(1+r)^2-I$. However, based on our assumptions so far, we have $CF_2/(1+r_l)^2 > CF_1/(1+r_l) > CF_1/(1+r_h)$, which means that stock price increases are higher in the case of more patient capital market participants (due to $r = r_l$ and the choice of project 2), implying a better performance for takeover activities.

Now, when switching from the consideration of just one national capital market to two distinctive ones with comparatively patient participants in the former one, i.e. $r = r_l$, and rather impatient participants in the latter, i.e. $r = r_h$, we will observe higher positive value effects of acquisitions in the capital market with the more patient investors. Certainly, the intuition is straightforward: higher patience leads to lower discounting, and, in addition, the attractiveness of more long-term oriented projects grows as well, implying a better takeover performance. Against this background, the same conclusion holds true if projects 1 and 2 are not mutually exclusive, but can be realized at the same time. In the patient economy, there will be relatively more long-term oriented projects of type 2 with $NPV_2 > 0$ (compared to the number of profitable short-term oriented projects of type 1, i.e. those with $NPV_1 > 0$). Moreover, in any case, the overall positive value effect of investing in projects of type 1 and/or type 2 will be more pronounced in the patient economy due to less severe discounting. However, this conclusion

only holds true if national capital markets are sufficiently segregated, because otherwise national interest rates and thus discount factors will converge (e.g. in the case of risk neutrality or certainty according to the uncovered interest rate parity).

In a situation with perfect transnational capital market integration, it does not matter whether there are more patient investors in one national (sub-) market than in the other: takeover performance would be the same in the whole transnational capital market. Such a conclusion applies not only to the effect of time preferences, but also to all dimensions of preferences (including risk preferences). But there is a lot of literature that shows that there are indeed performance differences (Croci et al., 2010; Petmezas, 2009; Alexandridis et al., 2007). That is, the assumption that capital markets are not perfectly integrated is not completely peculiar. In fact, real national capital markets are characterized by more or less integration. Depending on the degree of this integration, we will thus be able to observe differences in takeover performance or not as described above. This leads us to the following competing hypotheses:

H1 (perfect capital market integration): The level of investors' *future orientation* has no impact on long-term takeover performance.

H2 (segmented markets or only partial capital market integration): The level of investors' *future orientation* is positively related to long-term takeover performance.

The studies by Chen et al. (2007) and Gaspor et al. (2005) in the context of M&As have measured investors' time preferences based on investment turnover ratio, however, we particularly employ a cultural measure of time orientation. The idea of culture is reasonably workable here, as it is argued that national culture plays an important role in forming locals' preferences (Eugster et. al., 2011; Henrich, 2000), so we can assume that country-level cultural values are suitable proxies for investors' time preferences. Apparently, relying on a cultural measure for time preferences matches quite well the above described idea of examining differences in national levels of patience and their impact on only partly integrated national

capital markets. Literature also widely documents the presence of a home country bias, signifying that investors usually have a strong preference for investing in locally headquartered firms (Coval and Moskowitz, 1999; French and Poterba, 1991). This in turn suggests that the majority of the shareholders comes from the acquirer's home country and is subject to the same national culture. Against this background, for each M&A deal we identify the acquirer's home country and use the corresponding cultural values (LTO) as proxies for investors' time preferences.

3. DATA AND METHODOLOGY

3.1. Dataset

We investigate post-M&A takeover performance (over a time period of three years) of mergers and acquisitions deals that occurred from January 2000 to May 2015. We obtain a large-scale international sample from Standard & Poor's Capital IQ database and follow Frijns et al. (2013) and Malmendier and Tate (2008), among others, to attain the deals that fulfill the following criteria:

- The acquirer is a publicly traded firm with stock price data available.
- Both domestic and cross-border transactions are taken into account.
- Only those deals that imply a change of control are considered.
- Only large acquisitions with transaction size greater than US$ 1 million are included.

Our final sample is comprised of 38,153 M&A deals from 54 acquiring countries. The international securities identification numbers (ISINs) of acquirer firms are used to match deal data with stock returns data obtained from DataStream. We take daily stock returns of acquirer firms, and to be consistent in our measures and to compute abnormal returns using Fama and French (1993) for each acquirer, we also obtain the daily risk free rates, the excess market returns, and the Fama-French SMB and HML factors for the corresponding acquiring countries

from Kenneth R. French's Data Library. Moreover, we attain additional information on acquirer-specific characteristics from DataStream.

3.2. The Dependent Variable: Takeover Performance

In order to capture long-term takeover performance, we follow Mitchell and Stanford (2000) and compute *abnormal returns (ARs)* for the acquiring firm until three years after the date of the deal announcement using the Fama and French (1993) three-factor model, which is proved to be superior to a simple application of the one-factor Capital Asset Pricing Model (CAPM) by Sharpe (1964) and Lintner (1965).

Fama and French (2015) further build on the three-factor model and propose a five-factor model by adding the factors regarding robust (or weak) profitability and conservative (or aggressive) investment. However, the three-factor model is well tested and hugely documented in research. So, for the purpose of the current study, we follow Doukas and Petmezas (2007) and specifically employ the Fama and French (1993) three-factor model to compute daily abnormal returns for each acquirer by estimating intercepts from the time-series regression of daily returns. Nevertheless, we additionally rely on the CAPM and the Fama and French five-factor model (2015) in our robustness tests later in Section 5. We use 36-month daily return data prior to the event to predict regression estimates and rely these estimates to compute expected daily returns for a 36-month period (in our base case) after the announcement date. We calculate daily abnormal returns (or alpha) after taking the difference between realized returns and expected returns. We estimate the following regression model:

$$AR_{ijt} = R_{ijt} - R_{fjt} - \beta_{ij1} \cdot (R_{mjt} - R_{fjt}) - \beta_{ij2} \cdot SMB_{jt} - \beta_{ij3} \cdot HML_{jt} + \varepsilon_{ijt}. \tag{1}$$

AR_{ijt} is the daily abnormal return for acquirer i from country j at time t, calculated from time $t = \tau$ (the announcement date) to time $t = \tau + T$ (36 months later in our baseline case). R_{ijt} is the daily realized return for acquirer i from country j, R_{fjt} is the corresponding daily risk free rate,

$R_{mjt} - R_{fjt}$ is the daily excess market return for country j, where R_{mjt} is the daily CRSP value-weighted return of the market portfolio in country j, SMB_{jt} and HML_{jt} are the corresponding daily size and book-to-market factor returns by Fama and French (1993), β_{ij1}, β_{ij2}, and β_{ij3}, are regression coefficients, while ε_{ijt} is the error term. For alpha to credibly reflect (a variation in) post-takeover performance it is necessary that the Fama and French three-factor model works equally well in all countries. However, to confirm the validity of outcomes we also use other return measures in Section 5.1.

In our computation, we particularly use country (or region) specific estimates of the Fama and French factors, thus assuming separate national (or regional) capital markets in line with Hypothesis 2. However, we resort to global factor estimates in the instances of unavailability of local factors. In the case of missing local factors, we hence refer to integrated capital markets (which should be in favor of Hypothesis 1). Nevertheless, we check for the robustness of our empirical results after excluding those countries with no local factor estimates available, and also by accounting for all countries using global factor estimates (which would be most consistent to Hypothesis 1) and observe the same findings as revealed by our main return measure (presented in Appendix A, which is available as online supplementary material). This means that varying our assumptions regarding the degree of capital market integration with respect to risk factors does not affect our results for the impact of investors' national time preferences on takeover performance.

For the purpose of our study, we accumulate the daily abnormal returns over a specific time period as described below:

$$CAR_{ij\tau+T} = \sum_{t=\tau}^{\tau+T} AR_{ijt}. \tag{2}$$

$CAR_{ij\tau+T}$ is the cumulative abnormal return for acquirer i from country j calculated from time

$t = \tau$ until $t = \tau+T$ by simply adding the daily AR_{ijt} as defined in equation (1). In our base case,

T denotes the number of trading days over 36 months after the takeover announcement.

3.3. The Key Independent Variable: Future Orientation

Our key independent variable, *future orientation,* is based on cultural scores of long-term

orientation (LTO) obtained from the Hofstede et al. (2010) framework. The value of LTO varies

from 0 to 100, where higher values indicate a greater level of future orientation and patience.

Though relatively stable, our cultural measure for time preferences may have an inherent

causality problem that we try to address later in our robustness checks.

3.4. Control Variables

In addition to investigating the impact of our main variables of interest, we try to substantiate

the likely impact of a number of deal-specific, acquirer-specific, and country-specific control

variables on takeover performance.

3.4.1. Deal-Specific Control Variables

Many prior researchers have deemed deal-specific characteristics to be important success

indicators of acquisitions, hence we also control for them in our regression model. *Synergy* is a

dummy variable capturing the likely impact of relatedness of the bidder and the target. It takes

the value of 1 if both the bidder and the target are from the same industry and 0 otherwise.

Related firms are expected to yield higher post-merger returns due to fewer integration expenses

(Morck et al., 1990), however, research also suggests a significant negative impact owing to

reduced diversification opportunities (Corhay and Rad, 2000). *Financial* is a dummy variable

with a value of 1 if a bidder is from the financial sector and 0 otherwise. Financial companies

such as investment banks, financial advisors, or insurance companies may not only be more

experienced in carrying out deals, but also possess better information about the target

companies. Cybo-Ottone and Murgia (2000) studied the performance of European mergers and acquisitions among banks and financial institutions and report positive abnormal returns. We also examine whether mergers and acquisitions in the financial sector yield superior returns.

Method of payment is a dummy variable with a value of 1 if a merger is completely financed hrough stocks and 0 otherwise (i.e. either through cash or a combination of stocks and cash). It may have implications for acquirers' returns, as takeover premiums vary depending on the mode of payment (Shleifer and Vishny, 2003). *Hostile* is a dummy variable that takes the value of 1 if it is a hostile merger and 0 otherwise. Research findings suggest hostile bids either yield relatively lower bidder returns (Servaes, 1991) or cast no significant impact on takeover returns (Guo and Petmezas, 2012). *Cross-border* is a dummy variable with a value of 1 if it is a cross-border merger deal and 0 otherwise. Literature reveals mixed findings, with acquirers yielding significant positive returns for going across the border according to earlier studies (Doukas and Travlos, 1988), while the recent literature suggests cross-border mergers are relatively less profitable owing to integration problems and cultural clashes (Moeller and Schlingemann, 2005; Belcher and Nail, 2000). *Deal size* is the natural logarithm of the transaction value that captures the size of the deal. Previous research suggests that large targets result in relatively bigger profits for bidders than small targets do (Linn and Switzer, 2001), however, contemporary findings highlight the negative impact of higher integration costs associated with larger deals (Ahern, 2010). *Relative size* is the transaction value normalized by the acquirer's size. Some empirical outcomes suggest that relatively large targets decrease acquirers' performance (Clark and Ofek, 1994), while others recommend no significant connection between relative size and takeover performance (Powell and Stark, 2005).

3.4.2. Firm-Specific Control Variables

Additionally, we control for a number of acquiring firm-specific characteristics. *Firm size* is computed as the natural logarithm of an acquirer's total assets following Gabaix and Landier

(2008). Larger firm size is expected to cast a negative impact on takeover performance owing to increased agency costs (Jensen and Meckling, 1976). *Return on assets* is net profit available for common shareholders normalized by total assets, as an acquirer's previous profitability is expected to have a significant impact on post-acquisition performance (Ahern et al., 2015; Brown and Sarma 2007). *Cash flow* is free cash flow normalized by total assets. According to Jensen (1986), free cash flow is associated with investment decisions that result in reduced firm value. *Leverage,* the ratio of total debt to total assets, is mostly considered to be among the main determinants of an acquirer's post-acquisition performance. According to Ammann et al. (2011), leverage has a significant negative impact on merger performance, Aggarwal et al. (2009), however, suggest that leverage has no significant impact.

3.4.3. Firm-Specific Control Variables

Finally, we try to grasp the probable impact of country-specific attributes other than time preferences that may affect acquirers' returns. *Cultural distance* captures the cross-country cultural differences between the acquirer and the target firms. It is computed, following Chakrabarti et al. (2009), by considering all five cultural values (long-term orientation, individualism, masculinity, uncertainty avoidance index, and power distance index) obtained from Hofstede et al. (2010). *Corporate boards* as a governance indicator for the acquiring country allows for the management's level of accountability towards investors and boards at the country level and takes a value from 1 to 7, where 7 depicts the maximum level of accountability. Güner et al. (2008) suggest that the board has an important impact on investment and financing decisions. The *anti-self-dealing* index as another governance indicator for the acquiring country, obtained from Djankov et al. (2008), measures the degree of legal protection for minority shareholders against insider self-dealing. The index varies from 0 to 1, where 1 refers to the best anti-self-dealing practices.

Legal system, another governance variable, is a dummy that takes the value of 1 if the legal origin of the acquiring country is civil law and 0 if the legal origin is common law. According to La Porta et al. (1998), the legal system has a significant impact on various financial outcomes. *Trust* is the average level of trust in the acquiring country. The numerical value of the average level of trust for each acquiring country is obtained from the *World Values Survey* and varies from 0 to 100 percent, where a higher value indicates a higher trust level. Trust is an essential corporate value for merger success, and its absence causes mergers to suffer the most (Stahl and Stikin, 2001; Napier, 1989). *Economic freedom* is an aggregate index for the acquiring country issued by the Heritage Foundation. The index is measured on a scale from 0 to 100, where 100 indicates the maximum level of freedom. Stocker (2005) argues that a higher level of economic freedom helps investors achieve better investment returns, while Chen and Huang (2009) suggest a slight connection between economic freedom and stock returns.

Market capitalization is the capitalization of listed companies from the acquiring country, normalized by gross domestic product. The literature highlights that merger activity and performance is affected by firm and overall market capitalization (Shleifer and Vishny, 2003). *GDP per capita* is the gross domestic product per capita of the acquiring country. According to Erel et al. (2012), GDP per capita is a significant macroeconomic determinant of M&A performance. We summarize our main dependent and independent variables along with all the control variables in Table 1.

>>> Table 1 goes about here <<<

Table 2 reports descriptive statistics for our variables, and Table 3 presents the correlation matrix.

>>> Tables 2 and 3 go about here <<<

4. EMPIRICAL FINDINGS

We estimate multivariate regression models to study the relationship between investors' future orientation and long-term post-acquisition takeover performance, while keeping the likely impact of a number of other factors controlled. Our dependent variable is the cumulative abnormal return based on the Fama and French three-factor model for a 36-month time window, while the main independent variable of interest is future orientation (proxied by LTO). More specifically, our regression model is:

$$CAR_{ij\tau+T} = \alpha + \beta \cdot Future\ Orientation_j + \sum_{k=1}^{l} \gamma_k \cdot Control_{ij\tau k} + \varepsilon_{ij\tau} \tag{3}$$

With τ being the announcement date, $CAR_{ij\tau+T}$ is the cumulative abnormal return of acquirer i from country j until time $\tau+T$ as defined in equation (2). $Future\ Orientation_j$ captures the impact of investors' future orientation (proxied by LTO) for acquirer i from country j, and $Control_{ij\tau k}$ takes into account the effect of deal-specific, acquirer-specific, and country-specific factors at time τ that may affect an acquirer's $CAR_{ij\tau+T}$. The mean variance inflation factors (vif) yield noticeably low values (mostly below 3) for our regression models, and we do not observe multicollinearity among the variables in our sample.

>>> Table 4 goes about here <<<

Our main results are reported in Table 4. We carry out a regression analysis at three levels based on three different types of controls that we exert in our model sequentially. At the first level, in addition to our main variable of interest, i.e. future orientation, we control for deal-specific variables and present the results as Model 1. At the second and third level, we add further additional controls based on firm and country-specific characteristics and present them as Models 2 and 3.

It should be noted that in all of our regression models standard errors are clustered at the country level. Our models try to explain takeover performance as a deal-specific phenomenon, however, our main variable of interest defining investors' time preferences is country-specific. We have data on more than 30,000 deals, yet only 54 time preferences values for LTO. We try to control for this disparity by defining our sample into 54 clusters at the country level. Moreover, clustering reduces the potential problems of serial correlation and yields better estimates of standard errors in testing our hypotheses. Furthermore, we take into account industry and year fixed effects. We control for fixed effects to deal with any unobserved heterogeneities that may distort our estimates and may cause wrong inferences regarding our hypotheses. Model 3 is the most refined and final regression model that we proceed with to conduct sensitivity analyses and additional tests. Results from all the regression models reveal that future orientation has a significantly positive impact on takeover performance. These findings suggest that countries with higher future orientation – those with higher scores on LTO – tend to exhibit improved takeover performance. Hence, we receive initial empirical support for our Hypothesis H2 suggesting that under segmented or only partially integrated markets investors' preferences for future orientation have a significant positive impact on acquirers' post-M&A returns.

As we have standardized both our dependent and independent variables to compute our regression results, the estimates of investors' future orientation (proxied by LTO) can be easily interpreted in economic terms. The original variable CAR (i.e. before standardization) has a mean value of 1.24% and a standard deviation of 32.26%. Such a low average abnormal rate of return is typical for acquirers' performance revealing the general difficulty of gaining positive excess takeover returns. Future orientation, in the last column of Table 4, has a coefficient of 0.0122, which implies that a one-standard-deviation increase in future orientation, e.g. switching from the United States to the United Kingdom, would induce a $0.0122 \times 32.26\% = 0.394$ percentage points increase in the CAR measure. In percentage terms, relative to the

absolute value of the mean of CAR, this corresponds to about a 31.77% increase in CAR. This is economically significant, given the difficulty to achieve high excess returns and the fact that this difference can be identified even for such closely related countries as the US and the UK.

Our main results regarding the control variables are in line with the previous literature. We observe strong synergy benefits for the sample under study. Bidders from the financial sector do not show better takeover performance. Bigger targets, as proxied by deal size, cast a significant negative effect on acquirers' returns, consistent with the findings of Ahern (2010), however, targets larger relative to the bidder exert no significant influence on takeover gains, consistent with Powell and Stark (2005). An acquirer's return on assets has a strong positive relationship with takeover performance. A good governance structure in place, in terms of a responsible corporate board and anti-self-dealing index, is positively related to takeover performance. The average level of trust prevailing in the country is also found to positively explain takeover performance. We can thus conclude that most of our control variables assume the expected signs in the regression models.

5. ROBUSTNESS CHECKS

In the following, we discuss a number of tests performed to confirm the robustness of our primary results.

5.1. Controlling for Alternate Return Measures

As a robustness check of our initial findings, we use abnormal returns based on both the CAPM and the Fama-French 5 factor model alternatively. Table 5 reports the results for alternate abnormal returns and clearly suggests that the previously documented effects of time preferences are still valid. Future orientation, proxied by LTO, continues to load significantly in a positive way throughout the regression models.

>>> Table 5 goes about here <<<

5.2.   Controlling for Window Length

Next, we study the likely impact of time preferences on takeover performance after restricting the time window from 36 months to 24 months as an alternate time frame to study long-term takeover outcomes. The results reported in Table 6 confirm that future orientation has a strong positive influence on takeover performance for the 24-month time window. We further restrict the window length to 12 months and find future orientation continues to exert a significant positive impact on takeover gains, though the adjusted R^2 values are reduced. However, this is in line with our consideration of the consequences of long-term time preferences if capital markets are not perfectly efficient in a semi-strong sense. This means that in contrast to our simple theoretical considerations of Section 2.2, it will take some time before the capital market has processed all information regarding a certain takeover activity. It seems natural to assume that information processing takes more time for long-term returns than for short-term returns, implying that the long-term investments in more "patient" societies outperform the more short-term oriented investments in more "impatient" societies only for a sufficiently long time horizon.

In fact, this conjecture can be confirmed if we further shorten the time frame to a 9, 6, 3, and 1-month time windows. The results reported in Table 6, as expected, provide a clear distinction of the impact of future orientation on a relatively longer time period from that of shorter time horizons. Future orientation has no significant impact for a 3-month time window, however, it exerts a strong *negative* impact for a 1-month time window.

>>> Table 6 goes about here <<<

5.3.   Applying Alternative Measures of Time Preferences

Next, we test for alternate measures of investors' time preferences, based on language and alternate cultural measures. We specifically rely on the future time reference (FTR) concept of

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language from Chen (2013), the original cultural scores of LTO from Hofstede (2001), the GLOBE cultural dimension of future orientation from House et al. (2004), and the updated cultural scores of LTO from Tang and Koveos (2008).

>>> Table 7 goes about here <<<

Table 7 presents re-estimated regression model findings using all four alternate measures of time preferences that reassure our previous findings.

5.4. Controlling for Time Effects

We further check whether our results are driven by the latest financial crisis that has noticeably reduced economic activity and greatly affected investment risk and long-term value creation. We divide our sample period into three parts as the pre-crisis period (2000 to 2006), the crisis period (2007 to 2008), and the post-crisis period (2009 to 2015), and re-compute our model to authenticate that our results are not driven by some particular time period with different economic implications.

The results presented in Table 8 support the robustness of our previous findings. Future orientation has a strong positive impact on acquirers' long-term post-acquisition performance for both the pre-crisis and the post-crisis time period. However, the coefficient estimates suggest that the likely impact of future orientation on long-term takeover performance is slightly more pronounced during the post-crisis time. Quite interestingly, the impact of LTO on takeover performance during the crisis period becomes irrelevant. It clearly indicates that during the period of financial turmoil, among other things, not even future-oriented behavior could bring in better returns. On the whole, we may conclude that these findings are in line with our earlier inferences.

>>> Table 8 goes about here <<<

5.5. Controlling for Sample Composition Bias

In order to ascertain that our results are not some particular country- or region-specific phenomenon, we try to control for a potential sample composition bias and conduct our initial analysis again. We start with removing the US initiated deals from our sample and re-generate our regression results. Next, we exclude the UK (the second most prominent acquiring country in our sample) initiated deals additionally and check the strength of our primary results. Furthermore, we repeat our analysis by considering only non-EU initiated mergers.

The regression outcomes reported in Table 9, for all three subsamples based on non-US, both non-US and non-UK, and non-EU (including UK) initiated mergers and acquisitions deals, suggest that investors' future orientation has a strong positive impact on long-term takeover gains. Although the sample size drops considerably when removing US and UK deals (resulting in exaggerated coefficients of determination), these findings clearly underpin that our earlier results are not a consequence of some particular cultural setting.

>>> Table 9 goes about here <<<

5.6. Controlling for Endogeneity using an Instrumental Variable Approach

Literature has shown concerns regarding the accuracy of cultural scores in capturing culture per se, as culture is argued to be an abstract and hard to define concept (Triandis et al., 1986). Such concerns give birth to the endogeneity issues of reverse causality or spurious relationship (between the dependent and the independent variables while leaving out unobserved determinants). Our cultural measure of future orientation is considerably stable, since world cultural rankings are observed to remain persistent under different economic conditions and change only very sluggishly over a course of centuries (Williamson, 2000), hence reverse causality is not a problem. However, to deal with unobserved determinants of culture causing

a spurious relationship, Aggarwal et al. (2016) suggest either to use many country level controls (that we already account for) or to carry out an instrumental variable analysis.

Therefore, in order to address the potential problem of causality and to capture the possible impact of some omitted variables, we follow Guiso et al. (2006) and conduct an instrumental variable analysis. Guiso et al. (2006) argue that culture is transmitted genetically. We, therefore, use data on genetics as an indirect proxy of cultural diffusion to confirm the robustness of our primary results. Gorodnichenko and Roland (2011) suggest that parents transmit both genes and culture to their offspring. This ongoing process of the transfer of genes and culture within countries runs through generations and ultimately shapes the cultural values of societies. They further argue that genetically close countries generally display similar cultural patterns. We also build on the same idea, and following the methodology proposed by El Ghoul and Zheng (2016) and Gorodnichenko and Roland (2011), use the *genetic distance* between the acquiring country and South Korea (the country with the highest long-term orientation score in our sample) as an instrument for our cultural measure of future orientation. All the necessary data on genetic distance is obtained from Cavalli-Sforza et al. (1994).

To be more specific, we employ the dominant population fixation index (Fst) distance as an instrument for future orientation (proxied by LTO). It takes into account the probable dissimilarity between two alleles (a specific form of a gene) selected randomly from two populations (El Ghoul and Zheng, 2016; Spolaore and Wacziarg, 2009). A higher Fst distance (from South Korea) suggests a higher genetic difference concerning long-term orientation amid two populations, and hence, a bigger cultural difference. This greater genetic and cultural disparity suggests a negative connection between the Fst distance and future orientation.

Furthermore, theory also hints at the agricultural origins of time preferences. Galor and Özak (2016) suggest an increase in the average potential crop yield pre-1500CE, as experienced by a country's ancestors, results in an increased patience for delayed gratification and thus increased

degree of long-term orientation in society. They further suggest that an increased change in the average potential crop yield post-1500CE further enhances long-term orientation. They also studied the impact of the pre-1500CE average potential crop growth cycle and its change in the post-1500CE period on long-term orientation, however, no conclusive direction of impact is observed. Based on their verdict of the strong association of pre- and post- 1500CE agricultural factors with long-term orientation, we also use these factors as instruments for our cultural measure of time preferences. We particularly use pre-1500CE average potential crop yield and average potential crop growth cycle and their change post-1500CE, as experienced by a country's ancestors, as instruments for future orientation (proxied by LTO). All the necessary data on agricultural factors is obtained from Galor and Özak (2016).

Table 10 summarizes results regarding the instrumental variable analysis. In Model M1 genetic distance is used as an instrument, while in Model M2 agricultural factors are used as instruments for future orientation (proxied by LTO). Our findings from the regression models M1 and M2 suggest that our coefficient estimates from the instrumented variable (LTO) are significant and retain the expected sign. It is worth mentioning that genetic distance is strongly associated with LTO maintaining the anticipated direction and is in itself uncorrelated with takeover performance. Furthermore, pre-1500CE average potential crop yield and its change in the post-1500CE period are strongly positively correlated with long-term orientation, while pre-1500CE average potential crop growth cycle and its change in the post-1500CE period, as expected, do not establish some consistent relationship with time preferences. In addition, these agricultural variables both pre- and post- 1500CE show almost no correlation with takeover performance. We present these first level regression results in Appendix B, which is available as online supplementary material. In general, the findings from the instrumental variable analysis further strengthen our earlier conclusions and offer assurance that our results on time preferences are not distorted by omitted variables.

>>> Table 10 goes about here <<<

6. ADDITIONAL EVIDENCE

6.1. Future Orientation, Investor Protection, and Long-Term Performance

So far we have postulated the impact of investors' time preferences in defining long-term takeover performance. In general, we would expect the same results based on managerial time preferences. If managers act in a patient way, takeover performance should be better than for more impatient managers. However, managers are generally found to be 'shorttermist', i.e. they prefer short-term returns at the cost of long-term gains mainly to receive better short-term compensation (Narayanan, 1985; Stein, 1988) with this kind of reimbursement being both a consequence and a cause of managerial incentive problems. Therefore, we might expect a relatively smaller sensitivity of takeover performance to managerial time preferences than to investors' time preferences (because all managers act in a more or less short-term oriented way in contrast to their "true" time preferences). One may thus conjecture that our results are mainly driven by investors' time preferences, even if we assume that managers and investors with the same cultural background also share similar time preferences.

However, the extent to which investors' time preferences act as determinants of long-term takeover performance may depend on the relevance of investor protection in the acquirer's country. In the presence of agency issues, there must be an appropriate institutional framework (in terms of *investor protection*) in place to ensure that investors' preferences are considered in corporate decision-making and hence be reflected in corporate strategy.

The literature on law and finance suggests a better investor protection results in lower private benefits of control for insiders (Dyck and Zingales, 2004). The literature further reveals that the takeover market is more active in countries having a stronger legal investor protection system (Rossi and Volpin, 2004). Several research studies hint at a strong positive relationship between investor protection and bidder returns. Improved investor protection practices are considered to

prohibit insiders from expropriation and thus increase corporate valuation, while less protective countries exhibit reduced firm values (Bris and Cabolis, 2008).

Furthermore, Han et al. (2010) argue that the institutional framework can alter the likely effect of cultural values. Hence, we also try to investigate whether a better investor protection, by safeguarding investors' time preferences, is able to strengthen the impact of future orientation on an acquirer's long-term takeover performance, specifically by defining partitions in data based on the strength of investor protection practices. We assume that the impact of investors' future orientation on takeover performance is more pronounced in countries with strong investor protection. To the best of our knowledge, there exists no such large-scale study in the context of M&As.

Early literature of corporate governance suggests the anti-director rights index developed by La Porta et al. (1998) as the most effective country-level measure of investor protection. Since its establishment, it has been used as an effective measure of investor protection. However, recent literature greatly disapproves and challenges the measurement of the anti-director rights index because of its ad hoc nature, and inherent conceptual and coding issues (Graff, 2008; Pagano and Volpin, 2005; Spamann, 2005). Hence, in order to account for the aforementioned issues of the anti-director rights index, Djankov et al. (2008) reformulate the anti-director rights index of La Porta et al. (1998) and present revised estimates. Furthermore, Spamann (2005) not only highlights the inherent issues of the anti-director rights index (also called the original anti-director rights index) by La Porta et al. (1998), but also comes forward to address those issues and presents a corrected anti-director rights index (e.g. see Spamann, 2010). Spamann (2010) particularly improved upon data collection methods, coding protocols, and documentation procedures.

For the purpose of the current study, we therefore use both the revised anti-director rights index by Djankov et al. (2008) and the corrected anti-director rights index by Spamann (2010) as

proxies for investor protection. According to Horn (2001), the location of shareholders is irrelevant, as this protection does not necessarily depend on the corporate law of the country where the shareholders reside, or where the business operates, or where the company assets are situated. It rather depends on the legal situation of the home country of the firm.

Since regression models with interaction terms between our measures of investor protection and future orientation imply variance inflation factors of up to 11, we use median values for the revised and the corrected anti-director rights index of the acquiring country to define partitions in our sample. Observations above median values are included in the samples with a higher level of the index, while observations below or equal to median values define the samples with a lower level of the index.

>>> Table 11 goes about here <<<

Results reported in Table 11 reveal quite an interesting and convincing pattern that investors' future orientation is significantly positively related to long-term takeover performance mainly in the case of subsamples with a higher level of the revised and corrected anti-director rights index. Consistently, the effect is weakened and becomes insignificant in the case of subsamples with a lower level of the revised and the corrected anti-director rights index.

Hence, we may conclude that a better institutional framework and governance, in terms of strong anti-director rights measures, increases the importance of investors' time preferences for long-term takeover performance by reducing managers' private benefits of control and investor expropriations. Our additional analysis not only strengthens our inferences about time preferences, but also highlights the essential role of investor protection in explaining long-term takeover performance. Yet, due to the lower country variation among some subsamples, determination coefficients yield uncommonly high values and should be interpreted with care.

As a further caveat however, it should be noticed that our measures of investor protection are primarily aimed at the problem of preventing major shareholders and managers from extracting "private benefits" and are thus less concerned with managerial behaviour adequately accounting for shareholders' time-preference traits. Therefore, we refrain from stating our conjecture regarding the moderating role of investor protection as a formal hypothesis.

6.2. Cross-Border vs. Domestic Mergers

So far the present study takes into account the overall impact of investors' temporal orientation in the case of both domestic and cross-border M&As. However, in the last decade we observe a greater thrive in cross-border business activity that makes it even more intuitive to disentangle the probable impact of the two different kinds of merger deals. It is argued that cross-border mergers are relatively less profitable owing to greater integration problems posed by cultural differences (Breuer et al., 2018; Slangen, 2006). Hence, we also try to substantiate how the probable impact of investors' time preferences (proxied by the cultural dimension of LTO) varies for domestic and cross-border deals by splitting the overall sample on the basis of a dummy variable *cross-border*. We expect a more pronounced impact of investors' time preferences for domestic deals due to reduced cultural differences, and a relatively less strong effect in the case of cross-border deals owing to greater cultural interference.

The results reported in Table 12 suggest that investors' future orientation has a strong positive impact on long-term takeover performance for both domestic and cross-border takeover deals. Nevertheless, the impact of future orientation, as expected, is relatively stronger in the case of domestic deals. Moreover, if we re-estimate our model by defining sample splits on the basis of the Hofstede cultural distance, we find exactly the same results, as in our case the median value for the Hofstede cultural distance takes the value of zero.

>>> Table 12 goes about here <<<

In a similar vein, we check for globalization effects assuming the level of globalization of a country, captured using both the globalization index and the acquirer's firm size, mediates the importance of (domestic) investors' time preferences on takeover performance and present the results in Appendix C (available as online supplementary material). In line with our conjecture, we find that a low level of globalization suggests a strong positive and more pronounced impact of (domestic) investors' future orientation (proxied by LTO) on long-term takeover performance, while the effect becomes relatively less pronounced to insignificant in the case of a higher level of globalization.

7. DISCUSSION AND CONCLUSION

The aim of the current study is to open a new academic discussion on time preferences and possible performance outcomes in the context of mergers and acquisitions. We seek to generate new insights on how investors' conceptualization of time may impact acquirers' performance outcomes. By particularly focusing on culture to grasp the notion of long-term (or future) orientation, we add to the existing literature by looking at a measure of investors' time orientation from a different perspective. We provide the first large-scale international evidence that investors' future orientation has a substantial impact on the long-term gains takeovers may create. In addition to examining the likely impact of time preferences, we also study how investor protection helps explain long-term takeover performance.

On the whole, our findings suggest that investors' time preferences cast a significant impact on the long-term abnormal returns a takeover may generate. We offer strong empirical evidence that investors' future orientation significantly improves post-M&A performance, while investors' short-termism deteriorates acquirers' takeover performance over an extended period of time.

Our empirical outcomes also reveal that a strong investor protection (proxied by the revised and the corrected anti-director rights index) when combined with investors' future orientation enhances takeover performance, by ensuring investors' (time) preferences are taken into consideration while deciding on corporate strategies. We can conclude that a better institutional framework (i.e. a strong investor protection) straightens managers' behavior by mitigating incentive problems like indulging in suboptimal short-term strategies, and thus increases the impact of future orientation. Based on our empirical findings, we have a clear message for the board of directors and the policy makers to constitute and implement a strong governance structure to deal with potential conflicts of interests. They must monitor managerial behavior and come forward to intervene if managers (in comparison to their industry peers) are found to pursue short-term oriented goals excessively. Moreover, such managerial myopic behavior may be curbed by offering rather long-term incentives, e.g., by coupling managerial compensations with long-term financial outcomes. Lastly, we believe our empirical study may encourage long-term oriented investors to stick to their temporal inclinations, while instigating short-term oriented investors to rethink of their time-based orientation to yield higher investment gains. Our findings further suggest that investors' time preferences have a more pronounced impact when foreign cultures do not interfere with and dilute the impact of the local culture, particularly in the case of domestic deals.

The study at hand extends prior work by Breuer et al. (2018), which analyzes the role of cultural values on takeover performance from a managerial perspective. Among other things, the consequences of managerial entrenchment are investigated, which necessitates to consider takeover performance without risk-adjustment. In contrast, the current study focuses solely on the effect of long-term orientation from an investor perspective. Therefore, we have to rely on measuring takeover performance with the help of the Fama-French model that explicitly takes risk considerations into account. Though only used as a control variable in Breuer et al. (2018),

it seems that long-term orientation impacts non-risk-adjusted takeover performance rather in a negative way. Taken together with the results of the paper at hand, we therefore may conclude that takeover returns in more long-term oriented societies exhibit comparatively lower risk features than in less long-term oriented cultures, thus implying higher risk-adjusted abnormal returns in the former case in spite of smaller "raw returns". As an an interesting issue for future research one may take a closer look at this relationship between long-term orientation and risk behavior.

Nevertheless, the current study has its own drawbacks that must be considered while interpreting its findings. In particular, we had to rely on country-based measures of time preferences. Certainly, such measures on an individual level would be preferable, but are very hard to obtain. Against this background, we believe that our empirical findings regarding investors' temporal orientation, investor protection, and takeover performance deliver sufficient evidence to boards and policy makers to help enhance takeover gains.

There is a lot more to be done to explore temporal vistas to better comprehend how investors, management, and organizations relate to the dimension of time, and how this may create a difference. We urge future scholars to employ temporal lenses to further inquire the issue at hand and to expand the insights we produce.

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Table 1: Description of Variables

Variables	Description	Mean	Standard Deviation
	Panel A: Time Preferences and Takeover Performance		
Future Orientation (proxied by LTO)	A focus on future rewards, primarily persistence, and thrift in long-term oriented cultures, whereas a focus more on the past and the present than the future and emphasis on following traditions, preserving 'face', and satisfying societal responsibilities in short-term oriented cultures. It takes the value from 0 to 100 based on world values survey from Hofstede et al. (2010).	46.24	32.26
Long-Term Performance	Measured as abnormal return (in percentage) based on the Fama and French (1993) three-factor model over a 36-month window. *Source: DataStream, Hofstede et al. (2010), and Kenneth R. French's Data Library*	1.24	24.34
	Panel B: Deal-Specific Variables		
Synergy	Dummy variable that identifies the merger as inter or intra industry, d = 1 if intra-industry, and d = 0 if inter-industry.	0.66	0.47
Financial	Dummy variable that identifies whether acquirer is from financial sector, d = 1 if financial, and d = 0 otherwise.	0.15	0.36
Method of Payment	Dummy variable that identifies the method of payment, d = 1 if all stock, and d = 0 otherwise.	0.39	0.39
Hostile	Dummy variable that identifies the nature of a bid, d = 1 if hostile, and d = 0 if friendly.	0.00	0.05
Cross-Border	Dummy variable that identifies the nature of a merger, d = 1 if cross-border, and d = 0 otherwise.	0.29	0.45
Deal Size	Natural logarithm of the transaction value (in million US dollars) of the acquisition.	4.59	2.86
Relative Size	Transaction value to the total assets of the acquiring company (in percentage). *Source: Bloomberg and DataStream*	8.00	5.61
	Panel C: Acquirer-Specific Variables		
Firm Size	Natural logarithm of the book value of total assets (in million US dollars).	13.07	2.50
Return on Assets	Net income to book value of assets ratio (in percentage).	-0.83	66.08
Cash Flow	Cash flow to book value of assets ratio (in percentage).	-6.20	6.95
Leverage	Total debt to book value of assets ratio (in percentage). *Source: DataStream*	67.76	67.29
	Panel D: Country-Specific Variables		
Cultural Distance	Cultural distance is the Euclidian distance of the target's cultural values from that of the acquirer's based on all five cultural values from the Hofstede et. al. (2010) framework.	2.89	5.42
Corporate Boards	Management's accountability to investors and boards (1 = little accountability; 7 = maximum accountability). *The Global Competitiveness Report 2011.*	5.04	0.42
Anti-Self-Dealing	The *anti-self-dealing* index, measures the regulation of corporate self-dealing along three parameters: disclosure, transaction approval procedures, and enablement of private litigation in the case of self-dealing. The index varies from 0 to 1, where 1 refers to best anti-self-dealing practices. *Djankov et al. (2008).*	0.65	0.18
Legal System	Dummy variable that identifies the legal origin of the bankruptcy law of each country, d = 1 if a country's legal origin is civil law, and 0 if the legal origin is common law. *La Porta et al. (2008).*	0.22	0.41
Trust	Average level of trust in a country. The individual country values vary between 0 and 100 percent and are obtained from the *World Values Survey* based on a composite of a number of survey questions.	23	0.11
Economic Freedom	An aggregate index of ten components of economic freedom measured on a scale from 0 to 100, where 100 indicates the maximum level of freedom. These ten components constituting the index are business freedom, trade freedom, fiscal freedom, government spending, monetary freedom, investment freedom, financial freedom, property rights, freedom from corruption, and labor freedom. *www.heritage.org*	72.73	8.24
Market Capitalization	Market capitalization is the value of total listed shares to gross domestic product. *Beck et al. (2009)*	1.16	0.46
GDP per capita	Gross domestic product per capita in US dollars. *The Global Competitiveness Report 2012.*	41,492.01	18,308.20
	Panel E: Other		
FTR	Classification of languages as weak-FTR (long-term oriented) and strong-FTR (short-term oriented) based on how they refer to future events. It is a dummy variable with d = 1 for weak-FTR, referring to long-term orientation and d = 0 for strong-FTR, referring to short-term orientation. *Chen (2013).*	0.25	0.43
Genetic Distance	The genetic distance between the focal country and South Korea (with the highest score for LTO in our sample). *Cavalli-Sforza, Menozzi, and Piazza, (1994).*	879.78	312.19
Crop Yield (Ancs., Pre-1500CE)	A country's average potential production of crop (in tens of millions of kilo calories per hectare per year) pre-1500CE as experienced by a country's ancestors. *Galor and Özak, (2016).*	7.09	1.67
Crop Yield Change (Ancs., Post-1500CE)	Change in a country's average potential production of crop (in tens of millions of kilo calories per hectare per year) post-1500CE as experienced by a country's ancestors. *Galor and Özak, (2016).*	1.08	1.13
Crop Growth Cycle (Ancs., Pre-1500CE)	The level of average potential crop growth period (in days) pre-1500CE as experienced by a country's ancestors. *Galor and Özak, (2016).*	135.54	9.62

Crop Growth Cycle Change (Ancs., Post-1500CE)	Change in average potential crop growth period (in days) post-1500CE as experienced by a country's ancestors. *Galor and Özak, (2016).*	22.28	16.36
Revised ADRI	Revised anti-director rights index. The individual country values vary between 2 and 5. *Djankov et al. (2008).*	3.57	1.09
Corrected ADRI	Corrected anti-director rights index. The individual country values vary between 2 and 6. *Spamann (2010).*	3.54	1.31

This table describes the main independent time preferences variable *LTO* from Hofstede et al. (2010), long-term takeover performance, and control variables, and presents their mean values and standard deviation across deals.

Table 2: Descriptive Statistics

Acquiring Countries	No. of Deals	CAR	LTO	Synergy	Financial	Payment	Hostile
Argentina	22	2.28	20	0.82	0.27	0.09	0.00
Australia	2,239	1.77	21	0.66	0.14	0.23	0.00
Austria	67	1.52	60	0.78	0.25	0.09	0.00
Belgium	167	3.78	82	0.70	0.19	0.15	0.00
Brazil	406	2.83	44	0.76	0.22	0.11	0.00
Bulgaria	1	8.46	69	0.00	0.00	0.00	0.00
Canada	3,196	1.32	36	0.72	0.09	0.34	0.00
Chile	81	1.94	31	0.79	0.24	0.15	0.00
China	2,820	1.30	87	0.56	0.11	0.12	0.00
Colombia	34	−0.78	13	0.80	0.40	0.20	0.00
Croatia	5	−1.94	58	0.80	0.00	0.20	0.00
Czech	3	6.29	70	1.00	0.67	0.00	0.00
Denmark	127	3.11	35	0.74	0.19	0.14	0.00
Finland	249	1.79	38	0.62	0.14	0.15	0.00
France	583	2.15	63	0.70	0.16	0.14	0.00
Germany	520	2.97	83	0.65	0.15	0.16	0.00
Greece	128	4.57	45	0.79	0.20	0.46	0.01
Hong Kong	230	2.78	61	0.47	0.37	0.10	0.00
Hungary	28	1.74	58	0.86	0.28	0.07	0.00
India	694	1.43	51	0.66	0.08	0.24	0.00
Indonesia	91	1.64	62	0.65	0.24	0.12	0.01
Ireland	264	2.36	24	0.74	0.10	0.06	0.00
Israel	265	1.20	38	0.63	0.15	0.11	0.00
Italy	436	3.67	61	0.73	0.18	0.12	0.00
Japan	2,419	1.40	88	0.60	0.11	0.21	0.00
Luxemburg	44	−0.54	64	0.79	0.29	0.09	0.04
Malaysia	844	2.92	41	0.52	0.19	0.11	0.00
Malta	4	4.55	47	0.75	0.75	0.00	0.00
Mexico	87	1.49	24	0.79	0.09	0.09	0.01
Morocco	9	5.32	14	0.78	0.22	0.33	0.00
Netherlands	289	2.59	67	0.66	0.16	0.08	0.00
New Zealand	148	0.99	33	0.66	0.11	0.13	0.00
Norway	306	1.16	35	0.63	0.09	0.13	0.00
Pakistan	10	2.83	50	0.90	0.40	0.70	0.00
Peru	26	0.88	25	0.69	0.19	0.11	0.00
Philippines	121	1.95	27	0.52	0.34	0.16	0.00
Poland	159	2.12	38	0.76	0.13	0.15	0.01
Portugal	64	3.32	28	0.63	0.19	0.08	0.00
Romania	4	2.97	2	1.00	0.25	0.50	0.00
Russia	109	1.92	81	0.76	0.13	0.03	0.00
Singapore	639	1.50	72	0.54	0.15	0.14	0.00
Slovenia	7	5.30	49	1.00	0.14	0.00	0.00
South Africa	418	3.06	34	0.67	0.24	0.17	0.01
South Korea	1,005	2.65	100	0.43	0.04	0.35	0.00
Spain	281	1.58	48	0.70	0.23	0.10	0.00
Sweden	552	1.72	53	0.66	0.15	0.09	0.00
Switzerland	254	2.50	74	0.74	0.18	0.09	0.00
Taiwan	411	1.88	93	0.62	0.19	0.42	0.00
Thailand	172	0.34	32	0.58	0.22	0.10	0.00
Turkey	64	1.56	46	0.65	0.19	0.19	0.00
United Kingdom	4,037	2.01	51	0.64	0.13	0.11	0.00
United States	13,005	0.04	26	0.70	0.18	0.18	0.00
Venezuela	3	10.24	16	0.67	0.07	0.33	0.00
Vietnam	6	0.47	57	0.83	0.33	0.67	0.00

This table presents mean values for the dependent variable *CAR*, main independent time preferences variable *LTO* from Hofstede et al. (2010), deal-specific variables and acquirer-specific variables. Observations are at the country level. There are 38,153 M&A deals (both domestic and cross-border) from 54 countries over the period from 2000 to 2015, from Standard & Poor's Capital IQ database. See Table 1 for detailed description of all the variables.

Table 2: continued

Acquiring Countries	Cross-Border	Deal Size	Relative Size	Firm Size	ROA	Cash Flow	Leverage
Argentina	0.09	4.48	0.89	13.85	2.67	19.66	21.84
Australia	0.28	3.83	15.31	11.35	−25.91	0.27	622.51
Austria	0.85	5.01	0.15	14.51	2.68	10.78	26.79
Belgium	0.72	4.77	0.01	14.07	0.37	8.76	24.10
Brazil	0.15	5.96	0.85	14.67	4.81	9.85	27.16
Bulgaria	0.00	2.74	0.01	14.12	4.34	17.84	55.50
Canada	0.35	4.05	12.90	12.05	−24.17	−23.63	24.02
Chile	0.45	5.80	0.40	14.32	4.99	10.83	26.68
China	0.08	6.26	2.64	13.32	8.70	14.69	24.68
Colombia	0.57	6.35	0.10	15.58	3.42	4.08	15.46
Croatia	0.40	3.42	0.02	12.70	0.59	−0.08	25.49
Czech	0.00	3.22	0.00	16.05	2.54	2.50	15.62
Denmark	0.65	5.01	0.14	13.99	3.42	9.80	27.76
Finland	0.58	4.32	0.24	12.96	3.97	11.54	24.75
France	0.63	5.87	0.24	14.92	1.12	8.10	24.28
Germany	0.65	5.54	0.23	14.49	0.36	6.64	20.90
Greece	0.27	3.96	0.05	13.42	2.22	6.57	29.14
Hong Kong	0.52	3.59	0.05	13.36	−1.67	0.76	23.22
Hungary	0.64	4.48	0.03	14.30	3.61	11.83	17.42
India	0.47	4.19	0.43	12.73	7.59	9.06	27.08
Indonesia	0.15	5.20	6.96	13.40	3.45	10.73	30.37
Ireland	0.83	4.91	0.34	13.80	2.25	8.90	25.60
Israel	0.62	4.27	0.58	12.92	−21.12	2.85	21.34
Italy	0.44	4.59	0.09	14.15	0.96	6.48	29.85
Japan	0.22	4.79	0.64	13.43	1.47	14.00	21.61
Luxembourg	0.97	6.70	0.41	15.16	6.47	7.28	26.39
Malaysia	0.23	3.42	3.09	12.23	−0.34	5.78	24.30
Malta	0.75	5.51	0.15	13.54	−2.70	11.79	25.98
Mexico	0.52	6.78	0.32	15.40	5.14	13.62	29.04
Morocco	0.44	4.67	0.02	13.87	7.62	5.96	19.15
Netherlands	0.75	5.61	0.26	14.83	3.46	9.29	25.58
New Zealand	0.39	3.74	3.70	11.66	−52.88	35.15	26.51
Norway	0.54	4.09	0.36	13.04	3.99	8.63	20.55
Pakistan	0.00	4.89	0.90	12.99	10.22	13.79	13.20
Peru	0.42	6.23	0.40	14.15	6.05	16.90	27.37
Philippines	0.26	4.67	69.87	13.16	−379.06	44.68	19.68
Poland	0.29	4.79	0.32	13.21	4.02	11.30	18.64
Portugal	0.45	4.74	0.12	14.25	2.02	8.96	39.28
Romania	0.00	3.30	0.01	12.70	13.18	6.66	1.28
Russia	0.30	6.92	0.08	16.08	7.46	20.60	28.36
Singapore	0.56	4.37	5.27	12.42	−0.98	7.34	25.36
Slovenia	0.86	4.26	0.01	14.41	3.94	5.39	33.01
South Africa	0.26	4.19	1.16	12.52	0.94	71.91	27.51
South Korea	0.09	2.56	0.03	12.05	−7.53	0.73	27.54
Spain	0.56	5.57	0.08	15.26	2.74	10.03	33.39
Sweden	0.61	4.39	0.24	13.18	−1.50	6.42	22.62
Switzerland	0.85	6.38	0.25	14.96	3.40	13.92	21.40
Taiwan	0.29	4.97	0.57	13.58	3.85	13.31	21.71
Thailand	0.25	4.99	0.01	13.09	4.15	13.91	34.28
Turkey	0.14	5.66	3.98	13.22	5.00	11.22	26.02
United Kingdom	0.34	2.82	0.14	12.25	−12.51	0.36	19.39
United States	0.19	5.03	16.51	13.42	−227.16	−28.76	47.79
Venezuela	0.00	3.39	0.01	14.01	−11.08	1.89	3.22
Vietnam	0.00	7.49	0.57	12.97	3.94	11.14	28.06

Table 3: Correlation Matrix

Variables	CAR	LTO	Synergy	Financial	Payment	Hostile	Cross-Border	Deal Size	Relative Size	Firm Size	ROA	Cash Flow	Leverage	Cultural Distance	Boards	ASDI	Legal System	Trust	Economic Freedom	Capitalization	GDP per Capita
CAR	1																				
LTO	0.01*	1																			
Synergy	0.00	−0.10*	1																		
Financial	0.00	−0.05*	0.07*	1																	
Payment	−0.01*	0.02*	0.03*	0.03*	1																
Hostile	−0.00	−0.02*	0.02*	−0.00	−0.00	1															
Cross-Border	0.01	0.00	0.01	−0.09*	−0.15*	0.01	1														
Deal Size	−0.02*	0.05*	0.02*	0.00	−0.03*	0.03*	0.08*	1													
Relative Size	−0.05*	−0.01*	−0.02*	−0.01	0.05*	−0.00	−0.01*	0.03*	1												
Firm Size	0.03*	0.05*	0.07*	0.20*	−0.22*	0.04*	0.14*	0.59*	−0.08*	1											
ROA	0.03*	0.02*	−0.00	0.00	−0.04*	0.00	−0.00	0.02*	−0.07*	0.09*	1										
Cash Flow	0.02*	0.02*	−0.01	0.01	−0.04*	0.00	−0.00	0.02*	−0.12*	0.10*	0.59*	1									
Leverage	−0.00	−0.01*	−0.01	−0.00	0.01*	−0.00	−0.00	−0.01	0.09*	−0.04*	−0.09*	−0.06*	1								
Cultural Distance	0.01	0.08*	0.01	-0.09*	-0.13*	0.01*	0.86*	0.09*	-0.00	0.15*	0.00	0.00	-0.00	1							
Boards	0.00	−0.42*	0.05*	0.001	0.04*	0.02*	0.13*	−0.14*	0.00	−0.15*	−0.00	−0.00	0.01	0.06*	1						
ASDI	−0.00	−0.20*	−0.03*	0.03*	−0.06*	−0.00	−0.12*	−0.17*	0.00	−0.20*	−0.00	−0.00	0.00	-0.16*	0.13*	1					
Legal System	0.01	0.51*	−0.03*	−0.01*	−0.04*	−0.01	0.09*	0.19*	−0.00	0.16*	0.01*	0.01*	−0.00	0.12*	−0.37*	−0.42*	1				
Trust	0.02*	0.17*	0.02*	−0.05*	0.09*	−0.00	0.14*	−0.08*	−0.01	−0.06*	0.01*	0.00	0.00	0.11*	0.28*	−0.30*	0.22*	1			
Economic Freedom	−0.00	−0.57*	0.06*	0.02*	0.05*	0.01	0.08*	−0.17*	0.00	−0.11*	−0.01*	−0.01*	0.01	0.01*	0.69*	0.09*	−0.65*	0.08*	1		
Capitalization	−0.00	−0.52*	0.04*	0.07*	−0.01*	0.01	0.06*	−0.13*	0.00	−0.04*	−0.01*	−0.01	0.01	-0.00	0.46*	0.32*	−054*	−0.22*	0.68*	1	
GDP per Capita	−0.01	−0.53*	0.07*	0.00ss	0.03*	0.01*	0.09*	−0.07*	0.01	−0.04*	−0.01*	−0.01*	0.01	0.04*	0.62*	−0.16*	−0.41*	0.12*	0.82*	0.44*	1

This table reports the correlation coefficients (with *$p<0.05$) of our main independent time preferences variable *LTO* from Hofstede et al. (2010), long-term takeover performance, and control variables.

Table 4: Regression Results: Investors' Time Preferences and Long-Term Takeover Performance

Independent Variables	M1		M2		M3	
Future Orientation	0.0181***	(2.93)	0.0108***	(2.72)	0.0122***	(5.24)
Synergy	0.0065*	(1.97)	0.0055*	(1.67)	0.0060*	(1.74)
Financial	−0.0025	(−1.09)	−0.0110	(−1.30)	−0.0101	(−1.29)
Method of Payment	−0.0233	(−1.53)	−0.0093	(−1.53)	−0.0096	(−1.58)
Hostile	0.0008	(1.30)	0.0008	(1.04)	0.0009	(1.14)
Cross-Border	0.0027	(0.83)	−0.0014	(−1.28)	−0.0002	(−0.09)
Deal Size	0.0133	(1.01)	−0.0332*	(−1.83)	−0.0326*	(−1.79)
Relative Size	0.0506***	(24.31)	−0.2825	(−1.57)	−0.2857	(−1.56)
Firm Size			0.0480	(1.56)	0.0544	(1.66)
Return on Assets			0.1565***	(10.16)	0.1537***	(9.85)
Cash Flow			−0.0036	(−0.51)	−0.0041	(−0.56)
Leverage			0.0047	(1.39)	0.0048	(1.42)
Cultural Distance					-0.0035	(-0.95)
Corporate Boards					0.0105**	(2.47)
Anti-self-dealing					0.0141**	(2.39)
Legal System					0.0044	(1.22)
Trust					0.0070*	(1.95)
Economic Freedom					0.0084	(1.28)
Market Capitalization					−0.0085	(−1.63)
GDP per Capita					−0.0041	(−1.04)
Industry FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	
Adjusted R^2	0.0408		0.0473		0.0454	
Mean VIF	1.95		2.03		2.38	
No. of deals	38,153		34,230		32,154	
No. of countries	54		54		34	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data on all the financial variables is obtained in terms of dollars. *Firm size* is based on start of the fiscal year values, while all other firm-specific variables are measured at the year-end (same as in Malmendier and Tate, 2008). See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 5: Robustness Check: Controlling for Alternate Return Measures

Independent Variables	M1: CAPM CARs		M2: FF 5-Factor Model CARs	
Future Orientation	0.0121***	(5.39)	0.0120***	(5.48)
Synergy	0.0060*	(1.76)	0.0054*	(1.77)
Financial	−0.0099	(−1.28)	−0.0101	(−1.26)
Method of Payment	−0.0097	(−1.59)	−0.0095	(−1.56)
Hostile	0.0009	(1.13)	0.0010	(1.17)
Cross-Border	−0.0002	(−2.69)	−0.0002	(−2.60)
Deal Size	−0.0328*	(−1.80)	−0.0326*	(−1.83)
Relative Size	−0.2933	(−1.55)	−0.2713	(−1.57)
Firm Size	0.0537	(1.67)	0.0536	(1.67)
Return on Assets	0.1493***	(9.54)	0.1277***	(10.45)
Cash Flow	−0.0044	(−0.60)	−0.0031	(−0.48)
Leverage	0.0049	(1.41)	0.0045	(1.42)
Cultural Distance	−0.0036	(−0.95)	−0.0039	
Corporate Boards	0.0105**	(2.45)	0.0103**	(2.43)
Anti-self-dealing	0.0139**	(2.36)	0.0138**	(2.39)
Legal System	0.0045	(1.39)	0.0046	(1.43)
Trust	0.0068*	(1.90)	0.0067*	(1.87)
Economic Freedom	0.0086	(1.35)	0.0081	(1.30)
Market Capitalization	−0.0085	(−1.63)	−0.0084	(−1.65)
GDP per Capita	−0.0041	(−1.06)	−0.0038	(−1.00)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0460		0.0474	
Mean VIF	2.38		2.38	
No. of deals	32,154		32,154	
No. of countries	34		34	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* for a 36-month time window based on the CAPM in Model M1 and the Fama and French five-factor model in Model M2. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 6: Robustness Check: Controlling for Alternate Time Windows

Independent Variables	24M	12M	9M	6M	3M	1M
Future Orientation	0.0135***	0.0146***	0.0124***	0.0085***	0.0019	−0.0032*
	(4.83)	(4.87)	(4.98)	(5.01)	(1.60)	(−1.94)
Synergy	0.0051*	0.0021**	0.0001	−0.0023	−0.0056	−0.0078
	(1.99)	(2.33)	(0.09)	(−1.03)	(−1.26)	(−1.48)
Financial	−0.0096	−0.0091	−0.0066	−0.0057	−0.0028	0.0001
	(−1.13)	(−1.05)	(−0.90)	(−1.05)	(−0.89)	(0.07)
Method of Payment	−0.0090	−0.0034	−0.0007	0.0037	0.0103	0.0132
	(−1.53)	(−1.36)	(−0.40)	(1.14)	(1.53)	(1.51)
Hostile	0.0008	0.0006	0.0005	0.0004**	0.0003	0.0000
	(1.28)	(1.23)	(1.50)	(2.05)	(1.67)	(0.06)
Cross-Border	0.0038	−0.0021	−0.0018	−0.0010	−0.0009	−0.0021*
	(0.11)	(−0.67)	(−0.70)	(−0.52)	(−0.61)	(−1.90)
Deal Size	−0.0323*	−0.0342	−0.0300	−0.0264	−0.0170	−0.0104
	(−1.79)	(−1.63)	(−1.56)	(−1.56)	(−1.38)	(−1.14)
Relative Size	−0.2765	0.2305	−0.1645	−0.1259	−0.0449	−0.0312*
	(−1.53)	(−1.51)	(−1.63)	(−1.53)	(−1.63)	(−1.79)
Firm Size	0.0613	0.0643	0.0538	0.0419	0.0192	0.0022
	(1.65)	(1.61)	(1.58)	(1.60)	(1.51)	(0.78)
Return on Assets	0.1469***	0.1303***	0.1001***	0.0716***	0.0347***	0.0119***
	(9.93)	(10.63)	(12.22)	(12.60)	(8.34)	(20.02)
Cash Flow	−0.0043	−0.0041	−0.0016	−0.0000	0.0009	0.0008***
	(−0.56)	(−0.60)	(−0.37)	(−0.01)	(1.15)	(2.83)
Leverage	0.0045	0.0036	0.0022	0.0012	−0.0001	−0.0009***
	(1.30)	(1.14)	(1.02)	(0.72)	(−0.15)	(−6.40)
Cultural Distance	−0.0042	-0.0016	-0.0011	-0.0010	-0.0002	0.0015
	(−0.92)	(-0.39)	(-0.32)	(-0.39)	(-0.15)	(1.23)
Corporate Boards	0.0120**	0.0128**	0.0103**	0.0067*	0.0018	−0.0025**
	(2.46)	(2.30)	(2.20)	(1.99)	(1.15)	(−2.66)
Anti-self-dealing	0.0163**	0.0190**	0.0161**	0.0129**	0.0061***	0.0006
	(2.39)	(2.47)	(2.49)	(2.59)	(3.08)	(0.63)
Legal System	0.0043	0.0066	0.0057	0.0055*	0.0039**	0.0026
	(0.94)	(1.42)	(1.45)	(1.92)	(2.53)	(1.34)
Trust	0.0084*	0.0088*	0.0069*	0.0041	0.0004	−0.0031**
	(1.94)	(1.99)	(1.89)	(1.55)	(0.39)	(−2.59)
Economic Freedom	0.0090	0.0089	0.0068	0.0041	0.0008	−0.0027
	(1.15)	(1.07)	(0.98)	(0.80)	(0.29)	(−1.00)
Market Capitalization	−0.0097	−0.0104	−0.0089	−0.0068	−0.0030*	0.0004
	(−1.53)	(−1.60)	(−1.61)	(−1.60)	(−1.85)	(0.46)
GDP per Capita	−0.0054	−0.0058	−0.0041	−0.0016	0.0016	0.0040
	(−1.16)	(−1.05)	(−0.88)	(−0.47)	(0.72)	(1.67)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.0507	0.0435	0.0333	0.0196	0.0069	0.0019
Mean VIF	2.38	2.38	2.38	2.38	2.38	2.38
No. of deals	32,154	32,154	32,154	32,154	32,154	32,154
No. of countries	34	34	34	34	34	34

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 24-, 12-, 9-, 6-, 3-, and 1-month time windows. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 7: Robustness Check: Controlling for Alternate Time Preference Measures

Independent Variables	FTR	LTO-HF	LTO-TK	FO-SP
Future Orientation	0.0061**	0.0153***	0.0097***	0.0104*
	(2.44)	(5.42)	(4.67)	(1.95)
Synergy	0.0057	0.0068	0.0056	0.0057
	(1.63)	(1.68)	(1.57)	(1.60)
Financial	−0.0103	−0.0113	−0.0093	−0.0098
	(−1.31)	(−1.18)	(−1.17)	(−1.21)
Method of Payment	−0.0093	−0.0104	−0.0097	−0.0092
	(−1.47)	(−1.46)	(−1.48)	(−1.42)
Hostile	0.0009	0.0012	0.0009	0.0009
	(1.09)	(1.22)	(1.06)	(1.07)
Cross-Border	−0.0006	−0.0014	−0.0013	−0.0014
	(−0.27)	(−2.66)	(−0.49)	(−0.63)
Deal Size	−0.0340*	−0.0372*	−0.0344*	−0.0345*
	(−1.87)	(−1.79)	(−1.89)	(−1.91)
Relative Size	−0.2860	−0.2955	−0.2851	−0.2857
	(−1.56)	(−1.54)	(−1.55)	(−1.56)
Firm Size	0.0550*	0.0634	0.0559*	0.0557*
	(1.69)	(1.77)	(1.71)	(1.70)
Return on Assets	0.1539***	0.1524***	0.1534***	0.1535***
	(9.89)	(8.96)	(9.83)	(9.92)
Cash Flow	−0.0041	−0.0050	−0.0041	−0.0040
	(−0.55)	(−0.63)	(−0.55)	(−0.55)
Leverage	0.0047	0.0049	0.0047	0.0047
	(1.42)	(1.45)	(1.42)	(1.42)
Cultural Distance	−0.0025	−0.0024	−0.0018	−0.0020
	(−0.70)	(−0.53)	(−0.45)	(−0.56)
Corporate Boards	0.0066	−0.0052	0.0107**	0.0011
	(1.20)	(−0.76)	(2.14)	(0.16)
Anti-selfdealing	0.0143**	0.0263**	0.0141**	0.0167**
	(2.27)	(2.93)	(2.42)	(2.41)
Legal System	0.0045	0.0053	0.0093**	0.0117***
	(1.14)	(1.02)	(2.69)	(3.01)
Trust	0.0097**	0.0168**	0.0098**	0.0108**
	(2.28)	(2.48)	(2.35)	(2.42)
Economic Freedom	0.0104	0.0298*	0.0168**	0.0118
	(1.35)	(2.04)	(2.16)	(1.37)
Market Capitalization	−0.0098	−0.0217**	−0.0084	−0.0134*
	(−1.62)	(−2.43)	(−1.59)	(−1.93)
GDP per Capita	−0.0071	0.0012	−0.0124**	−0.0057
	(−1.37)	(0.23)	(−2.35)	(−0.83)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.0453	0.0401	0.0448	0.0449
Mean VIF	2.39	2.98	2.29	2.57
No. of deals	32,154	27,168	31,673	31,796
No. of countries	34	13	29	30

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variables regarding investors' future orientation is based on *FTR* (Chen, 2013), the Hofstede cultural dimension of *LTO-HF* (Hofstede, 2001), the cultural dimension *LTO-TK* (Tang and Koeves, 2008), and the GLOBE cultural measure of future orientation based on societal practices presented as FO-SP (House et al., 2004). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 8: Robustness Check: Controlling for Time Effects

Independent Variables	Pre-Crisis		Crisis		Post-Crisis	
Future Orientation	0.0119***	(3.49)	0.0066	(0.76)	0.0148***	(4.28)
Synergy	0.0097*	(1.92)	0.0079**	(2.03)	−0.0061	(−1.12)
Financial	−0.0180	(−1.65)	0.0091	(0.91)	−0.0010	(−0.23)
Method of Payment	−0.0166**	(−2.09)	0.0112	(0.72)	0.0139*	(1.69)
Hostile	0.0007	(0.74)	0.0008	(0.69)	0.0007	(1.33)
Cross-Border	0.0008	(0.25)	−0.0039	(−0.50)	−0.0060*	(−1.88)
Deal Size	−0.0326*	(−2.01)	−0.0442	(−1.45)	0.0016	(0.14)
Relative Size	0.0064*	(1.75)	−0.3527***	(−28.24)	−0.5797	(−1.50)
Firm Size	0.0712*	(1.85)	0.0818	(1.39)	−0.0035	(−0.32)
Return on Assets	0.0038	(1.19)	−0.5254***	(−7.72)	0.4960***	(9.38)
Cash Flow	0.0090***	(4.11)	−0.1761**	(−2.63)	−0.0034	(−1.28)
Leverage	0.0001	(0.21)	−0.7550***	(−7.92)	−0.0991***	(−9.29)
Cultural Distance	−0.0050	(−1.38)	−0.0015	(−0.22)	0.0029	(0.88)
Corporate Boards	0.0102**	(2.50)	0.0179*	(1.98)	−0.0065*	(−1.94)
Anti-self-dealing	0.0157**	(2.47)	−0.0002	(−0.01)	0.0110**	(2.24)
Legal System	0.0063	(1.36)	0.0028	(0.37)	0.0042	(1.13)
Trust	0.0049	(1.58)	0.0086	(1.01)	0.0024	(0.88)
Economic Freedom	0.0043	(0.71)	0.0079	(0.67)	−0.0060	(−0.92)
Market Capitalization	−0.0073	(−1.39)	−0.0102	(−1.12)	−0.0055	(−1.45)
GDP per Capita	−0.0052	(−1.32)	−0.0107	(−1.09)	0.0244**	(2.60)
Industry FE	Yes		Yes		Yes	
Year FE	Yes		Yes		Yes	
Adjusted R^2	0.0328		0.3150		0.0661	
Mean VIF	2.49		2.71		2.58	
No. of deals	14,693		5,209		12,252	
No. of countries	32		33		33	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data is split at the end of 2006 and 2008 and our baseline regression is re-estimated for three subsamples. Pre-crisis comprises the time period from 2000 to 2006, crisis time period comprises 2007 to 2008, while post-crisis comprises the time period from 2009 to 2015. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 9: Robustness Check: Controlling for Sample Composition Bias

Independent Variables	M1: Non-US	M2: Non-US & Non-UK	M3: Non-EU
Future Orientation	0.0217***	0.0253***	0.0120***
	(4.70)	(4.82)	(5.26)
Synergy	0.0050*	0.0053	0.0063*
	(1.75)	(1.51)	(1.86)
Financial	0.0026	0.0034	−0.0100
	(0.66)	(0.73)	(−1.24)
Method of Payment	−0.0023	−0.0026	−0.0101
	(−0.38)	(−0.36)	(−1.61)
Hostile	−0.0002	−0.0003	0.0010
	(−0.09)	(−0.14)	(1.43)
Cross-Border	−0.0062	−0.0099**	−0.0003
	(−1.39)	(−2.26)	(−0.13)
Deal Size	−0.0322***	−0.0321**	−0.0315*
	(−3.08)	(−2.61)	(−1.75)
Relative Size	−0.0067	−0.0076	−0.2844
	(−0.75)	(−0.80)	(−1.55)
Firm Size	0.0168*	0.0148	0.0544
	(1.73)	(1.31)	(1.70)
Return on Assets	−0.0004	−0.0014	0.1528***
	(−0.26)	(−0.58)	(9.84)
Cash Flow	0.0014*	0.0014	−0.0043
	(1.97)	(1.54)	(−0.58)
Leverage	−0.0002	−0.0004	0.0048
	(−0.36)	(−0.52)	(1.43)
Cultural Distance	0.0011	0.0037	−0.0025
	(0.26)	(0.76)	(−0.67)
Corporate Boards	0.0076	0.0070	0.0097*
	(1.29)	(1.16)	(2.02)
Anti-self-dealing	0.0122*	0.0175***	0.0119**
	(1.97)	(2.91)	(2.40)
Legal System	0.0189***	0.0211***	0.0026
	(2.80)	(3.16)	(0.65)
Trust	−0.0043	−0.0037	0.0077*
	(−0.90)	(−0.73)	(1.78)
Economic Freedom	−0.0018	0.0002	0.0057
	(−0.17)	(0.02)	(0.88)
Market Capitalization	−0.0052	−0.0048	−0.0075
	(−1.45)	(−1.39)	(−1.63)
GDP per Capita	0.0083	0.0101	−0.0028
	(1.26)	(1.35)	(−0.70)
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adjusted R^2	0.7804	0.7485	0.0422
Mean VIF	2.40	2.49	2.65
No. of deals	20,476	16,728	29,428
No. of countries	33	32	24

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data is split according to country (and geographic) composition and our baseline regression is re-estimated for three subsamples, Non-US, Non-US and Non-UK, and Non-EU (including UK) M&A. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 10: Robustness Check: Controlling for Endogeneity using Instrumental Variable Approach

Independent Variables	M1: Genetic Distance		M2: Agricultural Measures	
Future Orientation	0.0116***	(4.58)	0.0149***	(4.34)
Synergy	0.0064*	(1.78)	0.0062*	(1.81)
Financial	−0.0105	(−1.33)	−0.0101	(−1.32)
Method of Payment	−0.0105	(−1.64)	−0.0101	(−1.63)
Hostile	0.0009	(1.11)	0.0009	(1.18)
Cross-Border	−0.0004**	(−0.18)	0.0001	(0.05)
Deal Size	−0.0328*	(−1.80)	−0.0321*	(−1.80)
Relative Size	−0.2850	(−1.58)	−0.2856	(−1.58)
Firm Size	0.0554*	(1.70)	0.0542*	(1.68)
Return on Assets	0.1535***	(10.03)	0.1537***	(9.98)
Cash Flow	−0.0042	(−0.58)	−0.0041	(−0.57)
Leverage	0.0048	(1.45)	0.0048	(1.45)
Cultural Distance	−0.0032	(-0.89)	−0.0040	(−1.10)
Corporate Boards	0.0133***	(2.60)	0.0107**	(2.59)
Anti-self-dealing	0.0154**	(2.46)	0.0143**	(2.41)
Legal System	0.0058*	(1.71)	0.0038	(0.97)
Trust	0.0059*	(1.82)	0.0066**	(1.98)
Economic Freedom	0.0052	(1.01)	0.0081	(1.26)
Market Capitalization	−0.0078*	(−1.69)	−0.0080*	(−1.66)
GDP per Capita	−0.0022	(−0.61)	−0.0031	(−0.72)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0445		0.0454	
No. of deals	31,398		32,154	
No. of countries	33		34	

This table presents standardized coefficients based on an instrumental variable approach analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. In Model M1, *genetic distance* (same as, El Ghoul and Zheng, 2016) is used as an instrument, while in Model M2 agricultural measures based on pre-1500CE *crop yield* and *crop growth cycle* and their *change* in the post-1500CE period from Galor and Özak (2016) are used as instruments for the *LTO* measure of future orientation. See Table 1 for a detailed description of all the variables. The *z*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 11: Additional Analysis: Investors' Time Preferences, Investor Protection, and Takeover Performance

Independent Variables	Hi R-ADRI	Low R-ADRI	Hi C-ADRI	Low C-ADRI
Future Orientation	0.0243***	−0.0027	0.0103**	0.0050
	(6.14)	(−1.04)	(2.55)	(0.98)
Synergy	0.0087**	0.0058	0.0090**	0.0076**
	(2.72)	(1.49)	(2.36)	(2.54)
Financial	0.0054	−0.0104	0.0104	−0.0168*
	(1.04)	(−1.36)	(0.98)	(−2.11)
Method of Payment	−0.0034	−0.0122**	−0.0120***	−0.0118*
	(−0.42)	(−2.58)	(−3.33)	(−1.86)
Hostile	−0.0011	0.0013	0.0045	0.0010
	(−0.08)	(1.74)	(1.74)	(1.08)
Cross-Border	−0.0059	0.0024	−0.0002	−0.0019
	(−1.14)	(1.48)	(−0.04)	(−0.81)
Deal Size	−0.0338**	−0.0340*	−0.0442***	−0.0426**
	(−2.45)	(−1.75)	(−6.79)	(−2.53)
Relative Size	−0.0071	−0.5130***	0.0771**	−0.2832
	(−0.73)	(−27.94)	(2.71)	(−1.50)
Firm Size	0.0202*	0.0642**	0.0357***	0.0696**
	(2.02)	(2.81)	(5.67)	(2.32)
Return on Assets	−0.0009	0.3251***	0.0090	0.1553***
	(−0.61)	(6.49)	(1.78)	(9.92)
Cash Flow	0.0013	−0.0109**	0.0027***	−0.0069
	(1.28)	(−2.81)	(4.86)	(−0.88)
Leverage	0.0001	0.0310***	0.0037	0.0054
	(0.09)	(3.43)	(0.92)	(1.58)
Cultural Distance	0.0038	−0.0054***	−0.0054	0.0004
	(0.61)	(−7.25)	(−1.11)	(0.12)
Corporate Boards	0.0186***	0.0021	0.0146***	0.0072*
	(4.88)	(0.82)	(8.94)	(1.80)
Anti-self-dealing	0.0044	0.0129**	−0.0160*	0.0173**
	(0.60)	(2.41)	(−2.06)	(2.41)
Legal System	0.0090**	0.0234***	−0.0122**	0.0079
	(2.31)	(4.53)	(−2.60)	(1.37)
Trust	−0.0009	−0.0004	0.0064***	0.0093***
	(−0.28)	(−0.19)	(3.41)	(3.02)
Economic Freedom	0.0101	0.0065	0.0054*	0.0068
	(1.62)	(1.00)	(1.85)	(0.95)
Market Capitalization	−0.0046*	−0.0006	−0.0017	−0.0074
	(−2.08)	(−0.30)	(−0.79)	(−1.44)
GDP per Capita	−0.0018	−0.0013	−0.0033	−0.0019
	(−0.38)	(−0.71)	(−0.90)	(−0.42)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.7584	0.0296	0.8703	0.0327
Mean VIF	2.65	4.28	5.40	2.50
No. of deals	14,124	18,030	8,827	20,254
No. of countries	17	17	10	17

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data is split into subsamples based on high or low level of the *revised anti-director rights index (R-ADRI)* from Djankov et al. (2008) and the *corrected anti-director rights index (C-ADRI)* from Spaman (2010). See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Table 12: Additional Analysis: Cross-Border vs. Domestic Mergers

Independent Variables	Cross-Border		Domestic	
Future Orientation	0.0089***	(3.29)	0.01333***	(4.51)
Synergy	−0.0031	(−0.80)	0.0071	(1.64)
Financial	−0.0141*	(−1.71)	−0.0097	(−1.13)
Method of Payment	−0.0055	(−1.43)	−0.0101	(−1.64)
Hostile	−0.0010	(−0.41)	0.0015*	(1.94)
Deal Size	−0.0341***	(−4.43)	−0.0285	(−1.64)
Relative Size	0.4850*	(1.86)	−0.0930	(−1.67)
Firm Size	0.0518**	(2.57)	0.0524*	(1.72)
Return on Assets	−0.0382	(−1.58)	0.5046***	(7.07)
Cash Flow	0.0644***	(5.43)	0.0011	(0.14)
Leverage	−0.0211	(−1.51)	0.0040*	(2.02)
Cultural Distance	−0.0019	(−0.52)		
Corporate Boards	0.0099	(1.64)	0.0123**	(2.39)
Anti-self-dealing	0.0092	(1.57)	0.0133***	(2.77)
Legal System	0.0087**	(2.07)	0.0029	(0.77)
Trust	−0.0008	(−0.18)	0.0083**	(2.58)
Economic Freedom	−0.0012	(−0.18)	0.0110	(1.52)
Market Capitalization	0.0018	(0.48)	−0.0109*	(−2.01)
GDP per Capita	0.0017	(0.30)	−0.0054	(−1.23)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.5091		0.0379	
Mean VIF	3.59		2.48	
No. of deals	8,569		23,585	
No. of countries	32		34	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data is split into two subsamples: one comprising *cross-border* M&A deals, while the other based on *domestic* deals. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Appendix: Online supplementary material

NOT for print publication, only for online publication and referees' information

Appendix A: Checking for Local and Global Factor Estimates

Independent Variables	M1: CAR_Local FF		M2: CAR_Global FF	
Future Orientation	0.0114***	(7.34)	0.0123***	(5.64)
Synergy	0.0066*	(1.89)	0.0044*	(1.82)
Financial	−0.0132	(−1.64)	−0.0090	(−1.34)
Method of Payment	−0.0106	(−1.66)	−0.0089	(−1.59)
Hostile	0.0011	(1.20)	0.0010	(1.23)
Cross-Border	−0.0018	(−0.76)	−0.0002	(−0.07)
Deal Size	−0.0383**	(−2.07)	−0.0289*	(−1.86)
Relative Size	−0.2903	(−1.54)	−0.2174	(−1.58)
Firm Size	0.0611*	(1.83)	0.0497	(1.68)
Return on Assets	0.1536***	(8.90)	0.0985***	(11.34)
Cash Flow	−0.0054	(−0.69)	−0.0010	(−0.21)
Leverage	0.0049	(1.48)	0.0038	(1.47)
Cultural Distance	−0.0029	(−0.79)	−0.0034	(−0.93)
Corporate Boards	0.0027	(0.84)	0.0108**	(2.68)
Anti-self-dealing	0.0172**	(2.96)	0.0136**	(2.44)
Legal System	0.0079**	(2.19)	0.0044	(1.28)
Trust	0.0149*	(2.13)	0.0066*	(1.88)
Economic Freedom	0.0153*	(1.86)	0.0079	(1.25)
Market Capitalization	−0.0108*	(−2.01)	−0.0083	(−1.67)
GDP per Capita	−0.0009	(−0.29)	−0.0036	(−0.98)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0430		0.0496	
Mean VIF	2.29		2.38	
No. of deals	27,827		32,154	
No. of countries	25		34	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French (FF) three-factor model computed using local factor estimates for a 36-month time window. In Model M1, only local factor estimates from Kenneth French's website[2] are used, while in Model M2 only global factor estimates are utilized to compute *CAR*. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

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[2] https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

Appendix B: First level regression results for instrumented and instrumental variables

Independent Variables	M1: LTO	M2: CAR	M3: LTO	M4: CAR
Future Orientation		0.0084** (2.26)		0.0068* (1.85)
Genetic Distance	−0.6359*** (−4.26)	−0.0020 (−0.60)		
Crop Yield (Anc., pre-1500)			0.3648*** (4.21)	0.0026 (1.41)
Crop Yield Change (Anc., post-1500)			0.4644*** (4.02)	0.0098 (1.68)
Crop Growth Cycle (Anc., pre-1500)			-0.0499*** (-3.51)	0.0004 (1.21)
Crop Growth Cycle Change (Anc., post-1500)			-0.0014 (-0.18)	0.0003** (2.24)
Synergy	−0.0086 (−1.59)	0.0064* (1.75)	-0.0219*** (-3.11)	0.0061* (1.77)
Financial	0.0185 (1.02)	−0.0104 (−1.31)	0.0414 (2.21)	-0.0097 (-1.28)
Method of Payment	0.0134 (1.23)	−0.0105 (−1.61)	0.0111 (1.26)	-0.0102 (-1.60)
Hostile	0.0000 (0.03)	0.0009 (1.10)	-0.0075* (-1.91)	0.0009 (1.09)
Cross-Border	−0.0170 (-0.54)	−0.0005 (−0.20)	-0.0332 (-1.17)	-0.0007 (-0.28)
Deal Size	−0.0637** (−2.28)	−0.0329* (−1.78)	-0.0796** (-2.47)	-0.0328* (-1.80)
Relative Size	0.0044 (0.44)	−0.2850 (−1.56)	0.0007 (0.06)	-0.2855 (-1.56)
Firm Size	0.0557** (2.19)	0.0556 (1.68)	0.0600** (2.53)	0.0551 (1.68)
Return on Assets	−0.0084 (−1.09)	0.1534*** (9.87)	0.0028 (0.33)	0.1534*** (9.79)
Cash Flow	0.0017 (0.71)	−0.0042 (−0.57)	-0.0021 (-0.95)	-0.0042 (-0.57)
Leverage	−0.0003 (−0.35)	0.0048 (1.43)	-0.0021 (-1.35)	0.0047 (1.42)
Cultural Distance	0.0529* (1.99)	−0.0030 (−0.84)	0.1024** (2.65)	-0.0031 (-0.83)
Corporate Boards	0.4174** (2.05)	0.0146** (2.14)	0.1417 (0.86)	0.0152*** (2.85)
Anti-self-dealing	0.0244 (0.16)	0.0154** (2.43)	0.0888 (0.55)	0.0183** (2.66)
Legal System	0.2985* (1.78)	0.0068** (2.11)	0.3042* (1.88)	0.0144** (2.66)
Trust	0.0192 (0.17)	0.0060* (1.77)	-0.0123 (-0.13)	0.0032 (1.11)
Economic Freedom	−0.4085 (−1.64)	0.0039 (0.76)	0.0816 (0.43)	0.0127 (1.47)
Market Capitalization	0.2065 (1.51)	−0.0072 (−1.59)	-0.1591 (-1.47)	-0.0099* (-1.92)
GDP per Capita	−0.2578* (−1.90)	−0.0030 (−0.78)	-0.0082 (-0.06)	0.0008 (0.19)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.7809	0.0445	0.8288	0.0454
Mean VIF	2.41	2.56	2.71	2.90
No. of deals	21,398	31,398	32,154	32,154
No. of countries	33	33	34	34

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The main independent variable in Models M1 and M2 is base nd on *genetic distance,* while in Models M3 and M4 main independent variables are pre-1500CE *crop yield* and *crop growth cycle* and their change post-1500CE. The main dependent variable in Models M1 and M3 is the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010), while in Models M2 and M4 is *CAR* based on the Fama and French three-factor model for a 36-month time window. Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. See Table 1 for detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

Appendix C: Globalization Effects

Independent Variables	Hi GI	Low GI	Larger Firms	Smaller Firms
Future Orientation	0.0046	0.0160***	0.0086**	0.0166***
	(0.77)	(6.83)	(2.40)	(5.68)
Synergy	0.0030	0.0064*	0.0024	0.0054*
	(1.11)	(1.88)	(0.70)	(1.81)
Financial	−0.0018	−0.0074	0.0122**	−0.0103
	(−0.28)	(−0.95)	(2.57)	(−1.13)
Method of Payment	0.0014	−0.0126**	−0.0102*	−0.0053*
	(0.16)	(−2.84)	(−1.86)	(−1.91)
Hostile	−0.0019	0.0014**	0.0026	0.0007
	(−0.92)	(2.78)	(0.75)	(0.71)
Cross-Border	−0.0098	0.0057***	−0.0096*	0.0017
	(−1.74)	(3.58)	(−1.73)	(0.44)
Deal Size	−0.0196	−0.0304	−0.0432***	−0.0258*
	(−1.38)	(−1.57)	(−9.98)	(−1.87)
Relative Size	−0.0088	−0.5119***	0.0059***	−0.3005
	(−1.05)	(−24.15)	(7.59)	(−1.57)
Firm Size	0.0142	0.0604**	0.0287***	0.0612
	(1.27)	(2.57)	(6.79)	(1.60)
Return on Assets	−0.0003	0.3266***	0.0050***	0.1523***
	(−0.33)	(6.97)	(2.79)	(12.49)
Cash Flow	0.0011	−0.0097**	0.0105***	−0.0074
	(0.78)	(−2.11)	(3.17)	(−0.78)
Leverage	−0.0003	0.0320***	−0.0032	0.0066
	(−0.47)	(3.63)	(−1.03)	(1.56)
Cultural Distance	0.0079	−0.0092	0.0049	0.0005
	(1.30)	(−3.14)	(1.06)	(0.14)
Corporate Boards	−0.0006	0.0033	0.0022	0.0158***
	(−0.10)	(1.40)	(0.42)	(3.27)
Anti-self-dealing	−0.0082	0.0066	0.0050	0.0196***
	(−0.33)	(1.52)	(0.74)	(3.56)
Legal System	−0.0010	−0.0031	0.0107	0.0014
	(−0.04)	(−1.05)	(1.68)	(0.24)
Trust	−0.0023	0.0017	−0.0099*	0.0133***
	(−0.22)	(0.63)	(−1.89)	(3.51)
Economic Freedom	−0.0020	0.0132**	−0.0096	0.0082
	(−0.10)	(2.42)	(−0.98)	(0.97)
Market Capitalization	0.0037	−0.0022	0.0038	−0.0118*
	(1.23)	(−0.43)	(0.90)	(−1.90)
GDP per Capita	0.0014	−0.0168***	0.0065	−0.0026
	(0.23)	(−4.73)	(0.94)	(−0.51)
Industry FE	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes
Adjusted R^2	0.7773	0.0311	0.8017	0.0306
Mean VIF	4.46	3.86	2.38	2.38
No. of deals	12,178	19,401	15,969	16,185
No. of countries	15	17	34	33

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *CAR* based on the Fama and French three-factor model for a 36-month time window. The main independent variable regarding investors' future orientation is based on the Hofstede cultural dimension of *LTO* (Hofstede et al., 2010). Data is comprised of 38,153 M&A deals from 54 countries, over the period from 2000 to 2015. The data is split into subsamples based on high or low level of the *globalization index* (from Dreher, 2006) and bigger or smaller *firm size* of the acquirer. See Table 1 for a detailed description of all the variables. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance level is denoted by ***, **, and *, respectively.

National Culture, Managerial Preferences, and Takeover Performance

By Wolfgang Breuer, Bushra Ghufran[*], and Astrid Juliane Salzmann

Abstract: We investigate the influence of managerial preferences proxied by national culture on takeover performance in a cross-disciplinary international study. To this end, we rely on the cultural dimensions according to Hofstede et al. (2010). Some managerial preferences are related to certain cultural features that may lead to the destruction of firm value in the long run. Using data on a cross-section of 53 countries and 32,856 M&A deals, we find that national culture is statistically significant in explaining different levels of takeover performance. Countries with high individualism and uncertainty avoidance scores appear to exhibit lower post-acquisition risk and stock price performance supporting the managerial entrenchment hypothesis. Masculinity, however, has a positive effect on relative deal size and the takeover outcomes implying that empire building is not observed to cast a negative impact on post-acquisition performance. Results are more pronounced in the case of domestic transactions and also for less globalized acquirer firms due to the absence of the interfering impact of cultural differences.

Keywords: cross-cultural, cultural values, managerial preferences, mergers and acquisitions

JEL Classifications: D03, D22, G02, G34, Z10

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1. INTRODUCTION

"The dangers of taking too much risk are very clear. We're reminded of them in the news every day. Unfortunately, we rarely hear any warnings about playing it safe. The dangers of playing it safe are not sudden, obvious, and dramatic. They don't make headlines. The dangers of playing it safe are hidden, silent killers." (Sundheim, 2013)

Understanding causes and performance of mergers and acquisitions (takeover performance, henceforth) has been extensively explored in the literature. While numerous studies have shown that shareholders of target companies enjoy significant abnormal returns, the empirical evidence on returns to bidders is still quite ambiguous. In fact, many studies have reported negative long-run post-acquisition returns for acquirers (Mitchell and Stafford, 2000; Rau and Vermaelen, 1998; Agrawal et al., 1992). However, if most takeover deals destroy firm value in the end, why do we observe so many mergers and acquisitions in the market? What are the factors behind the post-acquisition underperformance of the acquirer?

A large body of literature reveals that behavioral elements are important driving forces of corporate decision making. Empirical evidence suggests that when managers are not carefully observed, they are more likely to follow goals that do not necessarily benefit investors. The literature has highlighted different managerial aspects that cause conflicting interests, such as exploitation for private benefits and the excessive tendency to avoid risks due to managerial risk preferences. Managers may indulge in value-destroying undertakings for their own benefits such as empire building (Marris, 1964; Baumol, 1959) or due to career concerns, managers may play it safe and take too little risk or even actively reduce the firm's risk to circumvent negative corporation outcomes that are personally costly to them (Smith and Stulz, 1985; Amihud and Lev, 1981), thus following an entrenchment strategy. The existing empirical literature does not talk much about managerial preferences in the context of mergers and acquisitions, although they have implications for both economic outcomes and optimal corporate policy.

Our paper examines empire building and entrenchment in the context of mergers and acquisitions. While both theories have been discussed in the literature for decades, they have only infrequently been subjected to direct empirical testing. We rely on data from sociologists on national culture to study these managerial preferences in an international framework. We link managerial behavior to wealth effects in acquisitions. If managers act in the best interest of their shareholders, then an acquisition can be expected to increase shareholders' wealth. If mergers are undertaken for less benign reasons, our study may help explain why firms often experience significant underperformance over several years after an acquisition.

There is a growing awareness that culture is an important factor that affects fundamental economic decision-making. Hofstede (2001) suggests that the cultural context determines individuals' choices in a crucial way. House et al. (2004) also argue that different cultural backgrounds influence individuals' values and preferences regarding management and leadership. As the cultural context impacts individuals' choices in a crucial way, cultural values are likely to be important for an understanding of global merger performance. Managers may engage in acquisitions for different reasons, and there may be distinct patterns in the global distribution of these reasons. In order to link managerial preferences to economic outcomes in an international framework, we rely on the cultural framework put forward by Hofstede et al. (2010).

Ahern et al. (2015), Ferris et al. (2013), Frijns et al. (2013), and Chakrabarti et al. (2009) document that cultural values are important factors in explaining takeover characteristics. A cultural explanation can hence provide a valuable addition to the understanding of takeover outcomes. To the best of our knowledge the current study is the first large-scale international endeavor to investigate the likely impact of managerial preferences as proxied by national culture on the long-term gains that takeovers, both domestic and cross-border, may create.

The remainder of this paper is organized as follows. The previous literature is reviewed and the research hypotheses are developed in the second section. The dataset and the research methodology are described in the third section. The main results are reported in the fourth section, various robustness checks are delivered in the fifth section, and additional checks are described in the sixth section. Finally, conclusions are drawn in the last section.

2. AGENCY MOTIVATIONS AND TAKEOVER PERFORMANCE

The mergers and acquisitions (M&A) literature highlights the importance of CEOs' preferences in deal related decisions. However, managerial preferences are not easy to observe, so any direct empirical indication of the impact of managers' preferences in mergers is nearly non-available. As an alternative, the literature mainly talks about the impact of managers' explicit incentives (e.g. caused by equity stakes) on mergers.

Research reveals that managerial personal traits and interests influence takeover decisions to a greater extent. It further suggests that firms not only engage in takeover activity when it is optimal from the firm perspective, but also when it is beneficial from the managerial perspective. In order to examine the conflict caused by managers' risk preferences, we study a potential entrenchment behavior, while to assess the conflict of private benefits, we investigate a possible empire building behavior.

2.1. Entrenchment

Typically, a substantial portion of a manager's total income depends on firm performance. If a firm fails to reach its targets or at worst gets into bankruptcy, the manager is most likely to lose his or her employment and future earning potential. Managers cannot diversify away employment risk in their personal portfolio settings. Therefore, they are more inclined to mitigate it by other means, e.g., through diversifying merger deals that reduce risks related to

managerial human capital such as losing one's job and reputation (Comment and Jarrell, 1995; Shleifer & Vishny, 1989; Amihud and Lev, 1981).

May (1995) supports this rationale by demonstrating that managers' personal risk preferences are associated with decisions that affect firm risk. Diversifying mergers generally even out a firm's earnings so that the diversification effect may have a positive net present value for managers. The diversification effect, however, is of no relevance to shareholders as they can easily control the risk of their portfolios in the capital market at a very low cost. Therefore, managers who are willing to invest in diversifying mergers and acquisitions primarily for the sake of risk reduction may destroy shareholder wealth. Consequently, we expect that entrenchment is negatively related to takeover performance.

2.2. Empire Building

Jensen (1986) extends the free cash flow theory to takeovers. The hypothesis of agency costs of free cash flow predicts that excess cash leads managers to produce low-benefit or even value-decreasing investment decisions. If there is any cash available after all profitable investments have been made, realizing acquisitions is one of the preferred methods by which managers may use money instead of distributing cash to shareholders (Harford, 1999). Consistent with the free cash flow hypothesis, the economic losses resulting from deals motivated by personal benefits can be substantial, as reflected in the negative stock price reaction to the announcement of such deals and the subsequent poor operating performance (Grinstein and Hribar, 2004).

McClelland (1975) argues that the need for power is the main driving force for managers. Rhoades (1983) and Schneider and Dunbar (1992) have extended this concept to takeovers that result in empire building. Similarly, Tosi et al. (1999) demonstrate that, in the absence of external monitoring, executive compensation may be positively linked to an increase in firm size due to acquisitions, even when a firm's market value is reduced. Such contractual

arrangements also seem to reflect managerial preferences. Summarizing, we, therefore, expect that empire building is negatively related to takeover performance.

2.3. Hypotheses Development

To study the impact of managerial traits on takeover performance, we resort to the concept of national culture put forward by Hofstede et al. (2010) as a way of capturing information about the psychology of managers. Hambrick and Mason (1984) contend that social values embedded in national culture cast pronounced effects on managerial views and decision-making. Similarly, Geletkanycz (1997) argues that culture has an important impact on the executive mindset and that cultural values strongly shape strategic orientations.

The Hofstede framework is, of course, neither free from criticism nor without alternatives. Doubts have been raised about its validity and generalizability (Kirkman et al., 2006; Shenkar and Luo, 2003), as the framework was developed using specific single company data in the 1960s and 1970s. Yet, many replications on different samples have proved that the country ranking remains valid (Beugelsdijk et al., 2015). Some authors have also criticized the framework for its overly simplistic conceptualization and non-exhaustiveness in cultural dimensions. Nevertheless, among all cultural approaches, the one by Hofstede provides the most straightforward link between cultural dimensions and individual preferences while this direct link is typically missing for other cultural approaches like that of Schwartz (1994, 1992) (see the comprehensive survey by Nadler and Breuer, 2017). Against this background, it is no surprise that Hofstede's framework is by far the most established in the international business literature and has become the standard tool for measuring cultural differences in several business disciplines (Nadler and Breuer, 2017; Karolyi, 2016). Moreover, the use of the Hofstede data allowed the largest sample of countries to be included in our research.

The following section discusses the managerial traits associated with the takeover motives outlined in the previous section and links them to the cultural dimensions of Hofstede et al. (2010).

2.3.1. Individualism versus Collectivism

The concept of individualism versus collectivism captures information about how people in different cultures hold divergent views about the 'self', resulting in distinct conceptions about the relatedness of individuals to each other. The strong social bonding among individuals in a collective culture allows jointly developing mechanisms to hedge against risk and turn to the social network for support, if needed.

The collectivist network would serve as a "cushion" that would hold its members in case they "fall". This "cushion hypothesis" proposed in Hsee and Weber (1999) links to the entrenchment motive. It conjectures that people from individualist societies are more prone to entrenchment in order to reduce their employment risk than people from collective societies. Since our literature review in the previous section indicates that entrenchment is negatively related to takeover performance, we examine whether firms in individualistic countries exhibit generally negative long-run post-acquisition performance. Therefore, we formulate the following research hypothesis:

> Hypothesis 1: The takeover performance in a country is negatively related to its
> level of individualism.

2.3.2. Uncertainty Avoidance

The cultural dimension of uncertainty avoidance deals with a society's tolerance for uncertainty and ambiguity and reflects the extent to which individuals are willing to deal with risk. The

psychology literature also suggests a connection between the cultural trait of uncertainty avoidance and risk aversion.

Individuals in high uncertainty avoidance societies are more skeptical about the potential rewards from risky ventures and apply higher discount rates due to higher perceived risks (Bontempo et al., 1997). Beugelsdijk and Frijns (2010) argue that people from countries with a high level of uncertainty avoidance are more risk averse and perceive investments as riskier than they really are. High uncertainty avoidance scores indicate that a country's residents have a lower tolerance for ambiguity and consequently take less risks (Fidrmuc and Jacob, 2010). We, therefore, expect uncertainty avoidance to be negatively related to takeover performance, as it may cause the willingness to engage in diversifying mergers that reduce shareholders' value. We summarize our reasoning in the following research hypothesis:

> Hypothesis 2: The takeover performance in a country is negatively related to its level of uncertainty avoidance.

2.3.3. Masculinity vs. Femininity

The cultural dimension of masculinity vs. femininity classifies a society's gender role pattern between either performance-oriented or cooperation-oriented. Masculine societies focus on assertiveness, competitiveness, and toughness, while feminine societies encourage tenderness and modesty. Masculine cultures value managerial decisiveness, proactive competitive behavior, and aggressive policies (Kanagaretnam et al., 2011). Newman and Nollen (1996) observe that in masculine cultures the magnitude of managerial compensation for good performance is relatively greater and the penalty for poor performance is relatively lower.

According to Hofstede et al. (2010) masculinity is associated with achieving greater opportunities for higher earnings, recognition, and job level advancement, while femininity is mainly linked to the desire for good working relations and cooperation. As a result, we may

conclude that empire building is more likely to occur in masculine cultures rather than feminine cultures. As empire building is expected to result in poor merger decisions, we analyze whether deals in masculine societies tend to produce a poor long-run post-acquisition performance. We hence put forward the following research hypothesis:

Hypothesis 3: The takeover performance in a country is negatively related to its level of masculinity.

Figure 1 summarizes the channels through which cultural values influence the takeover decision and consequently the takeover performance.

>>> Figure 1 goes about here <<<

3. DATA DESCRIPTION AND RESEARCH METHODOLOGY

3.1. Dataset

To study the impact of national culture on merger outcomes, we obtain a large international sample of mergers from Standard & Poor's Capital IQ database. We start with a sample of mergers and acquisitions deals as large as possible, which is reduced subsequently due to constraints on other variables. In order to measure shareholder value creation in mergers and acquisitions, we only use deals where the acquirer is a publicly traded firm with stock price data readily available. We follow Malmendier and Tate (2008) and take into account only those deals that imply a change of control, i.e. the acquiring firm obtains at least 51% of the target shares, and omit acquisitions where the acquirer already holds at least 51% of the target before the deal. Following Masulis et al. (2009), we exclude acquisitions where the transaction size is less than 1% of the acquirer value. These restrictions limit the size of our subsample to 32,856 deals from 53 countries over the period from 1983 to 2011, yet the scope is still relatively large.

3.2. The Dependent Variable: Takeover Performance

The key dependent variable of our present study is the takeover performance across countries. We adhere to Chakrabarti et al. (2009) and Lehn and Zhao (2006) and measure long-term post-acquisition stock price performance of acquirers using a buy-and-hold approach. We follow their model and calculate the excess return over the market that an investment in the shares of the acquiring firm will yield if the purchase is made at the announcement day of the acquisition. Our event-study looks at *BHAR* (buy-and-hold abnormal returns) for a window length of 36 months following the announcement.

More specifically, we calculate

$$BHAR_{ijt} = \prod_{\tau=t-d+1}^{t}(1 + R_{ij\tau}) - \prod_{\tau=t-d+1}^{t}(1 + R_{mj\tau}). \tag{1}$$

where $BHAR_{ijt}$ is the buy-and-hold abnormal return of acquirer i from country j at time t, $R_{ij\tau}$ is the daily return of the acquirer at time τ, and $R_{mj\tau}$ is the respective daily market return for $t-(t-d+1)+1 = d$ trading days over the 36 months after the acquisition. We use the natural logarithm of $BHAR_{ijt}$ in regression models to reduce potential problems associated with its skewed distribution.

Despite well-known problems in identifying long-run stock performance, the *BHAR* approach is the preferred method for long-term return analysis (Lyon et al., 1999) as it "precisely measure(s) investor experience" resulting from the purchase of the respective stock. We note in particular that our approach, as described by equation (1), seems indeed adequate, as we investigate managerial entrenchment strategies that might not be recognizable when looking at risk-adjusted returns. With respect to empire building we would not expect any risk consequences at all, which justifies to look at non-risk-adjusted returns as well. However, we will return to this issue in additional checks outlined in the sixth section.

3.3. The key Independent Variable: National Culture

Our key independent variables are the cultural scores of *individualism*, *uncertainty avoidance*, and *masculinity* from the Hofstede et al. (2010) model, which are so far the most established measures for cultural dimensions in several business disciplines. The data come from the World Values Survey, which covers more than one hundred countries worldwide and is updated regularly. As teams of people (e.g. managers, board members, and analysts) contribute to decisions about takeovers, the idea of culture can be put thoroughly to work, given that the majority of the team consists of subjects of the same national culture. Ahern et al. (2015) also argue that country-level values are appropriate proxies for the cultural values held by managers and employees of firms. Jha and Cox (2015) suggest the same that managerial preferences are strongly influenced by the cultural region. So for each merger, we identify the country in which the acquiring firm is headquartered and apply the corresponding cultural values. Nevertheless, the lack of individual cultural data has to be considered a shortcoming that we try to address in our section on robustness checks.

3.4. Control Variables

We also account for a number of deal-, acquirer-, and country-specific control variables that may affect an acquirer's performance. All the variables are elaborated in Table 1.

3.4.1. Deal-Specific Control Variables

We control for the potential of product *synergy* and classify bidders and targets according to their industry relatedness. In this regard, Morck et al. (1990) demonstrate that firms that are similar are more likely to display higher post-merger returns as they incur fewer integration expenses. To account for the likely impact of operating synergies, we include a dummy variable indicating the relatedness of the firms.

Shleifer and Vishny (2003) reveal that takeover premiums may vary depending on the *method of payment*. We, therefore, identify whether a merger is financed either completely through stock or otherwise (i.e. at least partially financed through cash) and include a corresponding dummy variable. A vast amount of the literature studies the performance of *cross-border* deals, nevertheless, still disagrees on the issue of whether cross-border mergers promise greater value than domestic mergers. According to Doukas and Travlos (1988), multinational companies yield significant positive returns by expanding across the borders. More recently, however, cross-border acquisitions have been associated with comparatively lower returns (Moeller and Schlingemann, 2005). In order to investigate the probable impact we, hence, include a dummy variable that indicates whether a deal involves a cross-border transaction.

Hostile deals are acquisitions pursued without the acceptance of the management of the target firm. Servaes (1991) documents that hostile bids coincide with relatively lower bidder returns, while Guo and Petmezas (2012) and Schwert (2000) find no significant effect. As the opposition of the target firm may also affect takeover performance, we include a dummy variable for hostile bids to capture the likely impact. We also control for *deal size* that may influence the post-acquisition performance of the acquirer. Alexandridis et al. (2013) argue that large targets are complex to manage and make it difficult for acquirers to yield economic benefits. According to Ahern (2010), large deals have higher integration costs, and consequently impact acquirer's returns negatively.

Furthermore, we control for *relative size* that is deal value with respect to the size of the acquirer. The literature reveals that relatively large targets bring in higher profits for acquirers than small targets do (Linn and Switzer, 2001). However, integration difficulties associated with relatively large targets lower down the impact of associated operating synergies and deteriorate performance (Clark and Ofek, 1994). In addition, some empirical findings indicate no meaningful relationship between relative size and post-acquisition performance (Powell and

Stark, 2005). We also try to substantiate the possible impact of the relative size of a deal on the acquirer's long-term performance.

3.4.2. Acquirer-Specific Control Variables

Among acquirer-specific characteristics we probe whether prior acquisition *experience* has an effect on the takeover outcome. Fowler and Schmidt (1989) document that acquisition experience improves post-acquisition financial performance, Laamanen and Keil (2008) however observe that a high rate of mergers and acquisitions deteriorates performance due to a lack of time to integrate the acquisition program. To study the likely impact we include a dummy variable that indicates whether a bidder belongs to the upper quintile of the most active takeover companies in our sample.

Moeller et al. (2004) identify *firm size* as an important factor in determining an acquirer's performance. It is argued that agency costs increase with firm size due to the larger span of operations that make external monitoring difficult (Jensen and Meckling, 1976). As used by Gabaix and Landier (2008), our proxy for size is the natural logarithm of the firm's total assets. We further control for *cash flow*, as Jensen (1986) argues that free cash flow results in value decreasing investment decisions. According to Ahern et al. (2015), acquirers' past returns have a significant impact on performance. We therefore control for firm profitability, relying on the measure of *return on assets*.

3.4.3. Country-Specific Control Variables

Besides the remaining Hofstede cultural dimensions of long-term orientation and power distance, we employ several other country-specific control variables. According to Djankov et al. (2008), insider self-dealing is the main concern for minority shareholders. We therefore refer to the *anti-self-dealing* index to measure the degree of legal protection for shareholders against this risk. Strong investor protection generally reduces the ability of insiders to expropriate

outsiders. La Porta et al. (1998) observe that the level of investor protection provided through the *legal system* is a strong predictor for numerous economic outcomes. Countries with a common law system generally exhibit better-developed financial markets than countries with a civil law tradition. To account for the legal system, we include an indicator dummy variable that identifies the legal origin of the bankruptcy law of each country. We also use *corporate board* as another indicator of investor protection and corporate governance. Firms with more accountable corporate boards are expected to demonstrate better performance. Moreover, we apply a measure for *corruption control*, as corruption lowers economic performance due to increased transaction costs, inefficient investments, and inappropriate allocation of factors of production (Kaufmann and Wei, 2000; Shleifer and Vishny, 1993). Furthermore, we follow Ahern et al. (2015) and control for a country's size and individual wealth using the *GDP per capita*. Finally, we control for religion as Guiso et al. (2003) suggest that religion is a major foundation of the disparities in societal values and economic decision-making. We use *same religion* as a dummy variable based on the primary religion of both the acquirer and the target (Stulz and Williamson, 2003).

>>> Table 1 goes about here <<<

Table 2 reports the descriptive statistics for our variables.

>>> Table 2 goes about here <<<

4. EMPIRICAL FINDINGS

To explore the relationship between takeover performance and national culture while controlling for other factors, we estimate multivariate regression models. We present ordinary least squares regressions with robust standard errors of the dependent variable of *BHAR* using

a 36-month window on our key variables of interest: *individualism*, *uncertainty avoidance*, *masculinity*, and a set of control variables. More specifically, our regression model is

$$BHAR_{ijt} = \alpha + \sum_{m=1}^{k} \beta_m Cultural\ Scores_{ijm} + \sum_{n=1}^{l} \gamma_n Controls_{ijnt} + \varepsilon_{ijt.} \qquad (2)$$

where $BHAR_{ijt}$ is the buy-and-hold abnormal return of acquirer *i* from country *j* at time *t*, as defined in (1), $Cultural\ Scores_{ijm}$ captures the likely impact of cultural dimensions *m*, and $Controls_{ijnt}$ takes into account the impact of deal-specific, acquirer-specific, and country-specific factors at time *t* that may affect an acquirer's $BHAR_{ijt}$. We calculate the variance inflation factors for all of our regression models, which yield notably low values. Multicollinearity among the variables is not a problem in our sample.

>>> Table 3 goes about here <<<

Table 3 presents results of the multivariate regression analysis. Model 1 (36 months) is our basic approach. We then add additional control variables in Models 2 and 3, and also take a look at an alternative time window (24 months). According to our baseline regression, countries with cultures characterized by high individualism tend to exhibit worse takeover performance. The empirical evidence provides strong support for our hypothesis that managerial entrenchment affects takeover returns in an adverse way. The estimated coefficient of individualism is significantly negative throughout all the regression models. Economically, the coefficient estimate in the baseline specification of Model 3 suggests that a one standard deviation increase in individualism is associated with a decrease of $0.1072 \times 0.39 = 4.18$ percentage points in takeover performance due to our consideration of standardized coefficients, with all other explanatory variables set at their mean values. The cultural dimension of uncertainty avoidance also has a negative effect on takeover performance. It supports our hypothesis and substantiates the negative effect of managerial entrenchment on takeover success. It is also consistent with the findings from Frijns et al. (2013) that suggest

CEOs of firms located in higher uncertainty avoidance countries require a higher premium on takeovers and thus impede takeover activity. In countries with high uncertainty avoidance, CEOs are less risk tolerant and demand a higher compensation for undertaking an acquisition. Eventually, only takeovers with high net synergies and thus high positive short-term announcement effects are realized. In addition to these results of Frijns et al. (2013), we find that managers focus particularly on low-risk takeovers (see Section 6.1, below) leading to low abnormal returns in the long run despite positive short-term announcement effects. In economic terms, the coefficient estimate in the baseline regression indicates a decrease of 0.0295×0.39 = 1.15 percentage points in abnormal long-term stock returns for a one standard deviation increase in uncertainty avoidance. The effect is economically significant, but less pronounced than for individualism.

Our findings further suggest a positive influence of masculinity on takeover performance. This empirical evidence contradicts our hypothesis that postulates a negative relationship between masculinity and the takeover outcome. In the sample under study, empire building is not observed to cast a negative impact on takeover performance. Other proxies for culture are not statistically significant in a consistent way. Overall, our results clearly indicate that national culture is an important factor for cross-country variation in takeover performance.

Our main results with respect to the cultural variables in question are identical for Models 1 to 3. Moreover, mergers and acquisitions in the same industry yield superior returns. Domestic mergers offer superior returns as compared to mergers across the border. Stock-financed mergers and acquisitions experience considerably lower returns than those offering cash payment, which is consistent with the negative signaling framework (Myers and Majluf, 1984). Larger firms with higher investment levels generate higher takeover returns. Experienced bidders enjoy better takeover performance. A good governance system in terms of the anti-self-dealing regulation and an accountable corporate board exhibits a strong positive effect on an

acquirer's returns. The legal system of a country is also found to have significant effects on a bidder's performance. Surprisingly, countries with the civil law are found to enjoy better long-term abnormal returns than those with common law. Corruption control has a strong positive effect on returns. We may conclude that most of the deal-specific, acquirer-specific, and the country-specific control variables enter the regressions with the expected signs.

5. ROBUSTNESS CHECKS

The following section describes several robustness checks to substantiate our results.

5.1. Controlling for Window Length

As a first robustness check, we examine whether the documented effects of culture remain stable after shortening the survey window from 36 months to 24 months. The results reported earlier in Table 3 continue to provide strong support for the documented effects. Individualism and uncertainty avoidance load significantly in a negative way on takeover performance, masculinity however loads significantly in a positive way throughout the regression models.

5.2. Controlling for Time Effects

One could expect our findings to be distorted by the recent financial crisis. The crisis led to a downturn in economic activity in general and also triggered discussions about investment risk and long-term value creation. To verify that our results are not driven by observations from a certain time period, we split our sample period at the end of the year 2007 and re-estimate our regressions. The results reported in Table 4 indicate that during the pre-crisis time horizon, individualism and uncertainty avoidance remain significantly negative and strongly support our hypotheses. However, masculinity remains significantly positive. During the post-crisis time horizon, all three cultural variables assume the same sign as before and exert a significant

impact on takeover performance. We thus may conclude that our results are robust to time effects.

>>> Table 4 goes about here <<<

5.3. Controlling for an Alternative Cultural Measure

As an additional robustness check, we also apply Hofstede's original measures of cultural scores as an alternative (Hofstede, 2001). Results are summarized in Table 5.

>>> Table 5 goes about here <<<

In general, though our results are slightly weakened, they are still in line with our findings known from our baseline regressions.

5.4. Controlling for Sample Composition

We test whether our previous evidence on takeover performance is driven by a sample composition bias and repeat our analysis with different sub-samples. First we check that our results are not driven by US firms. The US is by far the leader in takeover activity, and there is a sharp drop-off in such activities for the next most active market. We, therefore, remove deals initiated by US companies from our database. Our results for the remaining countries reveal again negative and significant effects for individualism and uncertainty avoidance, and a significantly positive influence of masculinity. Hence our previous evidence is not a US specific phenomenon. We further check by additionally excluding UK initiated deals, and the same results follow. We also examine separately non-European countries and G20 countries and find similar results. Finally, we focus on countries with mature and growing economies and limit our sample to the G8+5 countries. As shown in Table 6, the exclusion of countries with smaller economies has little effect on the regression outcome. Individualism and uncertainty avoidance maintain a negative and significant effect. Masculinity, however, is not significant any longer.

>>> Table 6 goes about here <<<

5.5. Controlling for Methodological Issues

We recognize that our empirical analysis may be vulnerable to econometric concerns, as heterogeneity, heteroscedasticity, the mismatch between our deal-specific dependent variable and our most important control variables defined only on the country level, and endogeneity may be problematic when examining time series and cross-sectional variations. We check for fixed effects, weighted least squares, clustered least squares, and instrumental variables to mitigate concerns about potential econometric problems.

5.5.1. Controlling for Heterogeneity using a Fixed Effects Approach

We address unobserved heterogeneity to yield convincing results. A fixed effects approach implies consistent outcomes in the presence of unobserved group heterogeneity (Gormley and Masta, 2014). Findings from Hausman Tests suggest that in our case, a fixed effects approach is better suited than a random effects approach. So to capture unobservable heterogeneities, we conduct *income fixed effects*, *industry fixed effects*, *region fixed effects* and finally, *year fixed effects* regressions. Table 7 provides compelling evidence that our results are robust in the presence of unobserved heterogeneities. Individualism and uncertainty avoidance continue to have strong negative effects, while masculinity again shows a pronounced positive impact.

>>> Table 7 goes about here <<<

5.5.2. Controlling for Heteroscedasticity using a Weighted Least Squares (WLS) Regression Analysis

Next, we control for heteroscedasticity as part of our robustness testing. The ordinary least squares method has the basic assumption of homoscedasticity, which means the error term has a constant variance. However, that may not always be the case, so in order to account for

potential heteroscedasticity, we use the weighted least squares method. We define weights on the basis of *income groups*, *industry sector*, *geographic region* and finally, *year of acquisition*. The findings from Table 8 suggest that culture remains a significant determinant of the acquired business performance, and our results are thus robust to heteroscedasticity.

>>> Table 8 goes about here <<<

5.5.3. Controlling for Noise on the Country Level

As we already discussed, our main cultural variables of interest are country-specific, though with the help of them we try to explain takeover performance that indeed is a deal-specific phenomenon. There are more than 28,000 deal-specific observations in our sample, whereas there are only 53 different values for each of our cultural variables. This disparity may result in a lot of noise due to within-country variation that is basically not perfectly controlled for.

We try to address this potential issue in two ways. First, we account for clustered standard errors on the country level. Second, we compute average firm- and deal-specific data for each country (and year) in order to deal with country-averages on both sides of our regression equation. Hence, we firstly repeat our WLS analysis of Table 8 but with clustered standard errors on the country level for all four models (see Table 9). Furthermore, we also average all variables for each year on the country level and present corresponding WLS (with weights defined on the country level) regression results in Table 10, thereby assuming that cultural variables are stable over time.

>>> Table 9 goes about here <<<

>>> Table 10 goes about here <<<

We refrain from averaging all variables over time as this would be an unnecessarily rough approximation of the underlying data reducing our sample size to only 53 observations.

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Apparently, although some significance levels seem to be reduced, all in all our previous results are confirmed by these additional analyses.

5.5.4. Controlling for Endogeneity using an Instrumental Variables Analysis

While culture is predetermined, it is possible that our cultural measure is not properly capturing the national culture, and there may be some omitted variables determining our measures. To take care of this potential problem, we follow Guiso et al. (2006) and use an instrumental variables analysis to better account for causality. We use two exogenous instruments for individualism and uncertainty avoidance each and one for masculinity.

5.5.4.1. Instruments for Individualism Guiso et al. (2006) suggest that culture is inherited through genetics and learned through language and religion. Gorodnichenko and Roland (2011) argue that parents transfer both genes and culture to their kids, and this intergenerational transfer of genes and culture occurs within countries suggesting genetically close countries are likely to exhibit similar cultures. We therefore opt for the same methodology employed by Gorodnichenko and Roland (2011) and compute *genetic distance* between the acquiring country and the US (with the highest individualism score in our sample) as an instrument for individualism. We established a dataset of genetic distance between each country and the US using data from Cavalli-Sforza et al. (1994). We particularly use the distance measured by the dominant population fixation index (Fst) distance as an instrument for individualism. It captures the likelihood of a distinction between two alleles (a specific form taken by a gene) chosen at random from two populations (El Ghoul and Zheng, 2016; Spolaore and Wacziarg, 2009). A higher FST distance (from the US) marks a higher genetic disparity regarding individualism between two populations, and hence, a larger cultural disparity. In our case, this means FST distance is negatively related to individualism.

In addition to being acquired genetically, culture is also learned. Existing studies suggest that language can be used as an alternative instrument for culture (Stulz and Williamson,

2003;bLicht et al., 2001). Kashima and Kashima (1998) also emphasize that language and cultural values are closely related to each other. Accordingly, we also focus on language as a source for the exogenous variables that we use in our instrumental variable analysis.

Kashima and Kashima (1998) contend that a language's rules regarding *pronoun drop* reflect whether a culture places more focus on the uniqueness of the speaker or on the significance of the wider social context. They further argue that languages that necessitate the obvious use of pronouns are more individualistic and offer a clear distinction of the subject and the context. With regard to the cultural value dimensions, the usage of pronouns and pronoun drops should be related to a culture's degree of individualism versus collectivism. We expect pronoun drop to be negatively related to individualism.

5.5.4.2. Instruments for Uncertainty Avoidance Kashima and Kashima (1998) further suggest that the second-person pronoun usage indicates the social distinction between speakers and their audience. According to these authors, languages with singular second-person pronoun (e.g. English) suggest lesser social distinction, while languages with multiple second-person pronouns (e.g. German) always consider social distance between speakers and their audience. Their findings suggest that nations speaking languages that require *multiple second-person pronouns* score significantly higher on Hofstede's uncertainty avoidance index. We, therefore, follow El Ghoul and Zheng (2016) and use multiple second-person pronouns as an instrument for uncertainty avoidance in our model. We expect this instrument to be positively related to uncertainty avoidance.

Stulz and Williamson (2003) identify religion as a proxy for culture. The Guiso et al. (2006) definition of culture also articulates that *religion* is a pivotal factor in the formation and transmission of beliefs and values. According to Hofstede (2001) religion brings certainty and helps people to deal with an uncertain future by providing hope for life after death. La Porta et al. (1997) also suggest that in cultures with a higher level of uncertainty avoidance, religions

stress firm bonds of authority to instill the order and certainty. Therefore, we follow El Ghoul and Zheng (2016) and use religion as an instrument for uncertainty avoidance, as the predominant religion in a country typically does not change much over time. We use the percentages of the acquiring country's population linked to each religion. Hence, %Catholic, %Protestant, %Orthodox, %Muslim, %Hindus, %Buddhists, and %Others refer to the percentage of a country's population that is Catholic, Protestant, Orthodox, Muslim, Hindus, Buddhists, and others respectively, and are applied as instruments for uncertainty avoidance. We expect these seven instruments to be positively related to uncertainty avoidance.

5.5.4.3. Instrument for Masculinity Gender identity is one of the many identities people hold. We resort to the same idea that culture is transmitted genetically and that genetic data can be used as an indirect proxy of cultural diffusion. We follow once more El Ghoul and Zheng (2016) and employ *genetic distance* between the acquiring country and Japan (with the highest masculinity score in our sample) as an instrument for masculinity. We establish a data set of genetic distance between each country and Japan relying on data from Cavalli-Sforza et al. (1994). We use the measure of the dominant population fixation index (Fst) distance as an instrument for masculinity. A higher FST distance (from Japan) shows higher genetic disparity regarding masculinity between two populations, and hence, a larger cultural disparity. For our case, this implies a negative relationship between the applied FST distance measure and masculinity.

5.5.4.5. Results The results of the instrumental variables analysis are summarized in Table 11. In Model 1, genetic distance (to the US) is used as an instrument for individualism, while in Model 2 pronoun drop is utilized as an instrument for individualism. In Models 3 and 4 multiple second-person pronouns and religion are applied as instruments for uncertainty avoidance, respectively. In Model 5 genetic distance (to Japan) is employed as an instrument for masculinity. Our findings suggest that almost all the coefficient estimates on the instrumented

variables in all five models retain the same signs and are highly significant. In unreported results, our findings confirm that all our instrumental variables are significantly related to instrumented variables and retain the same signs as expected. Overall, the outcomes of our instrumental variables analyses assure that our primary results are robust and are not due to reverse causation or omitted variables.

>>> Table 11 goes about here <<<

6. ADDITIONAL CHECKS

The following section reports some additional tests to create a better comprehension of the underlying phenomena.

6.1. National Culture and Firm Risk

The model developed in Table 12 studies the impact of managerial characteristics (proxied by national culture) on firm risk. In order to support our hypothesis regarding entrenchment we establish a model that investigates the possible impact of managerial individualism and uncertainty avoidance on post-acquisition risk of the acquirer proxied by *beta*. We compute beta before and after the takeover activity based on 3-year daily return data. More specifically, we estimate

$$Beta_{ijt} = \alpha + \sum_{m=1}^{k} \beta_m Cultural\ Scores_{ijm} + \sum_{n=1}^{l} \gamma_n Controls_{ijnt} + \varepsilon_{ijt.} \tag{3}$$

where $Beta_{ijt}$ is the beta of acquirer i from country j at time t computed on the basis of national stock market indices for countries j e.g. S&P 500 for the US. $Cultural\ Scores_{ijm}$ and $Controls_{ijnt}$ are defined in a similar way as in equation (2).

Our findings suggest that managers with a higher level of individualism and uncertainty avoidance engage in diversification strategies that negatively impact firm returns, as indicated in Table 3. Results reported in Table 12 support our earlier findings and clearly indicate that managerial individualism and uncertainty avoidance are significantly negatively related to post-acquisition risk of the firm. It suggests that managers engage in diversification strategies to lower down firm risk for their personal benefits at the expense of shareholders. Interestingly, the negative regression coefficient for masculinity in the post-acquisition phase implies that higher values for *BHAR* coincide with smaller risk in the case of a higher level of masculinity. As a consequence, empire building due to high masculinity even implies additional risk-adjusted abnormal returns.

>>> Table 12 goes about here <<<

6.2. National Culture and Empire Building

We also study the impact of masculinity on *relative (deal) size* to yield a clear evidence on the presence of the phenomenon of empire building. We incrementally exert a number of deal-specific, acquirer-specific, and country-specific controls. More precisely, we estimate

$$Relative\ Size_{ijt} = \alpha + \sum_{m=1}^{k} \beta_m Cultural\ Scores_{ijm} + \sum_{n=1}^{l} \gamma_n Controls_{ijnt} + \varepsilon_{ijt.} \qquad (4)$$

where $Relative\ Size_{ijt}$ is the relative size of a deal with respect to acquirer *i* from country *j* at time *t*. $Cultural\ Scores_{ijm}$ and $Controls_{ijnt}$ are defined similarly as in equation (2).

Table 13 reports the regression results indicating that masculinity has a significantly positive impact on relative deal size. It suggests that a higher level of masculinity results in relatively bigger deals which is a clear evidence of the presence of the phenomenon of empire building.

>>> Table 13 goes about here <<<

6.3. Announcement Effects and Medium-Term Takeover Performance

We mainly explore the impact of culture on long-term takeover performance. However, it is quite intuitive to study short-term market reactions to takeover announcements and medium-term takeover performance as well, as we have already pointed out that there is reason to expect differences from long-term performance effects of takeovers.

We follow Frijns et al. (2013) and develop a model in Table 14 to substantiate the relationship between national culture and *CARs* (cumulative abnormal returns) around the announcement of a takeover. However, besides our main cultural scores of individualism, uncertainty avoidance, and masculinity, many other factors may also affect CARs around takeovers. So we exert a number of deal-specific, firm-specific, and country-specific controls. We follow a similar computation methodology as outlined by Golubov et al. (2013) and compute CARs for the 3-day (-1, +1) and the 5-day (-2, +2) time windows around the announcement of the takeover. They suggest to include the days before a takeover announcement as it helps taking into account the impact of any possible information leakages, while few more days after the takeover announcement date help capturing the impact of any delay in the stock price reactions. Moreover, it is interesting to investigate the pure post-merger short-term market reactions and abnormal returns, so we also compute CARs for the 2-day (0, +1) and 3-day (0, +2) time windows capturing stock price reactions after the takeover announcement has been made. More specifically, we estimate

$$CAR_{ijt} = \alpha + \sum_{m=1}^{k} \beta_m Cultural\ Scores_{ijm} + \sum_{n=1}^{l} \gamma_n Controls_{ijnt} + \varepsilon_{ijt.} \qquad (5)$$

where CAR_{ijt} is the cumulative abnormal return of a deal with respect to acquirer *i* from country *j* at time *t*. $Cultural\ Scores_{ijm}$, and $Controls_{ijnt}$ are defined similarly as in equation (2).

>>> Table 14 goes about here <<<

Interestingly, the level of uncertainty avoidance is found to have a significantly positive impact on CARs in most of the cases: 2-day (0, +1), 3-day (−1, +1), and 5-day (−2, +2) time windows . The level of individualism is found to have a significantly positive impact in the case of 3-day (−1, +1) and 5-day (−2, +2) time windows. Masculinity, however, is found to have no significant impact on short-term abnormal returns. Deal size also has a strong positive impact on CARs indicating that larger deals due to greater inherent risk should carry a greater risk premium and should therefore result in a greater CAR. Moreover, firm size is found to have a significant negative relationship with CARs. It suggests that larger firms have lower short-term abnormal returns as compared to smaller firms. These findings are in line with the evidence offered by Frijns et al. (2013) and underpin the relevance of a clear distinction between short-term and long-term return effects of takeover activities as expected.

However, relative (deal) size, though expected to cast a positive impact on cumulative abnormal returns as suggested by Jarrel and Poulsen (1989), is found to have no or only a weakly significantly negative impact in our case. The underlying reason of these contradictory results may be that, in contrast to Jarrel and Poulsen (1989), we also control for (absolute) deal size and firm size, separately. For higher deal size and lower firm size, implying overall a higher relative (deal) size, we also arrive at higher cumulative abnormal returns. According to this finding, we may conclude that relative (deal) size alone bears only little explanatory power in this setting if already controlled for firm size and (absolute) deal size. It should be noted that despite the close relationship between relative (deal) size, firm size, and (absolute) deal size, we do not observe any problems of multicollinearity in our regressions.

In addition to substantiating short-term announcement effects we also investigate the possible impact of cultural scores on medium-term performance. We particularly employ the same model as outlined in equation (2), but with different possibilities of post-merger time windows for acquirer's return, e.g. 30-, 60-, 90-, and 360-day BHAR.

>>> Table 15 goes about here <<<

Table 15 in connection with the results of Table 14 reveals how the impact of our cultural variables changes over different time horizons, implying that the relevance of our cultural variables for empire building and entrenchment indeed evolves only over time and may intermingle with other effects for shorter time horizons. In the short run, individualism starts exhibiting a positive impact on takeover performance, while for medium-level time horizons, this positive effect vanishes and eventually turns out to become negative. The same holds true for the impact of uncertainty avoidance, while masculinity shows no significant impact in the short run, but gains a positive influence on takeover performance for mid-term and long-term horizons with the latter being more pronounced.

6.4. Cross-Border versus Domestic Mergers: When to consider managerial traits?

Large scale evidence demonstrates that cultural differences have a substantial impact on acquisition performance in cross-border deals. The literature often posits that cultural issues cause integration challenges, which account for the adverse performance following an acquisition (Slangen, 2006; Pautler, 2003; Kogut and Singh, 1988). Although we are not mainly interested in the effects of cultural differences, a closer look at them might help us to substantiate our previous findings. In order to do so, we investigate how the impact of managerial traits (proxied by national culture) varies on the basis of the nature of the deal (domestic or cross-border) and thus the cultural difference between the acquiring country and the target country. We expect stronger effects of managerial traits for domestic transactions, as there is no interfering foreign culture at work, which may weaken the impact of the cultural values of the acquiring country on takeover performance. To put it another way: According to the *Hofstede (cultural) distance* variable as introduced by Chakrabarti et al. (2009), we have a value of 0 for domestic transactions and (typically) a positive value for cross-border acquisitions. The phenomenon of cultural interference suggests to draw a clear distinction

between domestic and cross-border deals. In order to investigate this issue more precisely, we perform a simple sample split that is based on the dummy variable *cross-border*. Table 16 presents our results. It should be noted that results are essentially identical if undertaking a sample split based on the Hofstede cultural distance measure (due to a median value of zero for this variable).

In line with our conjecture, the negative influence of individualism and uncertainty avoidance on long-term takeover performance is weakened in the case of cross-border transactions and thus for greater cultural differences between the two countries involved. The positive influence of masculinity vanishes completely for cross-border transactions and hence larger cultural distance. Overall, these additional analyses not only underpin the relevance of the cultural values of the acquirer's country, but also establish a link to the literature on the impact of cultural differences on takeover performance.

 >>> Table 16 goes about here <<<

6.5. National Culture and Globalization

With an ever growing phenomenon of globalization, it becomes even more important to scrutinize whether national culture still holds its impact intact. For example, we may expect that particularly in large firms many decision makers (holding managerial positions) might have attended US or British universities thus reducing cultural differences on the highest management levels. Unfortunately, we do not have any personalized information on managers' education. However, we try to investigate the likely impact of globalization on the basis of two variables: *(acquirer) firm size* and *globalization index* of the acquiring country. We use firm size as a proxy for MNEs (multinational enterprises), as larger firms tend to operate more globally. The other measure ranks countries according to the globalization index developed by Dreher (2006). In both cases, we make again use of sample splits by distinguishing between

observations above and below (or equal to) the median value of the respective variable. We expect that a higher level of globalization as measured by firm size and the globalization index of the respective country may result in the dilution of the original cultural effects. Table 17 confirms our conjecture.

>>> Table 17 goes about here <<<

7. DISCUSSION AND CONCLUSION

Our analysis sheds light on the question of why firms engage in takeovers and further demonstrates that this decision is also affected by managerial traits and interests. We document that performance effects of mergers and acquisitions depend on the underlying takeover motives. We find that national culture is statistically significant in explaining different levels of long-term takeover performance. Talking in the context of cultural values, the post-acquisition stock price performance appears to have a significantly negative relationship with individualism and uncertainty avoidance. The same holds true regarding a firm's post-acquisition beta risk measure. Taken together, entrenchment behavior of managers may be observed as they are more likely to play it safe, even if this reduces long-term abnormal returns. While some former studies have concluded that managers may exert less effort and are more likely to enjoy a quiet life by forgoing risky investments (Bertrand and Mullainathan, 2003), however, playing it safe may also entail putting extra effort to reduce a firm's risk (Holmstrom, 1979), ultimately in order to reduce employment risk that our analysis highlights clearly. We find that risk reduction may not necessarily be a drawback of managers exhibiting less effort, but instead an indication of managers' risk preferences in connection with takeover decisions.

Contrary to our expectations, masculinity has a positive impact on both long-term abnormal returns and relative (deal) size, suggesting that empire building does not harm post-acquisition performance, but rather improves it. This finding is in contrast to the common view in the

literature that empire building is a non-value maximizing behavior where managers try to increase the size of the organization for personal benefits that can have a negative impact on shareholders' wealth (e.g. Shleifer and Vishny, 1988). However, not all the literature shares this perspective, e.g., Jarrel and Poulsen (1989), p. 18., find no evidence for this argument. Moreover, the positive impact of masculinity could be a consequence of certain traits that are also connected with this cultural dimension: tenderness, compassion, and flexibility along with toughness and aggressiveness, and may contribute to positive business performance (Niva, 1998; Connell and Wood, 2005). This might imply that masculinity exhibits a positive impact on long-term takeover performance not because of, but maybe in spite of its connection to empire building. Apparently, here is a need for further research to carefully identify the mechanisms by which the Hofstede cultural dimensions drive long-term takeover performance. In order to do so, one may follow the suggestion in Nadler and Breuer (2017) to rely on the six cultural dimensions of Schwartz (1994, 1992), to decompose them into the underlying 57 original cultural values and to rearrange (some of) these 57 cultural values in a tailor-made way according to the research issue at hand. Such a procedure might open up a more differentiated view on certain topics than to simply rely on the Hofstede cultural dimensions, although for the time being the latter represent the most common way to investigate cultural issues.

It is also interesting to observe that the culture of the acquirer's country is mostly important in the case of domestic transactions, and also for small cultural differences to the target country. Additionally, it becomes even more relevant for smaller (less globalized) acquirer firms and less globalized acquirer countries. All these additional findings fit well into our story on the impact of the home country's culture on long-term takeover performance.

While our findings highlight managers' tendency to play it safe, however, due to informational asymmetries, managerial preferences and motives behind their choices are quite hard to detect. It is a great challenge to stop managers from playing it safe and to achieve the goal of

maximizing shareholders' wealth. In order to design a suitable incentive plan to mitigate the agency problem to benefit shareholders and the economy at large, it is necessary to understand the relevant agency conflicts and how they may vary over time and across firms. If a manager forgoes risky investments because of being unwilling to exert costly effort, then an increase in the ownership stake may help reduce this agency problem. However, if the manager forgoes risky investments because of his or her risk preferences, then adding on to the ownership stake will make the agency conflict even worse. In this situation, it would be better to increase the convexity of the manager's payoff structure (Gormley et al., 2013; Guay, 1999). To detect and discourage managers' tendency to play it safe, boards must design governance and compensation agreements in order to stimulate managers to take risks required to enhance investment value. If ignored, such conflicts may have crucial implications for shareholder value at the micro level and for aggregate investment and economic growth at the macro level.

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Figure 1: Linkages between National Culture and Takeover Performance

Hofstede et al. (2010) key cultural dimensions

masculinity *uncertainty avoidance* *individualism*

managerial decisiveness and competitive behavior

less risk taking than desired by investors

lack of social network to hedge against risk

spending excess cash on takeovers

employing risk reduction through diversifying mergers

empire building *entrenchment*

agency theory: bad takeover decisions made intentionally

decreased takeover performance

Table 1: Description of Variables

Variables	Description
	Panel A: National Culture and Takeover Performance
Individualism	A preference in a society wherein individuals are supposed to take care of themselves and their immediate families only.
Uncertainty Avoidance	The degree to which the members of a society feel uncomfortable with uncertainty and ambiguity.
Masculinity	A preference in society for achievement, heroism, assertiveness, and material success.
Power Distance	The extent to which the members of a society accept that power in institutions and organizations is distributed unequally.
	Source: Hofstede et al. (2010) and Hofstede (2001)
Long-Term Orientation	A focus on future rewards, primarily persistence, and thrift.
Post-Acquisition Long-Term Performance	Measured as the natural logarithm of the buy-and-hold abnormal return (BAHR) over a 36-month window (Chakrabarti et al., 2009).
	Source: DataStream
	Panel B: Deal-specific Variables
Synergy	Dummy variable that identifies nature of merger, d=1 if intra-industry, and 0 if inter-industry.
Method of Payment	Dummy variable that identifies the method of payment, d=1 if all stock, and 0 otherwise.
Cross-Border	Dummy variable that identifies nature of merger, d=1 if cross-border, and 0 otherwise.
Hostile	Dummy variable that identifies nature of bid, d=1 if hostile, and 0 if friendly.
Deal Size	Natural logarithm of the transaction value of the acquisition.
Relative Size	Transaction value to the total assets of the acquiring company.
	Source: Bloomberg and DataStream
	Panel C: Acquirer-specific Variables
Experience	Dummy variable, d=1 if the acquirer is among top 20% firms under study which are the most active, and 0 otherwise.
Firm Size	Natural logarithm of the book value of total assets.
Cash Flow	Cash flow to asset ratio.
Return on Asset	Net income to book value of asset ratio.
	Source: Bloomberg and DataStream
	Panel D: Country-specific Variables
Anti-Self-Dealing	Anti-Self-Dealing Index to measure the degree of legal protection for shareholders (Djankov et al. 2008).
Legal System	Dummy variable that identifies the legal origin of the bankruptcy law of each country, d=1 if a country's legal origin is civil law, and 0 if the legal origin is common law (La Porta et al., 2008).
Corporate Boards	Management's accountability to investors and boards [1=little accountability; 7=maximum accountability].
Corruption Control	Governance indicator for control of corruption – capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as "capture" of the state by elites and private interests. Measured in units ranging from −2.5 to 2.5, with higher values corresponding to better governance outcomes (Kaufmann et al., 2011).
GDP per capita	Gross domestic product per capita in current US dollars.
Same Religion	Dummy variable, d=1 if both acquirer and target have the same religion, and 0 otherwise.
	Source: The Global Competitiveness Reports and CIA World Factbook
	Panel E: Other Variables used in Robustness Checks
Pronoun Drop	Pronoun-drop-tendency in the major language spoken. [1 = pronoun drop license, 2 = no pronoun drop license] (Kashima and Kashima, 1998).
Multiple Second-Person Pronouns	Number of second-person pronouns in the major language spoken. [1 = single pronoun, 2 = multiple pronouns] (Kashima and Kashima, 1998).
Genetic Distance (instrument for individualism)	Genetic divergence between species or between populations within a species. Data set is compiled from work by Cavalli-Sforza, Menozzi, and Piazza, (1994) following Gorodnichenko and Roland (2011) methodology by taking the genetic distance between the focal country and the US that has the highest score for individualism in our sample.
Genetic Distance (instrument for masculinity)	Genetic divergence between species or between populations within a species. Data set is compiled from work by Cavalli-Sforza, Menozzi, and Piazza, (1994) following El Ghoul and Zheng (2016) methodology by taking the genetic distance between the focal country and Japan that has the highest score for masculinity in our sample.
Religion (as an instrument)	A vector describing the percentages of the focal country's population linked to each religion: Catholic, Protestant, Orthodox, Muslim, Hindus, Buddhists, and Others (CIA World Factbook).
	Panel F: Other Variables used in Additional Checks
Beta	Beta is a firm risk measure computed before and after the takeover activity based on 3-year daily return data and on the basis of national stock market indexes for the acquirers' countries like the S&P 500 for the US.
CARs	Cumulative abnormal returns (CARs) are computed for the 3-day (+1, −1) and the 5-day (+2, −2) time windows around the announcement of the takeover (same as in Frijns et al., 2013) and for the 2-day (0, +1) and the 3-day (0, +2) time windows after the takeover announcement has been made.
Globalization Index	Measures the extent of globalization of the acquirer's home country according to the globalization index obtained from Dreher (2006).
	Source: Datastream and Dreher (2006).

Table 2: Descriptive Statistics

	No. of Deals	BHAR	IDV	UAI	MAS	PDI	LTO	Synergy	Payment
Argentina	18	0.13	46	86	56	49	20	0.89	0.17
Australia	1,876	−0.05	90	51	61	38	21	0.67	0.22
Austria	58	0.11	55	70	79	11	60	0.78	0.05
Belgium	159	−0.16	72	93	60	67	82	0.69	0.18
Brazil	271	0.09	38	76	49	69	44	0.78	0.16
Britain	4,490	−0.08	89	35	66	35	51	0.64	0.11
Bulgaria	1	0.39	30	85	40	70	69	1.00	0.00
Canada	2,784	−0.04	80	48	52	39	36	0.74	0.36
Chile	62	0.07	23	86	28	63	31	0.74	0.18
China	1,011	0.49	20	30	66	80	87	0.57	0.13
Colombia	24	−0.03	13	80	64	67	13	0.88	0.29
Croatia	5	0.18	33	80	40	73	58	0.80	0.20
Czech	3	−0.00	58	74	57	57	70	1.00	0.00
Denmark	125	−0.01	74	23	16	18	35	0.72	0.15
Finland	210	0.14	63	59	26	33	38	0.65	0.20
France	517	−0.02	71	86	43	68	63	0.71	0.17
Germany	443	0.03	67	65	66	35	83	0.67	0.19
Greece	144	−0.13	35	112	57	60	45	0.77	0.46
Hong Kong	242	0.08	25	29	57	68	61	0.46	0.11
Hungary	23	−0.04	80	82	88	46	58	0.83	0.09
India	585	0.65	48	40	56	77	51	0.67	0.25
Indonesia	64	0.16	14	48	46	78	62	0.64	0.14
Ireland	220	0.10	70	35	68	28	24	0.75	0.08
Israel	219	−0.05	54	81	47	13	38	0.67	0.13
Italy	407	−0.07	76	75	70	50	61	0.75	0.12
Japan	1,646	0.20	46	92	95	54	88	0.63	0.26
Luxemburg	41	0.44	60	70	50	40	64	0.83	0.10
Malaysia	682	−0.12	26	36	50	104	41	0.54	0.12
Malta	2	0.57	59	96	47	56	47	0.50	0.00
Mexico	68	0.68	30	82	69	81	24	0.76	0.13
Morocco	9	−0.13	36	68	53	70	14	0.78	0.33
Netherlands	276	0.04	80	53	14	38	67	0.66	0.08
New Zealand	122	0.05	79	49	58	22	33	0.70	0.16
Norway	273	−0.07	69	50	8	31	35	0.66	0.14
Pakistan	7	−0.06	14	70	50	55	50	0.86	0.71
Peru	15	0.64	16	87	42	64	25	0.73	0.13
Philippines	88	0.05	32	44	64	94	27	0.59	0.26
Poland	117	−0.09	60	93	64	68	38	0.81	0.17
Portugal	61	−0.08	27	104	31	63	28	0.64	0.07
Romania	4	−0.26	30	90	42	90	2	1.00	0.50
Russia	71	0.47	39	95	36	93	81	0.79	0.08
Singapore	484	−0.13	20	8	48	74	72	0.54	0.17
Slovenia	7	0.20	27	88	19	71	49	1.00	0.00
South Africa	378	0.25	65	49	63	49	34	0.66	0.21
South Korea	1,032	−0.37	18	85	39	60	100	0.44	0.36
Spain	257	0.03	51	86	42	57	48	0.72	0.12
Sweden	494	−0.03	71	29	5	31	53	0.68	0.23
Switzerland	202	−0.05	69	56	72	26	74	0.74	0.11
Taiwan	284	−0.08	17	69	45	58	93	0.67	0.54
Thailand	121	−0.02	20	64	34	64	32	0.73	0.17
Turkey	34	−0.10	37	85	45	66	46	0.71	0.35
United States	12,116	−0.04	91	46	62	40	26	0.71	0.24
Venezuela	4	2.35	12	76	73	81	16	0.75	0.25
Mean		0.12	74	51	59	0.68	0.22	0.68	0.22
Standard deviation		0.39	25	18	15	0.47	0.41	0.47	0.41
Min		−0.37	12	8	5	0.00	0.00	0.00	0.00
Max		2.35	91	112	95	1.00	1.00	1.00	1.00
Median		−0.00	46	70	50	60	47	1.00	0.00

Table 2: Descriptive Statistics (continued)

	Cross-Border	Hostile	Deal Size	Relative Size	Experience	Firm Size	Cash Flow	ROA
Argentina	0.28	0.00	3.80	0.10	0.28	14.05	0.042	0.007
Australia	0.40	0.00	2.72	10.91	0.72	11.34	0.001	−0.236
Austria	0.53	0.00	4.30	0.13	0.12	14.63	0.066	0.027
Belgium	0.49	0.01	4.29	0.14	0.28	14.05	0.051	−0.003
Brazil	0.54	0.00	4.72	0.14	0.86	14.76	0.060	0.042
Britain	0.62	0.00	2.92	1.34	0.65	12.32	0.008	−0.123
Bulgaria	0.00	0.00	2.74	0.01	0.00	14.12	0.178	0.043
Canada	0.32	0.00	2.94	3.34	0.67	12.03	−0.295	−0.151
Chile	0.24	0.00	4.47	0.16	0.63	14.06	0.062	0.056
China	0.26	0.00	3.24	1.12	0.93	13.04	0.043	0.057
Colombia	0.42	0.00	5.00	0.08	0.54	15.12	0.025	0.039
Croatia	0.20	0.00	3.42	0.22	0.60	12.70	−0.001	0.006
Czech	0.00	0.00	3.22	0.00	0.00	16.05	0.025	0.025
Denmark	0.36	0.00	4.16	0.14	0.33	13.99	0.047	0.030
Finland	0.51	0.00	3.52	0.22	0.42	12.93	0.075	0.041
France	0.48	0.01	4.96	0.16	0.38	14.75	0.047	0.010
Germany	0.38	0.00	4.49	0.24	0.37	14.39	0.027	−0.004
Greece	0.40	0.01	3.89	0.27	0.71	13.18	0.053	0.026
Hong Kong	0.50	0.00	3.57	0.50	0.49	13.36	0.005	−0.018
Hungary	0.52	0.00	3.77	0.07	0.35	14.01	0.071	0.052
India	0.24	0.00	3.12	0.38	0.52	12.48	0.053	0.077
Indonesia	0.27	0.02	3.80	0.46	0.86	13.18	0.059	0.030
Ireland	0.73	0.00	3.48	0.19	0.20	13.28	0.052	0.012
Israel	0.26	0.00	3.44	0.21	0.40	12.89	−0.001	−0.22
Italy	0.49	0.01	4.06	0.12	0.59	14.19	0.034	0.001
Japan	0.23	0.00	3.19	0.20	0.83	13.12	0.045	0.006
Luxemburg	0.39	0.05	5.31	0.18	0.02	15.02	0058	0.065
Malaysia	0.25	0.00	2.34	0.39	0.8ß	11.97	0.044	0.014
Malta	0.00	0.00	3.05	0.04	0.00	12.22	−0.046	−0.056
Mexico	0.44	0.01	5.36	0.16	0.51	15.21	0.098	0.057
Morocco	0.00	0.00	4.67	0.18	0.56	13.87	0.060	0.076
Netherlands	0.49	0.00	4.80	0.14	0.26	14.79	0.063	0.035
New Zealand	0.39	0.00	2.80	38.82	0.60	11.58	0.362	−0.684
Norway	0.51	0.00	3.39	0.21	0.47	12.92	0.068	0.039
Pakistan	0.00	0.00	3.43	0.08	0.00	13.21	0.035	0.087
Peru	0.00	0.00	3.77	0.16	0.60	13.47	0.129	0.074
Philippines	0.41	0.00	3.17	0.56	0.73	12.83	0.527	0.018
Poland	0.32	0.01	3.41	0.26	0.71	12.82	0.044	0.038
Portugal	0.59	0.00	4.32	0.22	0.54	14.32	0.040	0.021
Romania	0.00	0.00	3.30	0.11	0.00	12.70	0.067	0.132
Russia	0.68	0.00	5.24	0.16	0.65	15.58	0.139	0.089
Singapore	0.47	0.00	2.52	0.77	0.47	11.97	0.043	−0.011
Slovenia	0.00	0.01	4.26	0.06	0.14	14.41	0.054	0.039
South Africa	0.44	0.00	3.20	6.76	0.76	12.31	0.760	5E-05
South Korea	0.13	0.00	2.61	0.29	0.90	12.14	0.001	−0.076
Spain	0.63	0.00	4.83	0.13	0.45	14.95	0.065	0.030
Sweden	0.63	0.01	3.44	0.36	0.43	12.96	0.022	−0.032
Switzerland	0.31	0.00	5.10	0.16	0.18	14.64	0.077	0.023
Taiwan	0.35	0.00	3.77	0.19	0.76	13.44	0.066	0.043
Thailand	0.26	0.00	2.92	0.33	0.79	12.72	0.054	0.040
Turkey	0.06	0.00	3.84	0.16	0.79	13.22	0.064	0.045
United States	0.62	0.00	3.98	12.97	0.84	13.26	N/A	−0.638
Venezuela	0.50	0.00	3.66	0.07	0.50	14.01	0.019	−0.111
Mean	0.49	0.00	3.77	1.60	0.72	13.52	0.072	−0.152
Standard deviation	0.50	0.05	0.80	5.75	0.45	1.08	0.139	0.147
Min	0.00	0.00	2.34	0.00	0.00	11.34	−0.295	−0.684
Max	1.00	1.00	5.52	38.82	1.00	16.05	0.760	0.132
Median	0.00	0.00	3.66	0.19	1.00	13.28	0.052	0.026

This table presents means, medians, and standard deviations for the dependent variable, main independent cultural variables from Hofstede et al. (2010), deal-specific variables and acquirer-specific variables along with minimum and maximum values. Observations are at the country level. There are 32,856 domestic and cross-border acquisition deals observations from 53 countries over the period from 1983 to 2011, from Standard & Poor's Capital IQ database. In the table, *BHAR* refers to buy-and-hold abnormal return, *IDV* to individualism, *UAI* to uncertainty avoidance, *MAS* to masculinity, *PDI* to power distance index, *LTO* to long-term orientation, and *ROA* to return on assets. For the explanation of the variables see also Table 1.

Table 3: National Culture and Long-Term Performance: Multivariate OLS Regression Results

Independent Variables	Model 1		Model 2		Model 3	
	24 M	36 M	24 M	36M	24M	36M
Individualism	−0.0877***	−0.0954***	−0.1010***	−0.1071***	−0.1000***	−0.1072***
	(−8.48)	(−9.17)	(−9.48)	(−10.02)	(−9.13)	(−9.73)
Uncertainty Avoidance	−0.0231***	−0.0313***	−0.0336***	−0.0423***	−0.0212**	−0.0295***
	(−4.56)	(−6.36)	(−6.44)	(−8.42)	(−3.48)	(−4.93)
Masculinity	0.0144**	0.0222***	0.0141**	0.0205***	0.0246***	0.0336***
	(2.65)	(4.06)	(2.58)	(3.76)	(4.19)	(5.67)
Power Distance	0.0035	0.0018	−0.0061	−0.0083	−0.0015	−0.0031
	(0.47)	(0.23)	(−0.81)	(−1.07)	(−0.19)	(−0.38)
Long-Term Orientation	0.0065	0.0150*	−0.0116	−0.0036	−0.0240**	−0.0179*
	(0.85)	(1.98)	(−1.49)	(−0.47)	(−2.96)	(−2.23)
Synergy	0.0761***	0.0713***	0.0693***	0.0635***	0.0665***	0.0608***
	(12.78)	(12.20)	(11.87)	(11.09)	(11.37)	(10.61)
Method of Payment	−0.1634***	−0.1614***	−0.0980***	−0.0899***	−0.0980***	−0.0892***
	(−22.74)	(−23.43)	(−13.59)	(−13.16)	(−13.49)	(−12.96)
Cross-Border	−0.0254**	−0.0253**	−0.0350***	−0.0353***	−0.0456***	−0.0447***
	(−4.50)	(−4.54)	(−6.30)	(−6.44)	(−5.48)	(−5.53)
Hostile	0.0038	0.0013	0.0086*	0.0071*	0.0078*	0.0062*
	(0.99)	(0.43)	(2.16)	(2.26)	(1.96)	(1.98)
Deal Size	0.1331***	0.1579***	−0.1016***	−0.0946***	−0.0974***	−0.0899***
	(23.37)	(28.29)	(−10.97)	(−10.42)	(−10.51)	(−9.90)
Relative Size	−0.0308*	−0.0609***	0.0064	−0.0274+	0.0073	−0.0267+
	(−2.53)	(−4.18)	(0.58)	(−1.88)	(0.65)	(−1.81)
Experience			0.0586***	0.0574***	0.0611***	0.0595***
			(9.16)	(9.08)	(9.49)	(9.36)
Firm Size			0.2984***	0.3227***	0.3018***	0.3256***
			(26.89)	(29.50)	(26.84)	(29.38)
Cash Flow			0.0038	−0.0094	0.0039	−0.0094
			(0.48)	(−1.19)	(0.48)	(−1.18)
Return on Assets			0.0243*	0.0207*	0.0239**	0.0203*
			(2.30)	(2.17)	(2.23)	(2.12)
Anti-Self-Dealing					0.0166*	0.0162*
					(2.07)	(2.04)
Legal System					0.0494***	0.0561***
					(6.19)	(7.05)
Corporate Boards					0.0544***	0.0568***
					(6.91)	(8.10)
Corruption Control					0.0210**	0.0234**
					(3.06)	(3.47)
GDP per capita					−0.0127	−0.0116
					(−1.65)	(−1.52)
Same Religion					0.0023	0.0054
					(0.30)	(0.72)
Adjusted R²	0.0539	0.0644	0.1016	0.1166	0.1056	0.1209
No. of Observations	29,966	29,966	29,179	29,179	28,828	28,828
No. of Countries	53	53	53	53	53	53

This table reports standardized coefficients from a multivariate ordinary least squares (OLS) regression analysis. The dependent variable is *BHAR* for 24 months and 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. *Synergy* is binary and equal to 1 for intra-industry mergers and 0 otherwise. *Method of payment* is binary equal to 1 for stocks and 0 otherwise. *Cross-border* is binary equal to 1 for cross-border mergers and 0 otherwise. *Hostile* is binary equal to 1 for hostile mergers and 0 otherwise. *Deal size* is measured as the natural logarithm of transaction value. *Relative Size* is the ratio of the transaction value to the acquirer's size in terms of total assets. *Acquisition experience* of a firm is binary equal to 1 if the acquirer is among the top 20% firms under study which are the most active ones and 0 otherwise. *Firm size* is the natural logarithm of total assets. *Cash flow* is earnings before extraordinary items plus depreciation normalized by total assets. Firm size is measured at the beginning of the fiscal year; all other firm specific variables are at the year end (same as in Malmendier and Tate, 2008). *Anti-self-dealing*, *legal system*, *corporate boards*, and *corruption control* are country level governance factors. The *anti-self-dealing* index is used to measure the degree of legal protection for shareholders. *Legal system* identifies the legal origin of the bankruptcy law of a country. It is binary equal to 1 if legal origin is civil law and 0 if legal origin is common law. *Corporate boards* is a measure of management's accountability to investors and boards on a seven-point scale, 1=little accountability to 7=maximum accountability. *Corruption control* in a country is measured from −2.5 to 2.5, with higher values indicating better governance. *GDP per capita* is the gross domestic product per capita in current US dollars. *Same Religion* is a binary variable equal to 1 if both acquirer and target have the same religion and 0 otherwise. All the financial variables are reported in $ terms. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 4: Robustness Check: Controlling for Time Effects

Independent Variables	Pre-Crisis		Post-Crisis	
Individualism	−0.0785***	(−6.45)	−0.1489***	(−6.38)
Uncertainty Avoidance	−0.0298***	(−4.38)	−0.0353**	(−2.76)
Masculinity	0.0114+	(1.63)	0.1024***	(8.91)
Power Distance	0.0097	(1.06)	−0.0352*	(−2.15)
Long-Term Orientation	−0.0222*	(−2.48)	−0.0080	(−0.46)
Synergy	0.0638***	(9.51)	0.0566***	(5.19)
Method of Payment	−0.0883***	(−11.27)	−0.0796***	(−5.53)
Cross-Border	−0.0512***	(−5.42)	−0.0230	(−1.48)
Hostile	0.0076*	(2.11)	0.0038	(0.63)
Deal Size	−0.0909***	(−8.65)	−0.0836***	(−4.70)
Relative Size	−0.0240	(−1.40)	−0.0256***	(−1.03)
Experience	0.0768***	(10.43)	0.0105	(0.86)
Firm Size	0.3173***	(25.70)	0.3435***	(13.80)
Cash Flow	−0.0070	(−0.70)	−0.0091	(−0.51)
Return on Assets	0.0171	(1.48)	0.0678*	(2.02)
Anti-Self-Dealing	0.0107	(1.13)	0.0399*	(2.57)
Legal System	0.0557***	(5.90)	0.0567***	(3.54)
Corporate Boards	0.0581***	(6.92)	0.0620***	(3.66)
Corruption Control	0.0272**	(3.46)	0.0001	(0.00)
GDP per capita	−0.0179*	(−2.09)	0.0094	(0.55)
Same Religion	−0.0019	(−0.22)	0.0375*	(2.55)
Adjusted R²	0.1170		0.1476	
No. of Observations	21,182		7,646	
No. of Countries	52		52	

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. Data is split at the end of 2007 and our baseline regression is re-estimated for two sub-samples. Pre-crisis M&A deals comprise the time period from 1983 to 2007, while post-crisis M&A deals comprise the time period from 2008 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 5: Robustness Check: Using Original National Cultural Measures

Independent Variables	24 M		36 M	
Individualism	−0.0503+	(-1.73)	−0.0735**	(−2.61)
Uncertainty Avoidance	−0.0476***	(-4.05)	−0.0654***	(−5.57)
Masculinity	0.0046	(0.42)	0.0212*	(2.00)
Power Distance	−0.0236	(-0.95)	−0.0393	(−1.58)
Long-Term Orientation	0.0881*	(2.33)	0.0955*	(2.59)
Synergy	0.0706***	(10.86)	0.0640***	(10.07)
Method of Payment	−0.0970***	(-12.12)	−0.0878***	(−11.59)
Cross-Border	−0.0378***	(-4.00)	−0.0400***	(−4.36)
Hostile	0.0072	(1.62)	0.0068*	(2.07)
Deal Size	−0.1043***	(-10.19)	−0.0977***	(−9.74)
Relative Size	0.0093	(0.78)	−0.0262+	(−1.67)
Experience	0.0636***	(8.74)	0.0636***	(8.86)
Firm Size	0.3051***	(24.68)	0.3309***	(27.19)
Cash Flow	0.0042	(0.48)	−0.0096	(−1.08)
Return on Assets	0.0234*	(2.00)	0.0192+	(1.88)
Anti-Self-Dealing	0.0023	(0.22)	−0.0020	(−0.19)
Legal System	0.0301**	(2.89)	0.0329**	(3.11)
Corporate Boards	0.0688***	(6.63)	0.0682***	(6.89)
Corruption Control	0.0016+	(1.82)	0.0206*	(2.42)
GDP per capita	0.0016	(0.16)	0.0079	(0.79)
Same Religion	0.0022	(0.25)	0.0046	(0.54)
Adjusted R^2	0.1112		0.1293	
No. of Observations	23,355		23,355	
No. of Countries	37		37	

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *BHAR* for 24 months and 36 months. Main independent cultural variables have been taken from the Hofstede (2001) framework. Data is comprised of 23,355 M&A deals from 37 countries, over the period from 1983 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 6: Robustness Check: Controlling for Sample Composition

Independent Variables	Non-US	Non-US & Non-UK	Non-EU	G20	G8+5
Individualism	−0.0950***	−0.0484**	−0.1535***	−0.0712***	−0.1291***
	(−6.84)	(−3.26)	(−7.57)	(−4.26)	(−6.76)
Uncertainty Avoidance	−0.0368***	−0.0456***	−0.0450***	−0.0623***	−0.0563***
	(−4.26)	(−4.67)	(−5.88)	(−7.97)	(−6.83)
Masculinity	0.0632***	0.0702***	0.0541***	0.0439***	−0.0079
	(7.05)	(6.61)	(6.86)	(6.64)	(−0.88)
Power Distance	0.0094	0.0000	−0.0391**	0.0594***	−0.0099
	(0.82)	(0.00)	(−3.45)	(4.86)	(−0.61)
Long-Term Orientation	−0.0401***	−0.0189+	−0.0394**	−0.0159	0.02508
	(−4.05)	(−1.66)	(−2.99)	(−1.33)	(1.57)
Synergy	0.0675***	0.0704***	0.0626***	0.0642***	0.0570***
	(9.06)	(8.26)	(9.49)	(10.35)	(8.74)
Method of Payment	−0.0760***	−0.0748***	−0.0811***	−0.0850***	−0.0902***
	(−8.34)	(−7.42)	(−10.61)	(−11.46)	(−11.50)
Cross-Border	−0.0435***	−0.0635***	−0.0701***	−0.0394***	−0.0378***
	(−3.71)	(−4.48)	(−6.47)	(−4.37)	(−4.10)
Hostile	0.0065	0.0066	0.0055	0.0060+	0.0067*
	(1.44)	(1.23)	(1.53)	(1.80)	(2.09)
Deal Size	−0.0507***	−0.0488***	−0.0982***	−0.0965***	−0.0950***
	(−4.46)	(−3.85)	(−9.64)	(−9.74)	(−9.03)
Relative Size	−0.0114	−0.0171	−0.0280+	−0.0282+	−0.0279
	(−0.93)	(−1.39)	(−1.72)	(−1.85)	(−1.64)
Experience	0.0307***	0.0156+	0.0594***	0.0662***	0.0804***
	(3.93)	(1.83)	(8.09)	(9.50)	(10.85)
Firm Size	0.2613***	0.2627***	0.3369***	0.3307***	0.3283***
	(20.41)	(18.25)	(26.70)	(27.33)	(25.31)
Cash Flow	0.0032	−0.0009	−0.0119	−0.0118	−0.0165+
	(0.33)	(−0.11)	(−1.35)	(−1.45)	(−1.68)
Return on Assets	0.0108	0.0028	0.0207*	0.0209*	0.0245*
	(1.26)	(0.30)	(1.96)	(2.10)	(2.09)
Anti-Self-Dealing	0.0219*	0.0510***	0.0170*	−0.0017	−0.0239*
	(1.99)	(4.54)	(2.15)	(−0.19)	(−2.41)
Legal System	0.0849***	0.1029***	0.0574***	0.0297**	−0.0045
	(8.05)	(8.97)	(7.30)	(3.28)	(−0.43)
Corporate Boards	0.0665***	0.0698***	0.0563***	0.0519***	0.0253**
	(6.03)	(5.44)	(6.18)	(5.76)	(2.72)
Corruption Control	−0.0136	−0.0029	0.0431***	0.0419***	0.0326***
	(−1.54)	(−0.28)	(5.27)	(5.01)	(3.60)
GDP per capita	−0.0052	−0.0285*	−0.0195	0.0032	−0.0074
	(−0.48)	(−2.16)	(−2.09)	(0.36)	(−0.79)
Same Religion	0.0088	0.0002	−0.0054	0.0101	0.0112
	(0.84)	(0.01)	(−0.52)	(1.20)	(1.31)
Adjusted R^2	0.0896	0.0914	0.1310	0.1274	0.1314
No. of Observations	17,947	13,811	21,663	24,536	21,976
No. of Countries	52	51	30	19	13

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data comprise 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. Data is divided into five sub samples on the basis of countries initiating M&A deals and our baseline regression model is re-estimated for each of the sub samples. These sub samples comprise M&A deals from Non-US countries, Non-US and Non-UK countries, Non-EU Countries, G20 countries, and G8 plus 5 countries. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 7: Robustness Check: Controlling for Heterogeneity Using a Fixed Effects Approach

Independent Variables	Income	Industry	Region	Year	Combined
Individualism	−0.0955***	−0.0989***	−0.0871***	−0.0992***	−0.0844***
	(−7.98)	(−9.04)	(−6.77)	(−8.92)	(−6.39)
Uncertainty Avoidance	−0.0194**	−0.0230***	−0.0198**	−0.0267***	−0.0117+
	(−2.94)	(−3.83)	(−3.12)	(−4.44)	(−1.70)
Masculinity	0.0252***	0.0310***	0.0296***	0.0297***	0.0221***
	(4.21)	(5.26)	(4.75)	(5.04)	(3.53)
Power Distance	−0.0126	−0.0026	−0.0096	−0.0052	−0.0156+
	(−1.53)	(−0.33)	(−1.13)	(−0.64)	(−1.74)
Long-Term Orientation	−0.0065	−0.0144+	−0.0092	−0.0126	−0.0011
	(−0.76)	(−1.80)	(−1.05)	(−1.58)	(−0.12)
Synergy	0.0599***	0.0604***	0.0602***	0.0568***	0.0563***
	(10.47)	(10.33)	(10.50)	(10.00)	(9.71)
Method of Payment	−0.0889***	−0.0857***	−0.0914***	−0.0924***	−0.0909***
	(−12.94)	(−12.37)	(−13.24)	(−13.24)	(−12.89)
Cross-Border	−0.0409***	−0.0481***	−0.0406***	−0.0439***	−0.0426***
	(−5.06)	(−5.99)	(−5.01)	(−5.45)	(−5.26)
Hostile	0.0061+	0.0046	0.0064*	0.0058+	0.0038
	(1.95)	(1.49)	(2.02)	(1.86)	(1.25)
Deal Size	−0.0898***	−0.0884***	−0.0902***	−0.0757***	−0.0719***
	(−9.73)	(−9.56)	(−9.91)	(−8.30)	(−7.76)
Relative Size	−0.0267+	−0.0274+	−0.0267+	−0.0267+	−0.0272*
	(−1.81)	(−1.88)	(−1.81)	(−1.86)	(−1.91)
Experience	0.0622***	0.0648***	0.0616***	0.0598***	0.0676***
	(9.73)	(9.98)	(9.67)	(9.54)	(10.55)
Firm Size	0.3264***	0.3189***	0.3258***	0.3170***	0.3096***
	(29.47)	(27.04)	(29.39)	(28.54)	(26.22)
Cash Flow	−0.0094	−0.0106	−0.0093	−0.0067	−0.0079
	(−1.18)	(−1.32)	(−1.17)	(−0.84)	(−0.97)
Return on Assets	0.0204*	0.0213*	0.0203*	0.0200*	0.0210*
	(2.12)	(2.25)	(2.12)	(2.02)	(2.14)
Anti-Self-Dealing	0.0148+	0.0179*	0.0366***	0.0169*	0.0262*
	(1.85)	(2.27)	(3.99)	(2.15)	(2.76)
Legal System	0.0363***	0.0562***	0.0876***	0.0539***	0.0526***
	(4.47)	(7.07)	(8.67)	(6.79)	(4.60)
Corporate Boards	0.0557***	0.0553***	0.0649***	0.0601***	0.0564***
	(7.08)	(7.33)	(7.80)	(7.99)	(6.64)
Corruption Control	0.0326***	0.0167*	0.0288**	0.0258***	0.0214*
	(4.77)	(2.48)	(3.39)	(3.85)	(2.46)
GDP per capita	0.0285	−0.0063	−0.0088	−0.0110	0.0256*
	(2.77)	(−0.83)	(−0.95)	(−1.44)	(2.34)
Same Religion	0.0077	0.0070	0.0092	0.0049	0.0094
	(1.03)	(0.94)	(1.22)	(0.65)	(1.25)
Adjusted R²	0.1225	0.1318	0.1220	0.1353	0.1481
No. of Observations	28, 828	28,818	28,828	28,828	28,818
No. of Countries	53	53	53	53	53

This table reports standardized coefficients from fixed effects regression analyses. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. A fixed effects approach is employed to address unobserved heterogeneities with five possibilities: income fixed effects, industry fixed effects, region fixed effects, year fixed effects and, finally, combined fixed effects. *Income fixed effects* refer to time-invariant heterogeneities among M&A deals from different income groups in target nations (i.e., high income, upper middle income, lower middle income and low income groups). *Industry fixed effects* refer to time-invariant heterogeneities among M&A deals from different industries in target nations (i.e., financial, technical, industrial, energy, utilities, basic materials, communications, consumer (cyclical), consumer (non-cyclical), and miscellaneous). *Region fixed effects* refer to time-invariant heterogeneities among M&A deals from different geographical areas of target nations (i.e., Europe & Central Asia, North America, East Asia & Pacific, Latin America & Caribbean, Sub-Saharan Africa, South Asia, and Middle East & North Africa). *Year fixed effects* refer to time-invariant heterogeneities among M&A deals occurring in different years from 1983 to 2011. Finally, *combined fixed effects* controls for a multitude of income, industry, region and year fixed effects at a time. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 8: Robustness Check: Controlling for Heteroscedasticity Using Weighted Least Squares

Independent Variables	Income	Industry	Region	Year
Individualism	−0.1303***	−0.1063***	−0.1074***	−0.1072***
	(−10.00)	(−9.06)	(−7.66)	(−9.73)
Uncertainty Avoidance	−0.0483***	−0.0414***	−0.0450***	−0.0295***
	(−7.06)	(−6.37)	(−6.39)	(−4.93)
Masculinity	0.0373***	0.0369***	0.0444***	0.0336***
	(6.31)	(5.66)	(6.57)	(5.68)
Power Distance	−0.0055	−0.0105	0.0032	−0.0031
	(−0.55)	(−1.25)	(0.31)	(−0.38)
Long-Term Orientation	−0.0113	−0.0114	−0.0152	−0.0178*
	(−1.37)	(−1.29)	(−1.57)	(−2.23)
Synergy	0.0619***	0.0694***	0.0682***	0.0607***
	(10.47)	(10.66)	(10.93)	(10.60)
Method of Payment	−0.0826***	−0.0826***	−0.0826***	−0.0892***
	(−11.83)	(−11.38)	(−11.15)	(−12.96)
Cross-Border	−0.0405***	−0.0433***	−0.0340***	−0.0446***
	(−4.80)	(−5.17)	(−4.16)	(−5.52)
Hostile	0.0049	0.0009	0.0044	0.0062*
	(1.19)	(0.24)	(1.05)	(1.98)
Deal Size	−0.0752***	−0.0885***	−0.0831***	−0.0899***
	(−7.88)	(−9.01)	(−8.53)	(−9.89)
Relative Size	−0.0308*	−0.0147	−0.0289*	−0.0268+
	(−2.19)	(−0.92)	(−2.05)	(−1.82)
Experience	0.0584***	0.0637***	0.0543***	0.0594***
	(9.17)	(9.14)	(8.17)	(9.35)
Firm Size	0.3106***	0.3191***	0.3215***	0.3256***
	(26.15)	(26.88)	(26.33)	(29.38)
Cash Flow	−0.0091	−0.0006	−0.0075	−0.0094
	(−1.24)	(−0.05)	(−0.97)	(−1.18)
Return on Assets	0.0207*	0.0177	0.0196*	0.0203*
	(2.32)	(1.44)	(2.16)	(2.12)
Anti-Self-Dealing	0.0103	0.0144+	0.0061	0.01619
	(1.17)	(1.66)	(0.77)	(2.04)
Legal System	0.0575***	0.0580***	0.0519***	0.0561***
	(6.44)	(6.34)	(6.54)	(7.05)
Corporate Boards	0.0560***	0.0580***	0.0615***	0.0613***
	(6.12)	(6.87)	(6.27)	(8.10)
Corruption Control	0.0259***	0.0128+	0.0327***	0.0233**
	(3.85)	(1.75)	(4.51)	(3.46)
GDP per capita	−0.0102	−0.0018	−0.0204*	−0.0116
	(−1.01)	(−0.23)	(−1.99)	(−1.52)
Same Religion	0.0114	0.0089	0.0166*	0.0055
	(1.39)	(1.12)	(2.04)	(0.73)
Adjusted R^2	0.1210	0.1141	0.1243	0.1209
No. of Observations	28,828	28,818	28,828	28,828
No. of Countries	53	53	53	53

This table reports standardized coefficients from weighted least squares regression analyses. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. The weights are defined on the basis of *income* group, *industry* sector, geographic *region*, and *year* of acquisition. For the explanation of the variables see also Tables 1 and 7. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 9: Robustness Check: Controlling for Noise on the Country Level Using Country-Clustering

Independent Variables	Income	Industry	Region	Year
Individualism	−0.0058**	−0.0049**	−0.0048**	−0.0053**
	(−3.31)	(−3.08)	(−2.75)	(−3.29)
Uncertainty Avoidance	−0.0030*	−0.0026*	−0.0027*	−0.0018
	(−2.52)	(−2.06)	(−2.09)	(−1.57)
Masculinity	0.0032*	0.0030+	0.0039*	0.0029+
	(1.98)	(1.96)	(2.26)	(1.85)
Power Distance	−0.0008	−0.0014	−0.0005	−0.0008
	(−0.52)	(−1.00)	(−0.34)	(−0.56)
Long-Term Orientation	−0.0004	−0.0004	−0.0004	−0.0007
	(−0.31)	(−0.36)	(−0.37)	(−0.66)
Synergy	0.1726***	0.1916***	0.1940***	0.1747***
	(7.69)	(8.00)	(8.10)	(9.34)
Method of Payment	−0.2767***	−0.2700***	−0.2730***	−0.3034***
	(−4.47)	(−6.67)	(−5.06)	(−5.77)
Cross-Border	−0.1225*	−0.1251	−0.1099	−0.1361+
	(−1.76)	(−1.61)	(−1.49)	(−1.75)
Hostile	0.1264	0.0282	0.1192	0.1572**
	(1.59)	(0.47)	(1.58)	(3.26)
Deal Size	−0.0493*	−0.0567*	−0.0557*	−0.0604**
	(−2.05)	(−2.63)	(−2.59)	(−2.91)
Relative Size	−0.0002***	−0.0001**	−0.0002***	−0.0001***
	(−5.83)	(−3.20)	(−5.09)	(−5.67)
Experience	0.1562**	0.1656**	0.1512*	0.1634*
	(2.74)	(2.84)	(2.19)	(2.56)
Firm Size	0.1677***	0.1680***	0.1764***	0.1797***
	(4.33)	(5.13)	(4.86)	(5.21)
Cash Flow	−0.0017+	−0.0001	−0.0014	−0.0018
	(−1.80)	(−0.11)	(−1.25)	(−1.55)
Return on Assets	0.0024***	0.0015***	0.0022***	0.0022***
	(4.52)	(4.91)	(3.96)	(5.23)
Anti-Self-Dealing	0.0590	0.0680	0.0651	0.0942
	(0.51)	(0.53)	(0.56)	(0.77)
Legal System	0.1602+	0.1624+	0.1742*	0.1668*
	(1.88)	(1.96)	(2.15)	(2.02)
Corporate Boards	0.1943***	0.2196***	0.2258**	0.2368***
	(3.21)	(3.95)	(3.29)	(4.43)
Corruption Control	0.0284+	0.0127	0.0342*	0.0245+
	(1.84)	(0.94)	(2.14)	(1.66)
GDP per capita	−0.0510+	−0.0497	−0.0701*	−0.0676*
	(−1.90)	(−1.53)	(−2.52)	(−2.40)
Same Religion	0.0433	0.0320	0.0669+	0.0214
	(1.28)	(0.64)	(1.67)	(0.49)
Adjusted R²	0.1214	0.1144	0.1252	0.1214
No. of Observations	28,828	28,818	28,828	28,828
No. of Countries	53	53	53	53

This table reports standardized coefficients from weighted least squares regression analyses with robust standard errors clustered on the country level. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. The weights are defined on the basis of *income* group, *industry* sector, *geographic region*, and *year* of acquisition, while the standard errors are clustered on the country level in each case. For the explanation of the variables see also Tables 1 and 7. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 10: Robustness Check: Controlling for Noise at the Country Level Using Country Averages

Independent Variables	WLS	
Individualism	−0.2044**	(−2.66)
Uncertainty Avoidance	−0.0202	(−0.33)
Masculinity	0.1205*	(2.42)
Power Distance	−0.1051+	(−1.76)
Long-Term Orientation	−0.1346**	(−2.75)
Synergy	0.1399*	(2.07)
Method of Payment	−0.1178+	(−1.87)
Cross-Border	0.0149	(0.17)
Hostile	−0.0456	(−1.32)
Deal Size	0.0343	(0.64)
Relative Size	0.0554	(1.40)
Experience	0.1708**	(2.86)
Firm Size	0.1467*	(2.23)
Cash Flow	−0.0213	(−1.17)
Return on Assets	0.1238*	(2.18)
Anti-Self-Dealing	0.1068	(1.48)
Legal System	0.2104**	(3.04)
Corporate Boards	0.1544+	(1.91)
Corruption Control	0.0295	(0.60)
GDP per capita	−0.2062*	(−2.35)
Same Religion	−0.0122	(−0.16)
Adjusted R^2	0.1953	
No. of Observations	679	
No. of Countries	53	

This table reports standardized coefficients from a multivariate weighted least squares regression analysis. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 679 observations in the form of average firm-specific values for each country (and year) from 53 countries over a time period from 1983 to 2011. Results for WLS are reported below, where weights are defined on the country level. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 11: Robustness Check: Controlling for Endogeneity using an Instrumental Variables Analysis

Independent Variables	Model 1	Model 2	Model 3	Model 4	Model 5
Individualism	−0.0035***	−0.0054***	−0.0067***	−0.0059***	−0.0073***
	(−4.19)	(−6.75)	(−10.78)	(−9.64)	(−8.52)
Uncertainty Avoidance	−0.0012**	−0.0019***	−0.0059***	−0.0025**	−0.0027***
	(−3.16)	(−4.06)	(−6.65)	(−3.34)	(−5.44)
Masculinity	0.0015***	0.0030***	0.0038***	0.0031***	0.0059***
	(3.26)	(5.19)	(7.04)	(5.82)	(4.13)
Power Distance	0.0005	−0.0009	−0.0006	−0.0003	−0.0012
	(0.63)	(−1.16)	(−0.91)	(−0.42)	(−1.56)
Long-Term Orientation	−0.0008	−0.0008	−0.0007	−0.0010*	−0.0019**
	(−1.50)	(−1.47)	(−1.42)	(−2.14)	(−3.06)
Synergy	0.1477***	0.1756***	0.1778***	0.1761***	0.1749***
	(11.35)	(10.58)	(10.71)	(10.61)	(10.53)
Method of Payment	−0.2540***	−0.3039***	−0.3002***	−0.3016***	−0.2991***
	(−13.45)	(−13.04)	(−12.89)	(−12.95)	(−12.85)
Cross-Border	−0.1077***	−0.1399***	−0.1432***	−0.1361***	−0.1242***
	(−5.55)	(−5.69)	(−5.81)	(−5.54)	(−4.96)
Hostile	0.1496*	0.1581+	0.1483+	0.1538*	0.1505+
	(1.97)	(1.99)	(1.89)	(1.98)	(1.93)
Deal Size	−0.0509***	−0.0606***	−0.0603***	−0.0609***	−0.0599***
	(−10.53)	(−9.83)	(−9.78)	(−9.89)	(−9.72)
Relative Size	0.0003	−0.0002+	−0.0001+	−0.0002+	−0.0001+
	(0.65)	(−1.81)	(−1.79)	(−1.81)	(−1.83)
Experience	0.1254***	0.1639***	0.1532***	0.1603***	0.1613***
	(9.32)	(9.49)	(8.86)	(9.32)	(9.38)
Firm Size	0.1281***	0.1798***	0.1818***	0.1799***	0.1792***
	(26.82)	(29.43)	(29.65)	(29.42)	(29.28)
Cash Flow	0.0006	−0.0017	−0.0017	−0.0017	−0.0018
	(0.49)	(−1.20)	(−1.17)	(−1.18)	(−1.19)
Return on Assets	0.0020*	0.0022*	0.0022*	0.0022*	0.0023*
	(2.23)	(2.12)	(2.10)	(2.12)	(2.14)
Anti-Self-Dealing	0.0904*	0.0921+	−0.0962	0.1001	0.0982+
	(2.07)	(1.69)	(−1.28)	(1.47)	(1.72)
Legal System	0.1256***	0.1669***	0.1261***	0.1817***	0.2083***
	(6.19)	(6.44)	(4.02)	(6.17)	(7.40)
Corporate Boards	0.1450***	0.2376***	0.1841***	0.2099***	0.2200***
	(6.94)	(9.27)	(6.76)	(7.79)	(8.41)
Corruption Control	0.0170**	0.0245***	0.0355***	0.0251**	0.0233**
	(3.10)	(3.49)	(4.63)	(3.41)	(3.33)
GDP per capita	−8.88e-07+	−8.55e-07	−6.14e-07	−9.102-07	−7.49e-07
	(−1.88)	(−1.39)	(−1.00)	(−1.49)	(−1.21)
Same Religion	0.0049	0.0172	0.0126	0.0196	0.0282
	(0.23)	(0.63)	(0.45)	(0.71)	(1.02)
Adjusted R²	0.1056	0.1215	0.1197	0.1209	0.1202
No. of Observations	28,828	28,785	28,785	28,828	28,828
No. of Countries	53	53	53	53	53

This table reports coefficients from two-stage least squares regression analyses. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. In Models 1 and 2, *genetic distance* and *pronoun drop* are used as instruments for *individualism* (Gorodnichenko and Roland, 2011; Kashima and Kashima, 1998). In Models 3 and 4, *multiple second-person pronouns* and *religion* are used as instruments for *uncertainty avoidance* (Kashima and Kashima, 1998; El Ghoul and Zheng., 2016). Finally, in Model 5, *genetic distance* is used as an instrument for *masculinity* (El Ghoul and Zheng, 2016). For the explanation of the variables see also Table 1. The z-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 12: Evidence on Entrenchment: National Culture and Firm Risk (Beta)

Independent Variables	Beta Before Acquisition		Beta After Acquisition	
Individualism	−0.0116***	(−3.79)	−0.0379***	(−6.92)
Uncertainty Avoidance	0.0048+	(1.66)	−0.0062***	(−3.55)
Masculinity	0.0018	(0.95)	−0.0045**	(−3.34)
Power Distance	0.0024	(1.10)	0.0260***	(10.08)
Long-Term Orientation	−0.0087+	(−1.77)	−0.0446***	(−14.89)
Synergy	0.0076	(1.39)	−0.0132	(−1.54)
Method of Payment	−0.0000	(−0.00)	0.0258*	(2.25)
Cross-Border	0.0018	(0.67)	0.0054**	(2.83)
Hostile	−0.0006	(−1.09)	0.0005	(0.43)
Deal Size	0.0249	(1.49)	0.0122	(1.49)
Relative Size	−0.5714+	(−1.79)	−0.0022+	(−1.65)
Experience	−0.0104+	(−1.78)	0.0120*	(2.42)
Firm Size	−0.0250	(−1.01)	0.0536***	(11.23)
Cash Flow	−0.2569+	(−1.82)	−0.0029*	(−1.99)
Return on Assets	0.1513+	(1.83)	0.0006	(0.41)
Anti-Self-Dealing	0.0008	(0.31)	−0.0139***	(−7.43)
Legal System	−0.0009	(−0.24)	−0.0139***	(−6.76)
Corporate Boards	0.0089	(0.91).	−0.0102***	(−4.66)
Corruption Control	−0.0089	(−1.64)	0.0061	(−0.84)
GDP per capita	−0.0018	(−0.38)	0.0105**	(3.30)
Same Religion	0.0024	(0.48)	−0.0016	(−1.01)
Adjusted R²	0.2877		0.0075	
No. of Observations	28,775		28,806	
No. of Countries	53		53	

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *beta* of the acquiring firm before and after the acquisition. The computation of beta is based on 3-year data on returns with daily frequency. Beta before acquisition is based on 3-year daily return data prior to the acquisition date, while beta after acquisition is based on 3-year daily return data from the acquisition date onwards. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 13: Evidence on Empire Building: National Culture and Relative (Deal) Size

Independent Variables	Model 1	Model 2	Model 3	Model 4
Individualism	0.0042 (1.14)	0.0082* (2.00)	−0.0062+ (−1.66)	−0.0054 (−1.29)
Uncertainty Avoidance	0.0011 (1.26)	−0.0017 (−1.55)	−0.0099** (3.03)	0.0108** (3.08)
Masculinity	0.0047*** (4.05)	0.0047*** (3.86)	0.0058*** (6.36)	0.0080*** (3.81)
Power Distance	0.0006 (0.22)	0.0026 (0.93)	0.0040 (1.23)	−0.0003 (−0.09)
Long-Term Orientation	−0.0171*** (−3.96)	−0.0154*** (−3.96)	−0.0022 (−0.90)	−0.0006 (−0.17)
Synergy		−0.0099 (−1.48)	−0.0049 (−0.91)	−0.0051 (−0.94)
Method of Payment		0.0455*** (3.99)	−0.0057* (−2.18)	−0.0055* (−2.07)
Cross-Border		−0.0005 (−0.18)	0.0002 (0.07)	0.0022 (1.31)
Hostile		−0.0007 (−1.55)	−0.0040** (−3.12)	−0.0034** (−2.98)
Deal Size		−0.0029 (−0.92)	0.1405*** (3.70)	0.1401*** (3.71)
Experience			0.0292** (2.66)	0.0289** (2.65)
Firm Size			−0.1940*** (−3.68)	−0.1983*** (−3.68)
Cash Flow			−0.4056*** (−3.99)	−0.4054*** (−3.99)
Return on Assets			0.0427 (0.28)	0.0430 (0.28)
Anti-Self-Dealing				0.0022 (0.59)
Legal System				0.0106** (3.21)
Corporate Boards				−0.0057 (−1.16)
Corruption Control				−0.0169* (−2.59)
GDP per capita				0.0006 (0.10)
Same Religion				0.0012 (0.42)
Adjusted R²	0.0004	0.0025	0.1727	0.1734
No. of Observations	29,966	29,966	29,179	28,828
No. of Countries	53	53	53	53

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *relative size*. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 14: National Culture and Announcement Effect: Multivariate Regression Results

Independent Variables	CAR (−1, +1)	CAR (−2, +2)	CAR (0, +1)	CAR (0, +2)
Individualism	0.0140*	0.0152*	0.0115	0.0054
	(2.03)	(2.17)	(1.44)	(0.68)
Uncertainty Avoidance	0.0252***	0.0216**	0.0086+	0.0125
	(3.54)	(3.20)	(1.78)	(2.56)
Masculinity	0.0007	−0.0025	0.0049	0.0063
	(0.26)	(−0.85)	(1.23)	(1.61)
Power Distance	−0.0024	−0.0002	−0.0003	−0.0033
	(−0.53)	(−0.27)	(−0.05)	(−0.63)
Long-Term Orientation	−0.0195*	−0.0175*	−0.0086	−0.0129
	(−2.46)	(−2.29)	(−1.46)	(−2.19)
Synergy	−0.0042	−0.0054	0.0109*	0.0088
	(−0.60)	(−0.78)	(1.95)	(1.57)
Method of Payment	0.0251*	0.0299**	0.0103***	0.0092
	(2.18)	(2.68)	(1.23)	(1.07)
Cross-Border	0.0248	0.0231	−0.0050	−0.0027
	(1.11)	(1.11)	(−0.94)	(−0.52)
Hostile	−0.0013	−0.0009	0.0016	0.0009
	(−0.93)	(−0.64)	(0.86)	(0.48)
Deal Size	0.0425***	0.0468***	0.0295**	0.0278**
	(4.44)	(4.81)	(2.80)	(2.86)
Relative Size	−0.0153	−0.0022	−0.0364*	−0.0412*
	(−1.10)	(−0.22)	(−2.26)	(−2.33)
Experience	−0.0030	−0.0038	0.0044	0.0022
	(−0.65)	(−0.83)	(0.84)	(0.40)
Firm Size	−0.1441***	−0.1593***	−0.1011***	−0.0943***
	(−9.76)	(−10.56)	(−6.03)	(−6.02)
Cash Flow	0.0004	0.0121*	−0.0124	−0.0241+
	(0.56)	(2.02)	(−1.12)	(−1.83)
Return on Assets	0.0028	−0.0144+	0.0128	0.0248**
	(0.34)	(−1.76)	(1.07)	(2.67)
Anti-Self-Dealing	0.0183	0.0141	−0.0039	−0.0037
	(1.47)	(1.19)	(−0.56)	(−0.52)
Legal System	0.0184**	0.0149**	0.0055	0.0028
	(3.25)	(2.60)	(0.83)	(0.42)
Corporate Boards	−0.0072	−0.0131*	0.0033	0.0047
	(−1.35)	(−2.37)	(0.48)	(0.70)
Corruption Control	−0.0104+	−0.0128*	−0.0147*	−0.0097
	(−1.88)	(−2.24)	(−2.00)	(−1.32)
GDP per capita	0.0021	0.0024	0.0010	−0.0001
	(0.39)	(0.43)	(0.14)	(−0.01)
Same Religion	0.0085	0.0043	−0.0058	0.0003
	(0.53)	(0.28)	(−1.12)	(0.06)
Adjusted R^2	0.0156	0.0197	0.0075	0.0078
No. of Observations	28,776	28,776	28,783	28,783
No. of Countries	53	53	53	53

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is cumulative abnormal return (*CAR*) for the 3-day (−1, +1) and the 5-day (−2, +2) time windows around the announcement of the takeover (same as in Frijns et al., 2013) and for the 2-day (0, +1) and the 3-day (0, +2) time windows after the takeover announcement has been made. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 15: National Culture and Medium-Term Performance: Multivariate Regression Results

Independent Variables	30-day	60-day	90-day	360-day
Individualism	−0.0005	−0.0152	−0.0215+	−0.067***
	(−0.04)	(−1.28)	(−1.85)	(−5.77)
Uncertainty Avoidance	0.0039	0.0084	0.0029	0.0074
	(0.57)	(1.16)	(0.40)	(1.11)
Masculinity	0.0056	0.0149*	0.0189**	0.0296***
	(0.98)	(2.44)	(3.15)	(4.89)
Power Distance	−0.0056	−0.0169+	−0.0101	−0.0153+
	(−0.71)	(−1.92)	(−1.23)	(−1.87)
Long-Term Orientation	−0.0003	−0.0079	−0.0165+	−0.0186*
	(−0.04)	(−0.92)	(−1.92)	(−2.16)
Synergy	0.0196***	0.0342***	0.0392***	0.0687***
	(3.18)	(5.48)	(6.36)	(11.30)
Method of Payment	−0.0288***	−0.0463***	−0.0584***	−0.0933***
	(−3.56)	(−5.73)	(−7.45)	(−12.50)
Cross-Border	−0.0115	−0.0154+	−0.0180*	−0.0383
	(−1.51)	(−1.93)	(−2.28)	(−4.52)
Hostile	0.0037	0.0058	0.0055	0.0101**
	(1.19)	(1.29)	(1.22)	(2.77)
Deal Size	−0.0081	−0.0103	−0.0218*	−0.0899***
	(−0.75)	(−1.00)	(−2.17)	(−9.42)
Relative Size	−0.0545*	−0.0438+	−0.0428*	0.0014
	(−2.00)	(−1.89)	(−2.38)	(0.09)
Experience	0.0207***	0.0224***	0.0304***	0.0509***
	(3.23)	(3.38)	(4.58)	(8.97)
Firm Size	0.0377**	0.0547***	0.0904***	0.2295***
	(2.60)	(4.13)	(7.16)	(20.17)
Cash Flow	−0.0161	−0.0047	−0.0068	−0.0018
	(−1.08)	(−0.27)	(−0.32)	(−0.13)
Return on Assets	0.0053	0.0084	0.0363+	0.0174
	(0.33)	(0.55)	(1.89)	(1.44)
Anti-Self-Dealing	−0.0038	−0.0005	0.0019	0.0203*
	(−0.43)	(−0.27)	(0.23)	(2.46)
Legal System	0.0074	0.0085	0.0216*	0.0512***
	(0.84)	(0.95)	(2.68)	(6.25)
Corporate Boards	0.0214**	0.0278***	0.0351***	0.0737***
	(2.60)	(3.35)	(4.26)	(9.22)
Corruption Control	0.0007	0.0139+	0.0201**	0.0159*
	(0.09)	(1.84)	(2.68)	(2.20)
GDP per capita	−0.0219*	−0.0405***	−0.0426***	−0.0499***
	(−2.48)	(−4.47)	(−4.86)	(−6.04)
Same Religion	0.0105	0.0072	0.0062	0.0015
	(1.38)	(0.91)	(0.80)	(0.18)
Adjusted R^2	0.0075	0.0078	0.0156	0.0710
No. of Observations	28,783	28,783	28,776	28,588
No. of Countries	53	53	53	53

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *BHAR* for 30-, 60-, 90-, and 360-day time windows. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 16: Controlling for the Nature of the Deal: Domestic or Cross-Border

Independent Variables	Domestic Deals		Cross-Border Deals	
Individualism	−0.1102***	(−6.96)	−0.0773***	(−4.83)
Uncertainty Avoidance	−0.0413***	(−4.08)	−0.0183+	(−1.90)
Masculinity	0.0632***	(7.83)	−0.0020	(−0.20)
Power Distance	−0.0053	(−0.51)	−0.0246	(−1.75)
Long-Term Orientation	−0.0458***	(−3.95)	0.0036	(0.30)
Synergy	0.0598***	(8.86)	0.0572***	(5.28)
Method of Payment	−0.08334***	(−10.97)	−0.1157***	(−7.28)
Hostile	0.0094**	(2.74)	−0.0000	(−0.00)
Deal Size	−0.0865***	(−8.36)	−0.0879***	(−4.84)
Relative Size	−0.0264	(−1.47)	−0.0349*	(−2.19)
Experience	0.0571***	(7.70)	0.0839***	(6.75)
Firm Size	0.3252***	(25.39)	0.2927***	(13.75)
Cash Flow	−0.0084	(−1.25)	0.0003	(0.01)
Return on Assets	0.0096	(0.53)	0.0219	(0.38)
Anti-Self-Dealing	−0.0065	(−0.67)	−0.0060	(−0.33)
Legal System	0.0716***	(8.67)	0.0009	(0.04)
Corporate Boards	0.0704***	(7.57)	0.0418**	(2.97)
Corruption Control	0.0483***	(5.28)	0.0102	(0.84)
GDP per capita	−0.0393***	(−4.06)	−0.0144	(−1.08)
Same Religion	0.0039	(1.21)	0.0054	(0.48)
Adjusted R^2	0.1255		0.1226	
No. of Observations	21,035		7,793	
No. of Countries	51		46	

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is *BHAR* for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. Data is divided into two subgroups depending on the nature of the deal, i.e. domestic versus cross-border. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

Table 17: Globalization and Long-term Takeover Performance

Independent Variables	Small size	Large size	Low GI	High GI
Individualism	−0.1482***	−0.0672***	−0.1113***	−0.0566***
	(−7.45)	(−4.66)	(−4.22)	(−3.89)
Uncertainty Avoidance	−0.0263**	−0.0166*	−0.0607***	−0.0008
	(−2.76)	(−1.95)	(−5.51)	(−0.08)
Masculinity	0.0490***	0.0167*	0.0686***	0.0067
	(5.16)	(2.04)	(7.65)	(0.63)
Power Distance	−0.0182	−0.0020	0.0310+	−0.0031
	(−1.29)	(−0.20)	(1.84)	(−0.23)
Long-Term Orientation	−0.0406**	0.0032	−0.0163	−0.0265**
	(−3.04)	(0.28)	(−1.04)	(−2.73)
Synergy	0.0709***	0.0387***	0.0565***	0.0602***
	(8.92)	(4.65)	(7.50)	(6.77)
Method of Payment	−0.0781***	−0.0326***	−0.0860***	−0.0967***
	(−8.11)	(−3.21)	(−9.95)	(−8.68)
Cross-Border	−0.0463***	−0.0309*	−0.0506***	−0.0361**
	(−3.76)	(−2.50)	(−3.87)	(−2.59)
Hostile	0.0049	0.0131*	0.0077*	0.0062
	(0.91)	(2.51)	(1.96)	(1.19)
Deal Size	−0.0558***	−0.0808***	−0.1081***	−0.0437**
	(−5.98)	(−6.67)	(−9.40)	(−3.15)
Relative Size	−0.0189	−0.0214**	−0.0249	−0.0172
	(−1.05)	(−2.80)	(−1.32)	(−1.29)
Experience	0.0533***	0.0474***	0.0769***	0.0502***
	(6.40)	(4.85)	(8.82)	(5.32)
Firm Size	0.2418***	0.1043***	0.3523***	0.2609***
	(19.45)	(9.21)	(24.47)	(16.95)
Cash Flow	−0.0142	0.1583	−0.0162	0.0048
	(−1.41)	(11.68)	(−1.25)	(0.38)
Return on Assets	0.0161	0.1205***	0.0212	0.0102
	(1.32)	(4.01)	(1.43)	(1.07)
Anti-Self-Dealing	0.0241*	0.0122	0.0021	−0.0196
	(2.10)	(1.04)	(0.23)	(−1.08)
Legal System	0.0753***	0.0344**	0.0338***	0.0031
	(7.48)	(2.77)	(3.47)	(0.17)
Corporate Boards	0.0784***	0.0165	0.0401***	0.0504***
	(7.33)	(1.62)	(4.15)	(3.97)
Corruption Control	0.0587***	−0.0238*	0.0168+	0.0096
	(6.04)	(−2.50)	(1.72)	(0.89)
GDP per capita	−0.0209	−0.0030	−0.0213+	−0.0198+
	(−1.96)	(−0.27)	(−1.78)	(−1.70)
Same Religion	0.0001	0.0087	0.0143	0.0026
	(0.01)	(0.78)	(1.26)	(0.22)
Adjusted R²	0.1183	0.0675	0.1500	0.0883
No. of Observations	14,417	14,411	16,299	12,529
No. of Countries	50	53	20	31

This table reports standardized coefficients from a multivariate OLS regression analysis. The dependent variable is BHAR for 36 months. Main independent cultural variables have been taken from the Hofstede et al. (2010) framework. Data is comprised of 32,856 M&A deals from 53 countries, over the period from 1983 to 2011. Data is divided into subgroups according to two criteria. *Small size* is based on the subsample with below (or equal to) median (acquirer) firm size, while *Large size* is based on the subsample with above median acquirer size. *Low GI* is based on the subsample with values for the globalization index below (or equal to) median, while *High GI* is based on the subsample for the globalization index above median. For the explanation of the variables see also Table 1. The t-statistics are in parentheses. 0.1%, 1%, 5%, and 10% significance level is denoted by ***, **, *, and +, respectively.

The Predictive Power of Managerial Tone: A Text-Based Analysis of Takeover Performance

Wolfgang Breuer[a] and Bushra Ghufran[b*]

Abstract: We analyze the use of positive and negative language in financial disclosures and the ability of such language to predict long-term gains to the acquirers. In order to predict long-term takeover performance, we apply textual analysis to the MD&A Section of SEC filings for M&A deals taking place in the United States, between 2000 and 2016. Our overall findings reveal that a negative managerial tone has a strong negative association with takeover performance, whereas a positive managerial tone indicates managerial confidence in merger success, and hence reflects an enhanced takeover performance over an extended period. The evidence clearly rejects the hypothesis that a positive managerial tone is interpreted as managerial 'overconfidence' in a merger's success. Our findings also affirm that the predictive power of a negative tone is far more pronounced than that of a positive tone and of any other sentiment word lists. Moreover, stock returns do not adjust to the textual description immediately due to investors' general inattentiveness and inability to process subtle textual information more accurately. We also observe that the significance of predictive power of a negative managerial tone gains strength in the post-crisis period and for cross-border and for riskier deals due to the comparatively higher uncertainty associated with evaluating such deals on the basis of 'hard information'.

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1. INTRODUCTION

A lot of the finance literature looks at firms' fundamentals and their accounting information to explain stock price movements. However, not too long ago, a few researchers highlighted certain stock price movements that had remained unexplained by firms' quantitative information alone and they suggested the need to incorporate qualitative information (e.g. Cutler et al., 1989; Roll, 1988; Shiller, 1981). The finance literature has since sought to examine the likely connection between qualitative information and equity values (e.g. Li, 2008; Tetlock, 2007; Antweiler and Frank, 2004; Frazier et al., 1984).

The analysis of the tone and sentiment of corporate filings has gained considerable attention in the finance literature in recent times. Language is assumed to unveil many aspects of firms' fundamentals that traditional accounting measures fail to explain. We do not assume that language analysis undermines the importance of traditional fundamental analysis and accounting measures. However, it certainly adds to the overall process by offering suitable interpretations of unexplained financial aspects. Does managerial tone used in corporate filings provide additional information on corporate takeover performance? Can we extract the element of 'sentiment' by analyzing the managerial tone used in corporate filings of acquirers? Can this sentiment help us predict the future success of acquirers? We can perhaps find the answers to these questions with the help of textual analysis.

The selection of words by managers to describe their operations and business activities has come a long way towards explaining future earnings and stock prices. Investors also analyze such qualitative information in addition to quantitative data in order to make their investment decisions. The market efficiency theory suggests that investors have unlimited cognitive and computational capabilities and that they can process information promptly and that all the relevant information is quickly and accurately reflected in market prices (Fama, 1970). However, in reality and as suggested by Peng (2005), fundamental shocks and firm disclosures

are not immediately entering prices, as investors require time and mental capacity to process information coming from multiple sources to shape beliefs that are ultimately reflected in their investment strategy. He further highlighted that a piece of information is not reflected in prices until investors pay enough attention even if that information is already publicly available. In a similar vein, Huberman and Regev (2001) argued about the massive public attention received by a disease cure related article published in the New York Times that increased the relevant drug company's daily returns enormously, despite the same information being already published in Nature and different newspapers for five months. Hirst and Hopkins (1998) also suggest that even professional analysts fail to recollect and process information disclosed in financial reporting, hence the importance of time and attention required to evaluate financial disclosures cannot be neglected. In addition, Edmans (2011) concludes that soft and intangible information take more time to get incorporated in the financial markets.

Cohen et al. (2019) as well argue that with an enormous flow of informational input, investors are usually inattentive to the changing qualitative information in corporate disclosures. They observed no short-term announcement effects and stated that it is not because financial disclosures have become less valuable over time, but because investors keep missing on subtle informational cues due to increased length and complexity of financial statements. They further suggest that the information is reflected in prices with a significant delay and only gradually, after the information is made available to the public, i.e. after investors have overcome their inattention and laziness due to more obvious information revealed later. Hence, markets are not completely efficient and, as investors pay more attention to the qualitative information that is provided in financial statements in addition to firm fundamentals, the overall market efficiency will improve. The current study on textual analysis aims to contribute to the overall process by adding to the current literature in this direction.

Since the traditional financial analysis has not been able to explain certain aspects of M&A outcomes, the need to understand corporate language and managerial tone has become even crucial to the forecasting of post-merger takeover performance. We also build on the rationale that the soft and qualitative discussion provided by managers in their financial disclosures can offer a prediction of future takeover performance that quantitative information may fail to provide. We particularly aim to decipher managerial language in order to deduce whether it is mere 'cheap talk' or whether it has long-term implications for the acquirers. We study corporate disclosures made by acquiring companies and examine managerial tone to figure out how much of the acquirers' long-term gains (losses) are explained by the textual description in the filings. As earlier discussion highlights investors' inattention and inability to process information timely and to adjust their investments consequently, we additionally study how long it takes for textual information to start reflecting in stock returns.

Tetlock et al. (2008) and Tetlock (2007) made use of the Harvard Dictionary-based definition of negative words to conduct their sentiment analysis, and they concluded that negative words have a much stronger correlation with stock returns than any other word lists. Tetlock et al. (2008) further suggest that the combined measures of positive and negative words are also significantly correlated with stock returns. When once used in isolation, positive words depict a relatively much weaker correlation with stock returns, particularly after controlling for negative words. Psychology literature also highlights similar observation that negative information is processed more carefully and given more weight as compared to positive facts (Baumeister and Bratslavsky, 2001; Rozin and Royzman, 2001).

We also analyze the use of positive and negative language in financial disclosures and the ability of such language to predict long-term gains to the acquirers. We build our study on Tetlock (2008) and investigate whether the fraction of negative words unambiguously reflects a negative outlook. Additionally, we postulate that the fraction of positive words may reflect a

positive or a negative outlook of the future earnings that takeovers may create. We assume that a positive managerial tone may either indicate (reasonable) managerial confidence, and hence a positive outlook of merger outcomes, or be a mere indication of managerial overconfidence in merger success with negative implications. In either case, we expect the qualitative information to go beyond simple fundamental indicators in creating a better understanding of long-term takeover performance.

Our study contributes to the literature that focuses on using textual analysis to address the question of how managerial tone explains long-term takeover performance and the most closely related papers to ours are Yan (2015) and Morgan (2018), although the emphasis of our study is different. Yan (2015) follows Loughran et al. (2011) and Tetlock (2007) and carries out a textual analysis of SEC filings based on commonly utilized negative sentiments used in the M&A-related disclosures to measure long-term takeover returns. Morgan (2018) also focuses on M&A-related releases to capture the predictive power of optimism among others. Both of these studies investigate relatively small samples based on M&A-related documents prepared by lawyers. We, however, particularly scrutinize a large-scale sample in order to investigate both negative and positive managerial tone with a focus on the MD&A section of 10-K filings as this is considered to be a true depiction of managerial tone and views (Audi et al., 2016; Loughran and McDonald, 2011). Not very surprisingly, our overall results differ to some degree from those of Morgan (2018) and Yan (2015), as we find that a negative managerial tone has a strong negative association with takeover performance, whereas a positive managerial tone indicates managerial confidence in merger success, and hence reflects an enhanced takeover performance over an extended period.

Furthermore, we try to make a clear distinction between causality and correlation in the context of managerial sentiment that the current literature fails to distinguish. Some define a causal relationship between managerial sentiment and performance outcomes (e.g. see Henry, 2008),

while others elaborate on it as a correlation highlighting the predictive power of textual information on managerial tone (e.g. see Morgan, 2018; Davis et al., 2008). Many studies, however, use the terms causality and correlation interchangeably and fail to differentiate between the impact of positive and negative language or predictive power of such language (e.g. see Yan, 2015; Demers and Vega, 2010; Feldman et al., 2010; Tetlock et al., 2008; Tetlock, 2007; Antweiler and Frank, 2004). We, therefore, try to dig deep (in Section 5.3.) in order to ascertain the transmission mechanism of managerial tone; either directly influencing the behavior of market participants (i.e. a causal relationship), or predicting future performance outcomes over a time period (i.e. a correlation). We are not convinced that managerial tone directly influences investor behavior, as it may take some time before more obvious (quantitative) information is revealed and subsequently processed by investors. Since we do not observe any immediate stock market reaction and short-term performance effects in our study, our overall findings in general and our time window related results in particular highlight the second possibility where tone serves as a predictor of future performance, which investors ignore (wrongly).

The organization of the rest of the paper is as follows. Section 2 discusses related literature and hypothesis development. Section 3 sheds light on data and research methods employed. Sections 4 and 5 present our main findings and further sensitivity analyses, respectively. Section 6 outlines additional analyses, while Section 7 delineates our conclusions.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

Textual analysis is gaining prominence in recent finance literature. It is used to quantify and analyze the tone of the qualitative content of news and corporate financial disclosures. The earliest work in this regard is by Antweiler and Frank (2004), who employ textual analysis to investigate the tone of messages posted on Yahoo! Finance and its impact on stock returns and trade activity. A lot of the literature, however, uses textual analysis to probe into the sentiment

or tone of documents in terms of positive and negative words. Textual analysis is used to investigate the impact of sentiment scores on current and future stock returns, with Loughran and McDonald (2011), Davis et al. (2008), Tetlock et al. (2008), and Tetlock (2007) being the most prominent work in this area.

After Tetlock (2007), we find a number of papers substantiating the association of a positive versus a negative tone of news (documents) with contemporaneous and future outcomes in finance and accounting contexts (e.g. see Loughran and McDonald, 2011; Demers and Vega, 2010; Feldman et al., 2010; Henry, 2008). Loughran and McDonald (2011) and Henry (2008), however, made a major contribution to sentiment analysis by creating a more finance-specific definition of negative words. They argued that a general-purpose definition of negative words, such as provided by the Harvard Dictionary, is unsuitable for examining finance- and accounting-specific documents. Henry (2008) studied earnings press releases to formulate finance-specific word lists, while Loughran and McDonald (2011) captured the sentiment conveyed in 10-K reports to create a more comprehensive finance-specific dictionary.

All aforementioned authors put forward the idea of quantifying and transforming the qualitative information in terms of managerial sentiment in order to explain stock returns in a general context. However, with the exceptions of Yan (2015) and Morgan (2018), we do not find any notable work that captures the predictive power of sentiment or tone for takeover performance. Yan (2015) examines the role of managerial beliefs in merger negotiations and outcomes using M&A-related proxy statements filed by the acquirer with the SEC. He analyzes DEFM 14A, a proxy statement that is filed when shareholders' votes with respect to an M&A event are required. Moreover, he analyzes DEFM 14C, a statement that provides additional information regarding mergers and acquisitions. He follows Tetlock (2007) and Loughran and McDonald (2011) and carries out a textual analysis of both of the aforementioned M&A-related filings in order to study managerial beliefs, based on the commonly used negative sentiment identified

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in the Loughran and McDonald dictionary for measuring long-term takeover returns. Yan assumes that negative tone accurately indicates potential managerial overconfidence and that it predicts post-acquisition gains to the acquirer proxied by buy-and-hold return (BHAR) for a time window of three years. After studying around 1,500 completed deals, Yan outlines that an increased use of negative language indicates a lower level of managerial overconfidence and hence results in increased post-acquisition BHAR. He further suggests that managers employing more optimistic language (i.e. reducing their use of negative language) display higher potential overconfidence and experience the worst long-term returns. He observes the same outcomes for time horizons of one and five year(s). These findings, however, are in sharp contrast with earlier results of Loughran and McDonald (2011) and Tetlock (2007) in a general context.

Morgan (2018) also focuses on M&A-related disclosures (DFEM 14A and DEFM 14C) to capture the predictive power of sentiment (related to activity, optimism, certainty, realism, and commonality) on post-filing stock returns. He employed pre-determined sentiment libraries in the Diction Software packages in order to identify the intentions of corporate boards and attorneys toward merger activity and how they forecast subsequent takeover performance. He used post-filing returns to the acquirer for a time period of one year. Among other findings, he clearly outlines a positive relationship between optimism and future gains to the acquirer for a sample of around 2,000 merger deals. These findings contradict the conclusions drawn by Yan (2015); they, however, do endorse the outcomes proposed by earlier literature. These contrasting results on takeover performance have made us more inquisitive about probing into the issue further and bringing about an additional explanation of the underlying phenomenon by taking other possible public disclosures into consideration.

The aforementioned M&A-related SEC filings are prepared by lawyers (Anderson and Manns, 2017) and not by the management and therefore may not be a true reflection of managerial tone.

Loughran and McDonald (2011) suggest that the Management Discussion and Analysis (MD&A) section is where managers are most likely to reveal information through the tone that they use. In contrast to these two papers by Yan (2015) and Morgan (2018), our analysis therefore focuses on the MD&A section of 10-K filings to investigate managerial tone. Furthermore, we particularly study both negative and positive aspects of managerial tone in order to offer a comprehensive explanation of prognostic power of managerial tonality for merger outcomes. To the best of our knowledge, we provide the first large-scale evidence that the managerial tone used in the MD&A Section of SEC filings has a considerable predictive power for the long-term post-acquisitions gains to the acquirers.

One may argue that there is a possibility of lying and of managers acting deviously in their discussion and analysis. It may be contemplated that managers possibly avoid the use of negative words altogether; however, the negative word list that we employ in our study is too comprehensive to be evaded. In a similar vein, managers may be believed to overly use positive words. This is not an easy choice either, unless backed by positive takeover performance. An 'exaggerated' use of a positive tone may be perceived as managerial 'overconfidence' and the literature already suggests that managerial overconfidence is translated into poor takeover performance over the long run (Breuer et al., 2018a).

We hypothesize that the managerial tone used in the MD&A Section of SEC filings can explain post-filing returns of acquiring companies. We postulate that a negative managerial tone conveys negative information about takeover success that goes over and beyond accounting data. However, positive words may convey either a positive outlook depicting managerial confidence in making a merger a success or a negative outlook indicating managerial overconfidence in merger outcomes. More specifically, we formulate the following research hypotheses:

H1: A negative managerial tone signals a negative long-term takeover performance.

H2a: A positive managerial tone signals a positive long-term takeover performance.

H2a: A positive managerial tone signals a negative long-term takeover performance.

We aim to decipher managerial tone using the finance-specific positive and negative words following the methodology discussed in the upcoming section.

3. DATA AND METHODOLOGY

3.1. Dataset

We obtained a large sample of mergers and acquisitions from Bloomberg, comprising deals from the United States occurring between January 2000 and March 2016. Each acquiring firm has a unique international securities identification number (ISIN) that is used to match deal data with stock returns data and other acquirer-specific financial data from DataStream. In order to conduct a sentiment analysis, we obtained all 10-K filings from the SEC's Electronic Data Gathering, Analysis, and Retrieval (EDGAR) web site (www.sec.gov) for all the acquiring companies. The EDGAR index retains information on companies with respect to Central Index Key (CIK) codes. We use ISINs to identify the matching CIK codes for all the acquiring firms from the Thomson Reuters Eikon and finally use these codes to retrieve company filings from the EDGAR index.

We parsed the downloaded statements (i.e. we removed tables, html formats, and codes from the text) and, for the purpose of the present study, we specifically obtained the MD&A section of 10-K filings to analyze the managerial tone. It is in this section of company filings where management provides a commentary on financial performance, strategies and systems, business risks, legal aspects, future plans, and new projects and events (e.g. M&As etc.). The MD&A section offers a clear illustration of management's views about different aspects of the firm (Audi et al., 2016).

Following Frijns et al. (2013), Loughran and McDonald (2011), and Malmendier and Tate (2008) among others, we retain only those deals for our analysis that meet the following criteria:

- The acquirer is listed on NYSE, AMEX, or NASDAQ.

- There are both domestic and cross-border transactions.

- The deal implies a change of control.

- The deal has a transaction size of more than 1% of the acquirer value.

- The deal has a transaction size greater than US$ 1 million.

- The MD&A Section of the deal contains at least 250 words.

Before matching the ISINs with the CIK codes and carrying out any textual analysis, our M&A sample comprised 13,096 deals. However, certain ISINs had no matches with corresponding CIK codes in the database, and certain company filings had an MD&A section with fewer than 250 words. Hence, our final dataset examined in the present study consists of 10,343 publicly listed deals from the US.

3.2. The Dependent Variable: Takeover Performance

We employ the ISINs and obtain data on an acquirer's daily stock returns, and to calculate abnormal returns for each firm, we utilize the corresponding daily market returns. In order to capture long-term takeover performance, we compute post-acquisition abnormal returns of acquirers using a buy-and-hold approach as employed by Chakrabarti et al. (2009) and Lehn and Zhao (2006). Following their methodology, we calculate the *BHAR* (buy-and-hold abnormal return) of the acquiring firm over the market portfolio that an investment in the shares will yield if the purchase is made on the announcement day of the acquisition. Our event-study looks at *BHAR* for a window length of 36 months following the announcement. More specifically, we estimate the following regression model:

$$BHAR_{it} = \prod_{\tau=t-d+1}^{t}(1 + R_{i\tau}) - \prod_{\tau=t-d+1}^{t}(1 + R_{m\tau}). \tag{1}$$

$BHAR_{it}$ is the buy-and-hold abnormal return of acquirer i at time t, $R_{i\tau}$ is the daily return of the acquirer at time t, and $R_{m\tau}$ is the daily market return for $t-(t-d+1)+1 = d$ trading days over the 36 months after the acquisition. Lyon et al. (1999) suggest that the *BHAR* approach is the preferred method for long-term return analysis, as it accurately captures investor returns from stock purchases. Additionally, we, however, control for systematic firm risk in our final regression model (as employed in Section 4), so that the overall construction of model remains risk adjusted.

3.3. The Key Independent Variable: Managerial Tone

In the early 1960s the Harvard Psychosociological Dictionary (known as the Harvard-IV-4 Dictionary), generated by the General Inquirer (GI) group, emerged as a main source of word classification in the context of textual analysis. It is pertinent to use because its formation is free from any researcher-specific composition bias, as a researcher is not bound to decide on words with a negative connotation. However, this classification is done in a general perspective and may not be appropriate to apply in a financial framework. There may be certain words that are often positive or negative in general, however, not in a financial situation.

Henry (2008) is among the pioneers who criticized the general purpose Harvard-IV-4 Dictionary. She created the first notable word list suitable for financial settings by scrutinizing earnings press releases of companies. It is suggested that her list measures the tone of financial documents better than the Harvard-IV-4 lists (Price et al., 2012). However, her list is largely disapproved for containing very few negative words (i.e. only 85) and leaving out many commonly used negative expressions in business communication (Loughran and Mcdonald, 2016). Loughran and McDonald (2011) also argue that word categorization carried out in one setting may not necessarily be efficiently translated into another context. They claim that the Harvard-IV-4 list of negative words, denoted as the H4N list, is essentially inaccurate for gauging the tone of financial scripts.

Loughran and McDonald (2011) not only highlighted the inappropriateness of the H4N list in a financial context, they also came forward to develop an exhaustive list of negative words suitable for finance and accounting studies. They particularly aimed at creating a comprehensive list of words that makes avoidance certainly unmanageable. They argued that an exhaustive negative word list should not only account for all the words with a negative connotation, it should also include all the possible inflections and forms of negative words (e.g. "accidental", "accidentally", "accidents"). They started with the negative word list used in Tetlock et al. (2008) and added all the possible inflections of the words. By doing so, they expanded the H4N list from 2,005 words to 4,187 words and named it H4N-Inf. Next, they specified a list of 2,355 words that display negative financial sentiment and named it Fin-Neg. They additionally created a positive category, Fin-Pos, with 354 words, including all the conceivable inflections.

Our key independent variables in our analysis of managerial tone − positive and negative words − are, therefore, based on the most updated Fin-Neg and the Fin-Pos word lists from Loughran and McDonald (2018). We consider these lists to be more appropriate for our study, as they have been created bearing business terminology in mind, and hence carry reduced measurement error. We, however, employ Henry (2008) word lists in our robustness analysis later in Section 5.1. We follow Loughran and McDonald (2011) and standardize the fraction of negative and positive words as elaborated in the equations that follow:

$$Neg_{it} = \frac{No.of\ negative\ words_{it}}{No.of\ total\ words_{it}} \qquad (2)$$

$$LMneg_{it} = \frac{Neg_{it} - \mu Neg_t}{\sigma Neg_t} \qquad (3)$$

$$Pos_{it} = \frac{No.of\ positive\ words_{it}}{No.of\ total\ words_{it}} \qquad (4)$$

$$LMpos_{it} = \frac{Pos_{it} - \mu Pos_t}{\sigma Pos_t} \qquad (5)$$

$No.\ of\ negative\ words_{it}$ is the total number of negative words. $No.\ of\ positive\ words_{it}$ and $No.\ of\ total\ words_{it}$ are defined analogously. Neg_{it} is the fraction of negative words, while Pos_{it} is the fraction of positive words for acquirer i at time t. $LMneg_{it}$ is the standardized measure of the fraction of negative words, while $LMpos_{it}$ is the standardized measure of the fraction of positive words for acquirer i at time t. μNeg_t and μPos_t are the mean values of the number of negative and positive words for all the acquirers at time t, while σNeg_t and σPos_t are the standard deviations of the number of negative and positive words across deals at time t.

3.4. Control Variables

Other than authenticating the prognostic ability of managerial tone with the help of positive and negative words, we also seek to control for the effects of numerous deal-specific, acquirer-specific, and country-specific variables on post-acquisition takeover performance. We summarize all of these variables in Table 1.

3.4.1. Deal-Specific Control Variables

We obtained deal-specific information from the Standard & Poor's Capital IQ database, such as: whether a deal is carried out in the same industry, whether it is financial in nature or not, whether it is hostile or friendly, whether it is domestic or cross-border, what the mode of payment is, and what the size of the deal is. Many earlier researchers have considered these characteristics to be important success indicators of acquisitions. We mostly construct dummy variables to account for information on these characteristics. We control for s*ynergy,* which classifies acquirers and targets based on the relatedness of their industries. It is a dummy variable that captures the impact of operating synergies on takeover performance. It takes the value 1 if both the acquirer and the target share the same industry, and 0 if not. It is argued that if acquirer and target belong to the same industry, acquirers face fewer post-acquisition integration costs, which ultimately leads to higher post-merger returns (Morck et al., 1990).

Next, we study whether bidders in the *financial* sector, being more experienced in carrying out deals and possessing additional information about the target companies, lead to a higher takeover performance. It is a dummy variable that takes the value 1 if an acquirer belongs to the *financial* sector, and 0 if not. A study based on M&As between *financial* institutions supports higher post-acquisition returns (Cybo-Ottone and Murgia, 2000). Next, we categorize M&As based on the *method of payment,* according to whether the merger is financed either entirely through stocks or through some other settlement (e.g. entirely cash or a combination of cash and stocks). We present a dummy variable with a value 1 if a merger is financed through stocks entirely, and 0 if not. The *method of payment* is found to be a determinant of takeover premiums and thus a driver of takeover returns (Shleifer and Vishny, 2003).

We further classify whether the merger deals are *hostile* and pursued forcefully without the target firm's management being taken into confidence. To this end, we define a dummy variable that takes the value of 1 if it is a *hostile* merger, and 0 if not. There are mixed results for unfriendly and forceful takeovers; some findings suggest lower takeover returns for unfriendly bids (Servaes, 1991), while others validate no significant impact on post-acquisition takeover performance (Guo and Petmezas, 2012). We also study the takeover performance of *cross-border* deals. It is a dummy variable that takes the value of 1 for deals across the border and 0 for domestic ones. There is extensive research on outcomes of across the border deals; however, we see mixed results. Some research hints at the possibility that such deals bring in greater returns compared to domestic deals (Doukas and Travlos, 1988), while recent findings suggest that going across the border results in reduced returns (Moeller and Schlingemann, 2005). We also substantiate the probable impact of *deal size* on takeover performance. It is computed by taking the natural logarithm of the transaction value of the deal. Earlier findings exhibit positive performance outcomes for bigger deals (Linn and Switzer, 2001). However, recent literature reveals the negative impact of larger deals on the post-acquisition performance of acquirers,

owing to the huge integration costs and management complexities associated with large targets (Alexandridis et al., 2013; Ahern, 2010). Finally, we calculate the *relative size* of a deal via dividing the transaction value by the acquirer's firm size. Clark and Ofek (1994) suggest that relatively large targets result in reduced operating synergies and in lower returns due to higher integration costs. However, other authors conclude that there is no significant impact of relative size on the post-acquisition gains that takeovers may create (Powell and Stark, 2005).

3.4.2. Acquirer-Specific Control Variables

In addition, we also control for acquirer-specific characteristics. We control for *firm size,* as it is considered to be a notable determinant of an acquirer's post-acquisition performance. We compute it as the natural logarithm of an acquiring firm's total assets, following Gabaix and Landier (2008). According to Jensen and Meckling (1976), *firm size* may have negative implications for takeover performance owing to higher agency costs for bigger firms. We further control for *cash flow,* computed as the free cash flow normalized by total assets of the acquiring firm. It is argued that a higher level of free *cash flow* results in investment decisions that yield lower returns (Jensen, 1986). Next, we account for *leverage* of the acquiring firm, calculated as the total debt to total assets ratio. The literature shows mixed outcomes regarding the debt proportions, some findings reveal that a higher debt fraction results in lower gains for the acquirer (Ammann et al., 2011), while others suggest it has no significant role in defining merger performance (Aggarwal, 2009). We also seek to capture the impact of the *book-to-market* ratio (computed as the book value of the equity to market capitalization ratio) of the acquirer on long-term takeover gains. The literature widely talks about the usefulness of the *book-to-market ratio* for explaining stock returns (Maroney, 2002; Fama and French, 1992). Finally, we capture the impact of *firm risk* to ensure that our model by construction is risk adjusted. Systematic risk is considered to be the only relevant risk that captures the sensitivity of firm returns to the changes in market returns (Lubatkin, 1983). Hence, we also control for it

and compute it as a slope co-efficient of longitudinal regression of daily individual firm returns against daily market returns for a time period of three years.

3.4.3. Country-Specific Control Variable

We capture cross-country cultural differences between acquiring and acquired firms by determining *Cultural distance*. We follow Chakrabarti et al. (2009) to compute this measure by considering the cultural characteristics of long-term orientation, individualism, masculinity, uncertainty avoidance, and power distance attained from Hofstede et al. (2010). The literature widely suggests that mergers and acquisitions perform better when both the acquirer and the target firms are culturally similar (Ahern et al., 2015; Chakrabarti et al., 2009).

3.4.4. Additional Sentiment Word Lists as Control Variables

Other than our main variables of interest ($LMneg_{it}$ and $LMpos_{it}$), we, additionally control for other sentiment word lists put forward by Loughran and McDonald (2011). Loughran and McDonald (2011) expanded the word classification categories with four additional word lists, which are necessary to analyze tone. They have added 297 Fin-Uncertainty words (e.g. almost, ambiguous, approximately etc.), 46 Fin-Modal words (e.g. always, definitely, possibly etc.), 184 Fin-Constraining words (e.g. bound, constraint, covenant etc.), and 904 Fin-Litigious words (e.g. absolve, acquittal, verdict etc.). Similarly, to our calculation of standardized weighted positive and negative words (as discussed in Section 3.3), we compute standardized measures of fractions of each of the most updated additional word lists obtained from Loughran and McDonald (2018) and denote them as *LMunc*, *LMmod*, *LMcon*, and *LMlit* in our model. Finally, we also control for *total words* computed as the natural logarithm of the total of all the words appearing in the MD&A Section. Table 1 reports all our main dependent and independent variables along with deal-, acquirer-, country-, and other word lists-specific controls. It exhibits descriptive statistics (mean values and standard deviation) additionally.

>>> Table 1 goes about here <<<

Table 2 reports the correlation matrix.

>>> Tables 2 about here <<<

4. EMPIRICAL FINDINGS

We use multivariate regression analysis to investigate whether the managerial tone used in financial statements has any implications for long-term post-acquisition takeover performance. In order to test our results, we calculate ordinary least squares with robust standard errors. We particularly apply the following regression model:

$$BHAR_{it} = \alpha + \beta_1 \cdot LMneg_{it} + \beta_2 \cdot LMpos_{it} + \sum_{l=1}^{m} \gamma_l \cdot Control_{itl} + \varepsilon_{it}. \qquad (6)$$

$BHAR_{it}$, $LMneg_{it}$, and $LMpos_{it}$ are the same as defined in (1), (3), and (5). $Controls_{itl}$ refers to the deal-specific, acquirer-specific, country-specific, and other sentiment word lists-specific factors at time t that may impact an acquirer's $BHAR_{it}$. We do not notice exaggerated values of multicollinearity among the variables in the sample under study, and the mean variance inflation factor values (vif) are also noticeably low in our regression models.

>>> Table 3 goes about here <<<

We report our primary results in Table 3. In the formulation of our basic model, we carry out regression analysis at five levels. At the first level, we start by regressing $BHAR$ for a 36-month time window on $LMneg$ and $LMpos$ and present our results as Model 1. At the second, third, fourth, and fifth levels, we sequentially add other sentiment word lists-, deal-, acquirer-, and country-specific control variables in Model 1 and present them as Models 2, 3, 4, and 5. In all of our aforementioned regression models, we cluster standard errors at the acquirer's industry level because clustering produces better estimations of standard errors by reducing the potential

problems of serial correlation. Furthermore, to mitigate the distorting impact of unobserved heterogeneities, we control for industry- and year-fixed effects.

Model 5 is the most sophisticated and final regression model with all the relevant control factors taken into consideration. We proceed with it in order to carry out further analyses to confirm the legitimacy of our primary results. Findings from all the regression models suggest that $LMneg$ has a strong negative relation, while $LMpos$ has a significant positive connection with long-term takeover performance. Hence, we obtain preliminary confirmation for our Hypothesis 1 that a negative managerial tone (proxied by $LMneg$) signals negative long-term takeover gains. Accordingly, in line with Hypothesis 2a, a positive managerial tone (proxied by $LMpos$) indicates higher post-M&A returns to the acquirers, suggesting that a positive tone must not be interpreted as managerial 'overconfidence' in a merger's success.

We use standardized values of our main dependent, independent, and control variables in the regression models. The mean value and standard deviation of $BHAR$ before standardization are -25.81% and 97.12%, respectively. Such a low $BHAR$ is typical for mergers, as gaining a positive excess holding period return is overall a difficult undertaking in the case of mergers. In the last column of Table 3, $LMneg$ has a coefficient of -0.0779, which suggests a one-standard-deviation rise in the use of a negative tone ($LMneg$) in financial disclosures would induce a $-0.0779 \times 97.12\% = 7.56$ percentage points fall in the $BHAR$ measure. As compared to the absolute mean value of $BHAR$, this parallels about a 29.31% decrease in $BHAR$. $LMpos$, in the same column has a coefficient of 0.0335, which indicates that a one-standard-deviation surge in positive tone ($LMpos$) would induce a $0.0335 \times 97.12\% = 3.25$ percentage points growth in the $BHAR$ measure. This equals about a 12.61% increase in $BHAR$ as compared to the absolute mean value. Our findings are highly economically significant against the background that most of the literature reveals that the magnitude of the economic significance of qualitative information is relatively low (Loughran and McDonald, 2016). For example,

Tetlock (2007) indicates an 8.1 and 4.4 basis points reduction in the Dow Jones owing to one standard deviation increase in pessimism and negative words, respectively. Moreover, it is again worth noting that the economic significance of negative tone is far more pronounced than that of positive tone.

Our outcomes concerning control variables are largely in line with the findings from the prior literature. We do not witness that acquirers from the *financial* sector achieve higher takeover gains. The stock-funded takeovers are observed to produce lower post-acquisition gains in the long run, as consistent with the signaling theory put forward by Myers and Majluf (1984). Analogously to the findings from Ahern (2010), bigger targets, as proxied by *deal size*, have a strong negative impact on long-term takeover gains to the acquirers. Similarly to the findings from Powell and Stark (2005), targets bigger than the acquirers are found to cast no significant impact on long-term post-acquisition gains. As suggested by Ammann et al. (2011), *leverage* exhibits a significant negative impact on takeover performance. Finally, *firm risk* is also observed to cause reduced takeover gains over an extended period. Generally, our control variables retain the expected direction of impact in the regression results.

5. ROBUSTNESS CHECKS

In this section, we describe a number of tests carried out to confirm the robustness of our initial findings.

5.1. Controlling for an Alternative Measure of Managerial Tone

We test for an alternative measure of managerial tone using positive and negative word lists put forward by Henry (2008). We use Henry (2008) word lists to observe the frequency of occurrence of positive and negative words in the MD&A section of 10-K filings. We compute the standardized fraction of positive and negative words in the same way as discussed in Section 3.3.

>>> Table 4 goes about here <<<

We re-estimate our regression model using alternative measures of managerial tone and report our findings in Table 4. The revised estimates also reveal comparable findings, reaffirming that our initial outcomes are robust. The correlation of negative tone misses conventional significance levels only by a narrow margin (11 percent). However, this relatively less strong predictive power of negative tone is understandable because many commonly used negative words in business communication (e.g. loss, losses, adverse, impairment) are not part of the Henry (2008) word lists.

5.2. Controlling for Alternative Performance Measures

Next, we check for alternative measures of takeover performance. We use return on assets (*ROA*) and market to book ratio (*MTBR*) alternatively and reproduce our results. Findings, as reported in Table 5, suggest both *LMneg* and *LMpos* continue to assume the suggested direction of predictive power. *LMneg* is significantly related to reduced *ROA* and *MTBR*, while *LMpos* is a strong indicator of improved *MTBR*. In general, our revised results confirm the robustness of our initial findings where a negative managerial tone has a relatively more pronounced predictive power compared to that of a positive tone used in financial disclosures.

>>> Table 5 goes about here <<<

5.3. Controlling for Alternative Time Windows

We further check for alternative time windows and their possible impact on our results. First, we restrict the time window from 36 months to 24 months and use it as an alternative measure of long-term post-acquisition takeover performance. Our findings confirm that both a positive and a negative managerial tone continue to significantly predict long-term post-acquisition performance for an alternative time window. We further continue restricting the time windows to 12, 9, 6, 3, and 1 month(s). We observe that managerial tone has an almost insignificant

relation of short-term takeover gains of 1-month to 3-month time windows. From six months onwards, the predictive power of negative and positive managerial tone gains strength, as we increase the window length. Additionally, we check for 3- and 5-day time windows as well; however, the findings are not significant. As consistent with Cohen et al. (2019), we do not observe a significant correlation of managerial tone with the short-term returns owing to subtlety of textual information and investors' general inattentiveness and/or boundedly rational behavior (also indicated by Breuer et al., 2018b). We summarize all of these findings in Table 6.

>>> Table 6 goes about here <<<

These findings lead us to very interesting inferences about the transmission mechanism of managerial tone for takeover performance. In general, there are two possible transmission ways: 1) Managerial tone may affect market participants' behavior directly. We are, however, not convinced of this argument in our context, because then one may expect a much faster stock market reaction in terms of short or medium term performance effects. 2) Managerial tone has a predictive power regarding future takeover performance and it takes some time before more obvious (quantitative) information is processed by investors. In such a situation, there is no direct 'impact' of tone on takeover performance, in fact, tone is 'correlated' with the takeover performance. Since we do not observe any immediate stock market reaction and short-term performance effects, our overall findings in general and our time window related results in particular highlight the second possibility where tone serves as a predictor of future performance, which investors ignore (wrongly). Breuer et al. (2018b) also highlight the at most boundedly rational nature of investor behavior due to which all the available information may not necessarily be completely exploited. Among other things, they further argue that this inability of accurately processing the available textual information might also be due to the

subtlety of textual information. We also observe something similar that reassures related conclusions from the earlier literature.

5.4. Controlling for Time Effects

Next, we try to substantiate that our results are not driven by the most recent financial crisis that greatly affected economic activity. We split our sample period into two parts, the pre-crisis period (2000 to 2007) and the post-crisis period (2008 to 2016), and revise our model estimates. The results, as presented in Table 7, support the robustness of our previous findings. Negative managerial tone is strongly negatively related to long-term post-acquisition performance for both the pre-crisis and the post-crisis period. The results further reveal that the predictive power of both a negative and a positive tone for long-term takeover performance is relatively more evident during the post-crisis period. These findings clearly suggest that managerial tone in general and a negative tone in particular become relatively more pertinent during the post-crisis period. Overall, we may conclude that these findings support our former inferences.

>>> Table 7 goes about here <<<

6. ADDITIONAL CHECKS

In this section, we outline some additional analyses to deepen our understanding of the subject under discussion.

6.1. Cross-Border vs. Domestic Mergers

As cross-border deals are considered to be comparatively riskier (Mantecon, 2009), we try to disentangle the likely prognostic power of managerial tone for cross-border takeover deals from that of domestic deals. We split the sample based on the type of deal (cross-border versus domestic deals) and recompute our models to identify whether the probable predictive power of managerial tone for long-term takeover performance varies for the two different kinds of merger deals.

>>> Table 8 goes about here <<<

The findings from Table 8 endorse the vigor of our initial findings, and we may determine that managerial tone helps predict long-term takeover gains both in domestic and cross-border takeovers. Our results also confirm that a negative managerial tone is taken more seriously as compared to a positive tone. They further suggest that the predictive power of negative tone is comparatively stronger in the case of cross-border deals, possibly due to the associated additional uncertainty in comparison to domestic deals. Tone becomes more relevant and carries relatively higher predictive power in the case of cross-border deals because it is more difficult to evaluate cross-border deals on the basis of 'hard information' alone than domestic deals.

6.2. Risk and Tonality

Last, we check how the significance of a positive and a negative managerial tone varies with the riskiness of M&A deals. We split our sample into two parts on the basis of the median value of firm risk, where the median value is included in the sample with lower risk.

>>> Table 9 goes about here <<<

Our overall results reported in Table 9 reassure our confidence in earlier outcomes that managerial tone is relevant. Our findings further highlight that overall significance of managerial tone is more pronounced in relatively riskier M&A deals (the same as in cross-border and post-crisis period deals). This may be because of the added difficulty of assessing long-term takeover performance using firm fundamentals only when there are higher risks associated with the deals.

6.3. Managerial Tone as a Function of Performance

According to our results so far, we may conclude that managerial tone shows some predictive power with respect to long-term takeover performance but not regarding short-term

performance. This means that investors seem not to react to variations in managerial tone, although managers reveal information which are not incorporated in hard data as described by our control variables. Against this background, managerial tone may be a function of managers' performance expectations with respect to the takeovers under consideration. Though we do not have information regarding managerial expectation, we may use actual long-term takeover performance as a proxy, just assuming that managers may forecast takeover performance with absolute precision. Based on this premise, we scrutinize how managers' expectations may determine managerial tone.

>>> Table 10 goes about here <<<

In Models M1 and M2, we use *LMneg* and *LMpos* as dependent variables respectively, while in Model M3 we combine these two measures of managerial tone and use pessimism (measured as, *pessimism = LMneg − LMpos*) as a dependent variable. In all these models, we use *BHAR* as our main independent variable of interest. Findings, as stated in Table 10, suggest that takeover performance is significantly negatively related to negative managerial tone while significantly positively related to positive managerial tone. In a similar vein, abnormal returns are found to have a significant negative association with pessimism. Hence, we may conclude that if managers can forecast takeover returns, they mold their tone accordingly. They tend to use a more negative or pessimistic tone if they foresee negative abnormal returns; in contrast, their usage of positive tone increases if they expect higher takeover gains.

7. CONCLUSION

In order to predict long-term takeover performance, we apply textual analysis to the MD&A Section of SEC filings of M&A deals taking place in the United States between 2000 and 2016. This study aims to substantiate the probable predictive power of soft information that comes along with the quantitative information in the financial disclosures. We particularly seek to

decipher the managerial tone used in the M&DA section of the 10-K filings, and investigate how managerial tone (both positive and negative) may signal long-term post-acquisition gains to the acquirers. Our overall findings reveal that a negative managerial tone has a strong negative association with long-term takeover performance. A positive managerial tone signals managerial confidence in merger success and hence reflects an improved takeover performance over an extended period. The evidence clearly rejects the hypothesis that a positive managerial tone the consequence of managerial overconfidence in a merger's success. Our findings also affirm that the predictive power of a negative tone is far more pronounced than that of a positive tone and of any other sentiment word lists (as is observed by Tetlock et al., 2008). Quite interestingly, we observe that takeover returns do not adjust to the textual description immediately due to investors' inattentiveness and in part inability to process delicate textual information more accurately (consistent with Breuer et al., 2018b). It also suggests that managerial tone does not directly influences investor behavior, in fact, it gradually correlates with the post-acquisition takeover performance, hence enabling us to forecast takeover outcomes. Our empirical findings further suggest that the significance of managerial tone gains even more strength in the post-crisis period and for cross-border as well as riskier deals.

On the whole, we can conclude that managerial language in financial disclosures should not be taken as a mere 'cheap talk'; in fact, it is very pertinent for foreseeing long-term takeover performance. More attentive investors who utilize textual analysis and take into account managerial tone used in the firm filings may book superior returns by investing in acquirers with a higher level of positive managerial tone and shorting investments with an intensified negative tone.

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Table 1: Description of Variables

Variables	Description	Mean	Standard Deviation
	Panel A: Time Preferences and Takeover Performance		
LMneg	Standardized measure of fraction of negative words from Loughran and McDonald (2018).	0.009	0.004
LMpos	Standardized measure of fraction of positive words from Loughran and McDonald (2018).	0.005	0.002
Long-Term Performance	Standardized measure of the buy-and-hold abnormal return (BAHR) over a 36-month window post-acquisition.	−.258	0.971
	Source: Loughran and McDonald (2018) and DataStream		
	Panel B: Deal-Specific Variables		
Synergy	Dummy variable signifying the merger as inter or intra industry, it assumes the value of 1 if intra-industry, and 0 if inter-industry.	0.704	0.456
Financial	Dummy variable indicating if the acquirer is from financial sector or not. It takes the value 1 if financial and 0 otherwise.	0.016	0.374
Method of Payment	Dummy variable that classifies the payment method of acquisition. It equals 1 if stock and 0 otherwise.	0.128	0.335
Hostile	Dummy variable that illustrates the nature of a bid. It has a value 1 if bid is hostile and 0 if friendly.	0.002	0.050
Cross-Border	Dummy variable that depicts the nature of a merger. It takes the value of 1 if merger is cross-border and 0 otherwise.	0.205	0.404
Deal Size	Natural logarithm of the transaction value (in million US dollars) of the acquisition.	12.529	2.931
Relative Size	Transaction value to the total assets of the acquiring company (in percentage).		
	Source: *Bloomberg and DataStream*	5.722	2.544
	Panel C: Acquirer-Specific Variables		
Firm Size	Natural logarithm of the book value of total assets (in million US dollars).	13.479	2.269
Cash Flow	Cash flow to book value of assets ratio (in percentage).	−0.113	8.014
Leverage	Total debt to book value of assets ratio (in percentage).	0.300	4.807
Book-to-Market	The ratio of book value of equity to market capitalization (in percentage).	0.000	0.008
Firm Risk	Systematic risk computed as a slope co-efficient of longitudinal regression of daily individual firm returns against daily market returns for a time period of 3 years.	0.730	31.949
	Source: *DataStream*		
	Panel D: Country-Specific Variables		
Cultural Distance	Euclidian distance of the target's cultural values from that of the acquirer's by accounting for all five cultural values obtained from Hofstede et. al. (2010).	1.930	4.553
	Panel D: Other Word Lists		
LMunc	Standardized measure of fraction of uncertainty words from Loughran and McDonald (2018).	0.011	0.004
LMmod	Standardized measure of fraction of modal words from Loughran and McDonald (2018).	0.008	0.003
LMcon	Standardized measure of fraction of constraining words from Loughran and McDonald (2018).	0.005	0.002
LMlit	Standardized measure of fraction of litigious words from Loughran and McDonald (2018).	0.004	0.002
Ln Total Words	Natural logarithm of total words in MD&A Section.	9.272	0.591
Negative_Henry	Standardized measure of fraction of negative words from Henry (2008).	0.016	0.005
Positive_Henry	Standardized measure of fraction of positive words from Henry (2008).	0.030	0.008

This table presents the main independent variables *LMneg and LMpos* from Loughran and McDonald (2018), long-term takeover performance, and control variables along with their mean values and standard deviation.

Table 2: Correlation Matrix

Variables	BHAR	LMneg	LMpos	LMunc	LMmod	LMcon	LMlit	Ln Total Words	Synergy	Financial	Method of Payment	Hostile	Cross-Border	Deal Size	Relative Size	Firm Size	Cash Flow	Leverage	Book-to-Market	Firm Risk	Cultural Distance
BHAR	1																				
LMneg	−0.03*	1																			
LMpos	0.03*	0.22*	1																		
LMunc	−0.05*	0.41*	0.20*	1																	
LMmod	−0.05*	0.49*	0.20*	0.72*	1																
LMcon	−0.04*	0.27*	0.06*	0.32*	0.29*	1															
LMlit	0.02*	0.30*	0.01	0.16*	0.17*	0.17*	1														
Ln Total Words	−0.02*	0.23*	0.08*	0.02	0.04*	0.14*	0.16*	1													
Synergy	0.05*	0.02	0.01	−0.02	−0.02	0.00	0.00	−0.01	1												
Financial	0.04*	0.05*	−0.09*	−0.15*	−0.13*	−0.10*	−0.10*	0.12*	0.09*	1											
Method of Payment	−0.08*	0.05*	−0.06*	0.04*	0.13*	−0.04*	−0.07*	−0.10*	0.03*	0.09*	1										
Hostile	0.01	0.01	0.02	−0.01	0.01	−0.03*	0.01	0.01	0.02	−0.01	0.01	1									
Cross-Border	−0.04*	0.01	0.09*	0.02	−0.01	0.04*	−0.01	0.04*	−0.03*	−0.13*	−0.09*	0.00	1								
Deal Size	−0.21*	−0.07*	0.08*	−0.03*	−0.10*	0.07*	0.07*	0.28*	−0.03*	−0.06*	−0.07*	0.02*	0.06*	1							
Relative Size	−0.06*	−0.00	0.05*	0.08*	0.08*	0.06*	−0.02	−0.10*	−0.02	−0.02	0.08*	−0.00	−0.00	0.04*	1						
Firm Size	0.02*	0.09*	0.17*	−0.07*	−0.19*	0.01	0.12*	0.46*	0.03*	0.25*	−0.17*	0.03*	0.07*	0.52*	−0.15*	1					
Cash Flow	0.05*	−0.00	0.00	0.01	−0.02*	0.02	0.02*	0.08*	−0.01	0.00	−0.07*	0.00	0.00	0.02	−0.54*	0.11*	1				
Leverage	−0.04*	−0.01	−0.01	−0.04*	−0.01	0.04*	−0.00	−0.03*	0.00	−0.01	−0.00	0.00	0.01	0.05*	0.12*	−0.02	−0.14*	1			
Book-to-Market	−0.00	0.03*	0.00	0.01	0.03*	−0.00	−0.00	−0.00	−0.00	0.01	−0.03*	−0.00	−0.00	−0.01*	−0.00	0.00	0.00	−0.06*	1		
Firm Risk	−0.03*	0.02	0.03*	0.00	0.01	−0.00	−0.00	0.03*	−0.04*	−0.01	0.01	−0.00	0.01	0.03*	−0.01	0.02	0.01	−0.00	−0.01	1.00	
Cultural Distance	−0.04*	0.02	0.09*	0.01	0.00	0.04*	−0.01	0.03*	−0.02*	−0.12*	−0.08*	0.01	0.84*	0.05*	−0.01	0.05*	0.00	0.01	−0.00	0.01	1

This table reports the correlation coefficients (with *$p<0.05$) of our main independent variables *LMneg* and *LMpos* from Loughran and McDonald (2018), long-term takeover performance, and control variables.

Table 3: Regression Results: Managerial Tone and Long-Term Takeover Performance

Independent Variables	M1	M2	M3	M4	M5
LMneg	−0.0569*	−0.0558***	−0.0541***	−0.0776***	−0.0779***
	(−2.22)	(−3.55)	(−3.62)	(−5.77)	(−5.64)
LMpos	0.0354**	0.0472***	0.0469***	0.0339**	0.0346**
	(2.39)	(3.43)	(3.33)	(2.92)	(2.99)
LMunc		0.0147	0.0055	−0.0128	−0.0134
		(0.87)	(0.35)	(−1.02)	(−1.01)
LMmod		−0.0872***	−0.0673**	−0.0212	−0.0204
		(−3.43)	(−2.63)	(−0.97)	(−0.93)
LMcon		0.0202	0.0218	0.0178	0.0174
		(1.25)	(1.46)	(1.06)	(1.04)
LMlit		0.0491***	0.0455***	0.0437***	0.0439***
		(3.64)	(4.19)	(3.26)	(3.23)
Ln Total Words		0.0447***	0.0373***	−0.0020	−0.0014
		(4.50)	(5.46)	(−0.14)	(−0.10)
Synergy			0.0222**	0.0110	0.0110
			(2.42)	(1.43)	(1.40)
Financial			0.0258	0.0056	0.0105
			(1.21)	(0.23)	(0.39)
Method of Payment			−0.0899***	−0.0742***	−0.0737***
			(−3.95)	(−5.02)	(−4.95)
Hostile			0.0026	0.0033	0.0034
			(0.20)	(0.26)	(0.27)
Cross-Border			−0.0202	−0.0242	−0.0096
			(−1.24)	(−1.54)	(−0.35)
Deal Size			−0.0258	−0.1211***	−0.1214***
			(−1.57)	(−7.57)	(−7.66)
Relative Size			0.0568***	−0.2904	−0.3166
			(8.04)	(−0.54)	(−0.58)
Firm Size				0.1189***	0.1167***
				(4.47)	(4.39)
Cash Flow				0.0347***	0.0349***
				(4.22)	(4.08)
Leverage				−0.0874**	−0.0866**
				(−2.61)	(−2.70)
Book-to-Market				−0.0036	−0.0036
				(−0.24)	(−0.23)
Firm Risk				−0.5265*	−0.5394*
				(−1.98)	(−2.01)
Cultural Distance					−0.0147
					(−0.58)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.1199	0.1282	0.1365	0.1374	0.1364
Mean VIF	1.75	1.85	3.00	2.98	3.07
No. of deals	10,343	10,343	10,041	9,360	9,329

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 4: Robustness Check: Controlling for Alternative Measure of Managerial Tone

Independent Variables	HN_Word Lists	
HNneg	−0.0172	(−1.80)
HNpos	0.0675***	(4.99)
LMunc	−0.0222	(−1.57)
LMmod	−0.0333	(−1.53)
LMcon	0.0135	(0.83)
LMlit	0.0363	(2.96)
Ln Total Words	−0.0089	(−0.62)
Synergy	0.0124	(1.45)
Financial	−0.0042	(−0.15)
Method of Payment	−0.0723***	(−5.12)
Hostile	0.0029	(0.22)
Cross-Border	−0.0113	(−0.42)
Deal Size	−0.1097***	(−6.25)
Relative Size	−0.3209	(−0.55)
Firm Size	0.0964***	(3.34)
Cash Flow	0.0335***	(4.39)
Leverage	−0.0798**	(−2.54)
Book-to-Market	−0.0061	(−0.36)
Firm Risk	−0.5508	(−2.01)
Cultural Distance	−0.0130	(−0.53)
Industry FE	Yes	
Year FE	Yes	
Adjusted R^2	0.1360	
Mean VIF	3.10	
No. of deals	9,329	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variables regarding negative and positive words are based on Henry (2008). Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 5: Robustness Check: Controlling for Alternative Performance Measures

Independent Variables	M1: ROA		M2: LnMTBR	
LMneg	−0.0077*	(−2.09)	−0.1109***	(−6.96)
LMpos	0.0018	(0.85)	0.0916***	(5.31)
LMunc	0.0018	(0.22)	0.0024	(0.12)
LMmod	0.0020	(0.29)	0.0625**	(2.81)
LMcon	0.0100	(1.51)	−0.0502	(−1.47)
LMlit	−0.0021	(−1.34)	0.0329**	(2.44)
Ln Total Words	0.0006	(0.10)	−0.0119	(−0.66)
Synergy	0.0053	(0.87)	0.0029	(0.12)
Financial	−0.0035	(−0.73)	−0.1366***	(−11.65)
Method of Payment	−0.0149**	(−2.06)	0.0332*	(1.75)
Hostile	0.0002	(0.41)	−0.0108	(−1.12)
Cross-Border	0.0013	(0.16)	0.0397*	(1.13)
Deal Size	−0.0292**	(−2.15)	0.0397	(1.33)
Relative Size	−1.1162	(−0.71)	−0.2666	(−0.09)
Firm Size	0.0591**	(2.72)	0.0329	(0.93)
Cash Flow	−0.0343	(−0.65)	0.0505	(0.62)
Leverage	−0.0916*	(−2.17)	1.8075***	(4.48)
Book-to-Market	0.0048	(1.37)	−0.1287	(−1.77)
Firm Risk	0.7200	(1.22)	5.3064**	(2.94)
Cultural Distance	−0.0134	(−0.98)	0.0209	(0.060)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0279		0.2009	
Mean VIF	3.74		2.11	
No. of deals	7,624		6,767	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *ROA* or *MTBR* 36-month after acquisition for Model M1 and M2, respectively. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 6: Robustness Check: Controlling for Alternative Time Windows

Independent Variables	24M	12M	9M	6M	3M	1M	5D	3D
LMneg	−0.0746***	−0.0081***	−0.0171***	−0.0034***	−0.0034	−0.0001	−0.0130	−0.0046
	(−5.67)	(−4.48)	(−7.33)	(−4.56)	(−1.46)	(−0.58)	(−1.59)	(−0.47)
LMpos	0.0292*	0.0029*	0.0059*	0.0014**	0.0024	0.0003*	0.0180	0.0089
	(2.06)	(1.83)	(2.09)	(2.59)	(1.29)	(2.20)	(0.93)	(0.48)
LMunc	0.0143	0.0032	0.0102*	−0.0026***	0.0072	−0.0001	−0.0140	0.0140
	(0.91)	(1.32)	(2.16)	(−3.23)	(1.41)	(−0.30)	(−0.65)	(0.74)
LMmod	−0.0474*	−0.0028	−0.0061	−0.0015**	−0.0024	−0.0001	0.0312	−0.0096
	(−2.17)	(−0.71)	(−1.12)	(−2.23)	(−1.56)	(−0.30)	(1.82)	(−0.62)
LMcon	0.0276**	0.0006	0.0019	0.0003	0.0026	−0.0000	−0.0089	−0.0067
	(2.34)	(0.36)	(0.54)	(0.30)	(1.09)	(−0.78)	(−0.98)	(−0.46)
LMlit	0.0283**	0.0032*	0.0064*	0.0009	−0.0000	0.0000	0.0006	0.0015
	(2.90)	(2.01)	(2.00)	(1.61)	(−0.17)	(0.18)	(0.07)	(0.17)
Ln Total Words	−0.0060	−0.0001	−0.0020	−0.0007	−0.0003	−0.0004	0.0187	0.0057
	(−0.45)	(−0.04)	(−0.76)	(−1.20)	(−0.76)	(−1.57)	(0.91)	(0.39)
Synergy	0.0052	−0.0006	−0.0003	−0.0003	−0.0001	−0.0000	−0.0008	0.0024
	(0.67)	(−0.44)	(−0.12)	(−0.87)	(−0.55)	(−0.13)	(−0.09)	(0.23)
Financial	0.0204	0.0028	−0.0041	−0.0001	0.0006	0.0006	0.0711**	0.0612**
	(0.58)	(0.46)	(−0.47)	(−0.13)	(0.68)	(1.53)	(2.88)	(2.77)
Method of Payment	−0.0717***	−0.0048*	−0.0067	−0.0006	0.0002	0.0006	−0.0214	−0.0199
	(−5.77)	(−1.87)	(−1.65)	(−0.82)	(0.88)	(1.79)	(−1.37)	(−1.54)
Hostile	0.0079	0.0017	0.0025	0.0005	0.0003	−0.0000	−0.0066	−0.0065
	(0.67)	(1.06)	(1.47)	(1.71)	(1.06)	(−0.16)	(−0.63)	(−0.69)
Cross-Border	−0.0323	−0.0041	−0.0059	−0.0012*	0.0002	−0.0003	0.0012	0.0022
	(−1.25)	(−1.65)	(−1.44)	(−1.91)	(0.57)	(−1.65)	(0.07)	(0.09)
Deal Size	−0.1217***	−0.0106***	−0.0176***	−0.0006	−0.0006	0.0009	−0.0123	−0.0019
	(−10.34)	(−4.35)	(−8.15)	(−1.00)	(−0.86)	(1.54)	(−0.87)	(−0.08)
Relative Size	−0.6022	−0.0357	0.1286	−0.0561	0.4044	−0.0306	0.7811	1.2530
	(0.65)	(−0.24)	(0.45)	(−0.88)	(1.32)	(−1.65)	(0.64)	(0.93)
Firm Size	0.1048***	0.0053	0.0097*	−0.0011	−0.0008*	−0.0019*	0.0073	−0.0022
	(5.12)	(1.33)	(2.01)	(−1.05)	(−2.05)	(−2.29)	(0.44)	(−0.13)
Cash Flow	0.0619***	0.0059**	0.0060	0.0009	0.0076*	−0.0007	0.0011	−0.0128
	(3.89)	(2.39)	(0.64)	(0.60)	(2.14)	(−0.80)	(0.07)	(−0.60)
Leverage	−0.0811	−0.0136	−0.0358*	−0.0040	−0.0023	0.0002	0.0216	−0.0254
	(−1.46)	(−1.55)	(−2.24)	(−1.44)	(−0.64)	(0.14)	(0.38)	(−0.60)
Book-to-Market	−0.0078	−0.0020	−0.0036	−0.0001	−0.0002**	−0.0001***	−0.0073	−0.0063
	(−0.49)	(−0.81)	(−0.82)	(−0.13)	(−2.28)	(−1.16)	(−1.25)	(−1.37)
Firm Risk	−0.4560	−0.0863**	−0.1511**	−0.0308	−0.0154	−0.0044	−0.1633	0.0096
	(−1.73)	(−2.31)	(−2.69)	(−1.59)	(−1.58)	(−1.16)	(−1.99)	(0.11)
Cultural Distance	0.0085	0.0024	0.0024	0.0006	−0.0002	0.0003	−0.0015	0.0026
	(0.36)	(0.79)	(0.45)	(0.64)	(−0.48)	(1.64)	(−0.08)	(0.11)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.1009	0.0686	0.0690	0.0628	0.1844	0.0203	0.0183	0.0137
Mean VIF	3.07	3.07	3.07	3.07	3.07	3.07	3.07	3.07
No. of deals	9,329	9,329	9,329	9,329	9,329	9,329	9,329	9,329

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 24-, 12-, 8-, 6-, 3-, 1-month time windows, and *CAR* for 3- and 5-day time windows, respectively. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 7: Robustness Check: Controlling for Time Effects

Independent Variables	M1: Pre-Crisis		M2: Post-Crisis	
LMneg	−0.0619**	(−3.03)	−0.0766***	(−5.23)
LMpos	0.0145	(1.58)	0.0711**	(3.48)
LMunc	−0.0228	(−0.98)	−0.0104	(−0.62)
LMmod	−0.0237	(−0.75)	0.0047	(0.28)
LMcon	0.0067	(0.28)	0.0262	(1.13)
LMlit	0.0624***	(4.78)	0.0065	(0.18)
Ln Total Words	0.0055	(0.27)	0.0088	(0.27)
Synergy	0.0273*	(1.88)	−0.0047	(−0.33)
Financial	−0.0723**	(−5.08)	0.0133	(0.43)
Method of Payment	−0.0486**	(−2.34)	−0.0818**	(−2.78)
Hostile	0.0048	(0.32)	0.0156***	(8.42)
Cross-Border	−0.0116	(−0.43)	−0.0101	(−0.24)
Deal Size	−0.1012***	(−6.94)	−0.0793	(−2.82)
Relative Size	0.0295**	(2.49)	−1.0607	(−0.86)
Firm Size	0.1139***	(3.97)	0.1280***	(4.18)
Cash Flow	0.0532	(1.63)	0.0427*	(1.95)
Leverage	−0.0217	(−0.95)	−0.1547**	(−2.46)
Book-to-Market	−0.0111	(−0.55)	−0.0811	(−1.60)
Firm Risk	−0.0896***	(−3.51)	−0.5258	(−1.56)
Cultural Distance	−0.0053	(−0.18)	−0.0277	(−0.90)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0797		0.1199	
Mean VIF	1.91		2.18	
No. of deals	4,829		4,500	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. The data are split at the end of 2007 and our baseline regression is re-estimated for both sub-samples. Pre-crisis comprises the time period from 2000 to 2007, and post-crisis time period comprises 2008 to 2016. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 8: Robustness Check: Cross-Border vs. Domestic Mergers

Independent Variables	M1: Cross-Border		M2: Domestic	
LMneg	−0.0830***	(−5.42)	−0.0776***	(−4.76)
LMpos	0.0216	(0.84)	0.0360**	(3.16)
LMunc	−0.0087	(−0.28)	−0.0179	(−1.16)
LMmod	0.0097	(0.28)	−0.0263	(−1.15)
LMcon	0.0205	(0.77)	0.0176	(1.06)
LMlit	0.0775**	(2.32)	0.0410**	(2.88)
Ln Total Words	−0.0350**	(−2.29)	0.0066	(0.45)
Synergy	0.0127	(0.65)	0.0109	(1.15)
Financial	−0.0686	(−1.20)	0.0834	(1.05)
Method of Payment	−0.0922**	(−2.77)	−0.0710***	(−5.25)
Hostile	−0.0253**	(−2.32)	0.0120	(0.88)
Deal Size	−0.0368	(−1.16)	−0.1396***	(−7.67)
Relative Size	−0.7533	(−0.57)	−0.0682	(−0.33)
Firm Size	0.1372***	(4.34)	0.1112***	(3.90)
Cash Flow	0.0984*	(2.21)	0.0169***	(4.65)
Leverage	−0.0987**	(−2.52)	−0.2311	(−1.28)
Book-to-Market	−0.0040	(−0.19)	−0.0039	(−0.25)
Firm Risk	−0.0312***	(−5.57)	−0.5379*	(−1.84)
Cultural Distance	−0.0163	(−0.48)		
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.1856		0.1305	
Mean VIF	2.37		3.81	
No. of deals	1,962		7,367	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. The data are split into two subsamples: one comprising cross-border M&A deals, while the other based on domestic deals. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 9: Additional Check: Risk and Tonality

Independent Variables	High Risk		Low Risk	
LMneg	−0.0762***	(−4.24)	−0.0607***	(−5.79)
LMpos	0.0364***	(4.80)	0.0341	(1.41)
LMunc	−0.0213	(−0.75)	−0.0060	(−0.66)
LMmod	0.0345	(1.10)	−0.0575*	(−2.09)
LMcon	−0.0050	(−0.16)	0.0290*	(2.12)
LMlit	0.0374	(1.76)	0.0425**	(2.26)
Ln Total Words	−0.0270	(−1.46)	0.0252	(1.10)
Synergy	0.0025	(0.26)	0.0143	(1.10)
Financial	0.0340	(0.54)	−0.0295	(−0.91)
Method of Payment	−0.0667**	(−0.18)	−0.0623***	(−3.48)
Hostile	0.0113	(1.29)	−0.0019	(−0.13)
Cross-Border	−0.0062	(−0.18)	−0.0108	(−0.36)
Deal Size	−0.1244***	(−4.83)	−0.1083***	(−3.58)
Relative Size	0.3195	(0.35)	0.0320	(0.20)
Firm Size	0.0805**	(2.62)	0.1104***	(3.30)
Cash Flow	0.0551*	(2.22)	0.0459***	(4.90)
Leverage	0.0372	(0.65)	−0.1475**	(−3.10)
Book-to-Market	0.0112**	(2.67)	−0.0366***	(−10.70)
Firm Risk	−1.0440***	(−4.80)	0.0633**	(2.71)
Cultural Distance	−0.0186	(−0.63)	−0.0111	(−0.33)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.1251		0.1880	
Mean VIF	3.16		3.10	
No. of deals	4,741		4,588	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variables regarding negative and positive words are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. The data are split into two subsamples: one comprising high risk M&A deals, while the other is based on low risk deals. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 10: Additional Check: Managerial Tone as a Function of Performance

Independent Variables	M1: LMneg	M2: LMpos	M3: Pessimism
BHAR	−0.0511**	0.0313*	−0.0597***
	(−3.04)	(2.20)	(−3.66)
LMneg		0.1478***	
		(6.36)	
LMpos	0.1073*		
	(4.72)		
LMunc	0.0809	0.0207	0.0661
	(1.34)	(0.45)	(0.97)
LMmod	0.3264***	0.2203***	0.2114**
	(4.11)	(3.95)	(2.70)
LMcon	0.1063**	−0.0719***	0.1270**
	(2.28)	(−4.18)	(2.82)
LMlit	0.2007***	−0.1290***	0.2368***
	(4.26)	(−4.45)	(5.63)
Ln Total Words	0.1635***	−0.0267	0.1614***
	(9.00)	(−0.81)	(8.43)
Synergy	0.0020	0.0105	−0.0024
	(0.13)	(0.68)	(−0.30)
Financial	0.0747	−0.0160	−0.0040
	(1.52)	(−0.43)	(−0.21)
Method of Payment	0.0414***	−0.0060	0.0406***
	(3.81)	(−0.63)	(3.91)
Hostile	−0.0007	0.0044	−0.0024
	(−0.09)	(0.65)	(−0.30)
Cross-Border	−0.0072	−0.0066	−0.0040
	(−0.41)	(−0.29)	(−0.21)
Deal Size	−0.1384***	−0.0008***	−0.1271***
	(−4.30)	(−0.02)	(−3.92)
Relative Size	−0.9231	4.5955*	−2.7099
	(−0.51)	(1.95)	(−1.04)
Firm Size	0.1293***	0.2549***	0.0159
	(6.58)	(5.86)	(0.57)
Cash Flow	−0.0508*	0.0438	−0.0645
	(−2.10)	(1.24)	(−1.81)
Leverage	0.0392	−0.0928	0.0737
	(0.80)	(−1.81)	(1.22)
Book-to-Market	0.0239	−0.0097	0.0259
	(1.27)	(−1.10)	(1.25)
Firm Risk	0.2306	0.5228*	0.0007*
	(0.86)	(1.20)	(0.00)
Cultural Distance	0.0163	0.0393	−0.0009
	(1.31)	(1.44)	(−0.05)
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Adjusted R^2	0.4101	0.2035	0.3038
Mean VIF	3.05	3.06	3.08
No. of deals	9,329	9,329	9,329

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The main independent variable is takeover performance (*BHAR*) for a 36-month time window. The main dependent variables *LMneg*, *LMpos*, and Pessimism (measured as, Pessimism = *LMneg* − *LMpos*) are based on the Loughran and McDonald Sentiment Word Lists 2018. Data are comprised of 10,343 M&A deals from the United States, over the period from 2000 to 2016. The data is split into two subsamples: one comprising *cross-border* M&A deals, while the other based on *domestic* deals. *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Managerial Talk of Trust and Takeover Performance

Bushra Ghufran

Abstract: The current study investigates the usage of virtuous language in the management discussion and analysis (MD&A) section of SEC filings (10-K Form) and the prognostic power of such language for takeover performance. The sample under study, obtained from Bloomberg, is comprised of a large number of M&A deals from the United States that took place between January 2000 and October 2016. The empirical results, based on textual analysis, reveal that *trust* is negatively associated with long-term takeover performance, suggesting that managerial virtuous talk is, in practicality, an indication of lower post-acquisition gains for the acquirers in the long run. Furthermore, takeover returns are found to reflect textual information on trust with a delay, owing to general inattention and inability of investors to process soft cues inherent in textual content and to managers purposefully lulling investors to keep them from paying attention and identifying managerial misconduct. Quite interestingly, the significance of virtuous talk becomes more evident in the post-crisis period due to relatively higher uncertainty linked with evaluating such kind of deals on the basis of hard information alone. Finally, an inflated virtuous talk when coupled with pessimistic tone, the ability of managerial 'good talk' to create a trustworthy image and to distract investors reduces and the predictive power of managerial *trust* talk increases even more. Overall, it is concluded that managerial virtuous talk should not be regarded as a 'cheap talk'. It is, in fact, very pertinent for predicting future takeover returns in the long run.

Keywords: mergers and acquisitions, virtuous language, trust words, takeover performance, managerial trust

JEL Classifications: G14, G30, G34, G41, L25

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"Let every eye negotiate for itself and trust no agent" – (Shakespeare, 2.1, 178-179, 1600).

1. INTRODUCTION

If humans could be counted on to conduct themselves with honesty at all times, then uncertainty, complexity, and agency arrangements would pose no extra problems in economic exchanges and there would arise no issues of managerial distrust. On the contrary, Williamson (1993) argues that humans have the propensity of "self-interest seeking with guile" that may include more blatant forms of deceiving or more camouflaged but calculated ways of falsifying, disguising, and confusing information disclosures. Contracts, controls, and procedures could be established to safeguard shareholders' interests, however, trust-induced embedded relationships increase the prospects that all the parties will work on the expectations of faith instead of self-interests even in the absence of contracts (Uzzi, 1997). Moreover, the relationships based on 'trust' are more satisfying and rewarding than those based on contracts (Kramer and Cook, 2004).

Research suggests that the economic efficiency of a nation is highly correlated with the institutional trust and the level of trust inherent in the society (Fukuyama, 1995). A comprehensive meta-analysis on post-acquisition takeover performance by King et al. (2004) unveils that many prominent factors, such as method of payment, firm relatedness, and acquirer's prior acquisition experience, are not significant indicators of post-acquisition performance. More recent research on M&As has paid rather more attention to the 'softer', less tangible, sociocultural and human characteristics contributing to takeover performance (e.g. see Breuer et al., 2020; 2018a; Yan, 2015). Thus, it comes with no surprise that trust, as a strategic element among sociocultural variables, is also considered to be a decisive driver of mergers and acquisitions (M&As) outcomes.

The effect of trust in the context of M&As is highly complex owing to the presence of huge information asymmetries and possible managerial opportunistic behavior. The inherent problems of opportunism, vulnerability, and uncertainty make the overall M&A process difficult to manage (Lander & Kooning, 2013; Graebner, 2009; Cording et al., 2008) and thus make the softer element of 'trust' of paramount significance to all the parties involved (Trąpczyński at al., 2018). Trust is found to be the most delicate when it comes to the repercussions of M&As. The uncertainties arising after a merger's announcement are perceived to be quite favorable to propagate distrust, as M&A outcomes are difficult to predict and the parties with less or no power feel the most vulnerable (Chua et al., 2005; Schweiger and Walsh, 1990). In such circumstances, even a little act of infringement would suffice to 'tip the scales' and break trust (Dirks and Ferrin, 2001).

Most of the research on trust in the context of M&As revolves around management and subordinate relationship, analyzing employees' trust in management (Ozag, 2006, Zaheer et al., 1998) or employees' trust in overall organization (Stahl et al., 2011), but the trustworthiness of acquiring firm's management towards investors remains relatively less understood. I therefore try to explore the human side of mergers and acquisitions (M&As) and its impact on takeover outcomes, albeit from a different perspective using textual analysis.

Flores and Solomon (1997), while referring to agents, argue that trust is not only formed out of a relationship; more importantly, it is the outcome of communication in that connection. Most recent research also indicates that the descriptive part of annual statements does not display mere 'cheap talk' and that it is rather important communication for all sorts of users, even skilled ones, e.g. financial analysts (Breuer et al., 2018b; Loughran and McDolald, 2011; Tetlock 2008). There is, however, a possibility that management is not truly virtuous and that its discourse of virtue and integrity in the management discussion and analysis section is purposely deceitful and a mere fabrication to create a trustworthy image and to distract outside

investors and other stakeholders (Breuer et al., 2018b). Hence, the need to understand managerial virtuous talk used to create trustworthiness towards investors has become even more critical for predicting post-acquisition performance. I therefore build on the idea that the concept of trust has a critical role in defining post-acquisition takeover gains and I try to investigate managerial trust talk in financial disclosures that managers use to advertise their trustworthiness towards investors. I aim to decode managerial trust talk used in the management discussion and analysis (MD&A) section to ascertain if it is a true portrayal of managerial trustworthiness towards investors, signaling improved takeover outcomes, or a mere fabrication aimed at lulling investors in order to hide performance problems, ultimately indicating poor post-acquisition gains. Additionally, I try to probe the diffusion mechanism of managerial virtuous talk; exerting a direct impact on market participants' behavior or predicting future takeover performance only gradually (detailed discussion in Section 5.2.).

The current study contributes to the existing literature in multiple ways. First, it contributes to the emerging research stream of trust in the context of M&As. There is considerable research that explores the role of trust in M&As; however, most of the research to date has focused on the trust of surviving employees in the acquiring management and firm (Nikolaou et al., 2011; Ozag, 2006). By determining the role of managerial trust from the investors' perspective, this paper contributes to the relatively unexplored role of managerial trust on takeover performance. Second, the trust-related human side of M&As has been tested with the help of a number of theoretical approaches using case studies, surveys, and interviews employing only small sample sizes (e.g. Lander and Kooning, 2013; Graebner, 2009). I, however, contribute to the trust-related literature in M&As investigating a relatively large sample size by using a different methodology that is based on textual analysis. Third, the transmission mechanism of managerial virtuous talk to create trustworthiness towards investors is not addressed in literature so far. The current study tries to establish a clear distinction that whether the managerial virtuous talk

'predicts' takeover outcomes or exerts an 'impact' on takeover performance. Finally, it not only contributes to the trust-related research, it also adds to the relatively nascent research stream of textual analysis in M&As.

The remainder of the paper is structured as follows. Section 2 provides the theoretical framework and hypothesis development. Section 3 describes the data and methodology, while Section 4 explains the empirical analysis. Sections 5 and 6 outline the robustness checks and additional analyses respectively, while Section 7 discusses the conclusions drawn.

2. THEORETICAL FRAMEWORK AND HYPOTHESIS DEVELOPMENT

The trust dynamics (i.e. antecedents and consequences of trust), in addition to circumstantial factors affecting trust, are claimed to be critical to the success of M&As for many years after the deal is closed (e.g. Chua et al., 2005; Schweiger et al., 1987). Research on M&As demonstrates that trust exists at different levels within and between organizations. Some researchers investigate trust as a firm level phenomenon (e.g. see Vlaar et al., 2007; Das and Teng, 1998; Ring and Van de Ven, 1992). Others, on the contrary, examine it at the individual level or group level, or as a multi-layered concept (e.g. Currall and Inkpen, 2002; Zaheer et al., 1998) that particularly focuses on trust liaison between the acquiring firm's management and the acquired company's employees.

Despite there being a considerable, yet generally anecdotal, evidence emphasizing the pivotal role of trust in overall merger and acquisition process, we have not yet entirely explored the role of trust in M&A outcomes (Stahl et al., 2011). I aim to add to the current literature in this direction to bring about better comprehension of the topic under discussion. I seek to conceptualize trust at the managerial level, by analyzing the virtuous language used by managers in annual financial reports to advertise their trustworthiness towards investors and what signal such language conveys about post-acquisition M&A performance.

Rogers and Grant (1997) suggests the descriptive sections of the annual statements (e.g. management discussion and analysis) provide far more information than basic financial statements do. The quality of communication, however, is recognized to be crucial in determining the level of trust in the M&As (Stahl et al., 2011). Hogan and Overmyer-Day (1994) also argue that it is not the amount of information provided by the acquirer that matters; among other things, it is rather the quality of information that affects trust. An absence of fair communication, on the contrary, induces a higher level of rumors, job insecurity, mistrust, apprehensive feelings, and ultimately poor financial outcomes (Marks and Mirvis, 1998; Buono and Bowditch, 1989). Annual reports are regarded as an open communication platform that managers use to advertise and preach their philosophies and to flaunt themselves and their companies (Ingram and Frazier, 1983). McConnell et al. (1986) also perceive such accounting descriptions as 'carefully drafted public relations documents' that offer content with intended purposes. Thus, I postulate that management's 'virtuous talk' in the financial disclosures is not a 'cheap talk'; it, in fact, not only influences investors' perception of the management's trustworthiness but also the post-acquisition performance over an extended period.

Following Breuer et al. (2018b), I strive to investigate managerial virtuous talk by formulating two competing propositions. The first proposition contends that managers do not excessively engage in virtuous talk to exhibit their trustworthiness unless they truly believe it and are willing to honor the same. Karpoff et al. (2008) and McMillan and Woodruff (2000) suggest that managers refrain from opportunistic behavior in order to build and maintain their reputation because they have an inherent fear of losing their good name and credibility due to any unreasonably sweet talk. Davis et al. (2015) too claim that exaggerated language, which may carry lies and deception, is considered to be costly by management. They further put forward that managers with investment banking experience are more careful and try not to inflate investors' expectations, as they know that the negative repercussions would be even stronger.

Gneezy et al. (2018) and Akerlof and Kranton (2000) also reaffirm that individuals are concerned about how they are perceived by others and try to maintain a credible first image even if further interaction is least likely. Overall, my first presumption argues that the virtuous talk, that managers use to advertise their trustworthiness towards investors, is authentic and not an indication of managerial opportunistic behavior and hence consequently indicates improved takeover outcomes over the long run. I formulate the following hypothesis accordingly,

H1: Managerial virtuous talk to advertise the management's trustworthiness signals a higher long-term takeover performance.

The second proposition, on the other hand, recognizes that management has no consideration of the potential negative repercussions associated with exaggerated virtuous talk. Managers may rather pursue to distract investors by magnifying their own trustworthiness so that they may lull investors towards inattentiveness in order to hide their opportunistic behavior under the cover of 'sweet talk'. Breuer et al. (2018b) also argue that trust rhetoric in the financial disclosures is a mere well-planned-out discourse aimed at 'depicting' a more authentic and trustworthy image to satisfy investors. In the same vein, Craig and Amernic (2018) reason that carefully crafted speeches are aimed to create an intended impression of the management. Since 10-K files are very cautiously created drafts by management, it is expected that management purposefully strives to use virtuous language to exhibit a trustworthy image. Loughran et al. (2009) also endorse that unethical managers are more likely to engage in ethical talk in order to conceal their wrong doings. Hence, I presume that managerial virtuous talk may be aimed at appeasing investors to keep them from paying attention to managerial opportunistic behavior towards investors, which may predict reduced M&A performance over an extended period. I formulate the following hypothesis in this direction,

H2: Managerial virtuous talk to advertise the management's trustworthiness signals a lower long-term takeover performance.

In order to obtain results, with the help of textual analysis of unique trust words proposed by Audi et al. (2016), I aim to decrypt managerial virtuous language used in financial disclosures.

3. DATA AND METHODOLOGY

3.1. Dataset

The sample under study, obtained from Bloomberg, is comprised of a large number of M&A deals from the United States which took place between January 2000 and October 2016. I use the distinctive international securities identification number (ISIN) of each of the acquiring firm to match deal-related data with firm fundamentals-related data obtained from DataStream. To analyze managerial talk of trust, I attained all the relevant SEC's 10-k filings from the Electronic Data Gathering, Analysis, and Retrieval (EDGAR) website (www.sec.gov).

The information stored in the EDGAR index can be identified with the help of Central Index Key (CIK) codes. I obtained CIK codes for the acquiring firms from the Thomson Reuters Eikon using matching ISINs, and I ultimately employed these codes to obtain respective 10-K filings from the EDGAR index. After downloading the required statements, I removed tables, html formats, and codes from the text to make it usable for analysis. I then obtained the MD&A section of 10-K filings, as I am more interested in analyzing the language used by management when presenting financial outcomes and discussing policies and structures, corporate risks, legal issues, future perspectives, and new ventures. The MD&A section completely represents firm information and managerial beliefs and opinions through the tone that managers use (Audi et al., 2016; Loughran & McDonald, 2011).

I follow Frijns et al. (2013), Loughran and McDonald (2011), and Malmendier and Tate (2008) among others, and analyze only those deals that meet the specifications outlined below,

- The acquirer is listed on NYSE, AMEX, or NASDAQ.
- Both domestic and cross-border deals.

- Deals that imply a change of control.

- Deals with a transaction value of greater than 1% of the acquirer size.

- Deals with a transaction value above US$ 1 million.

- Deals where the MD&A Section has 250 words or more.

I began with a sample comprising 13,365 M&A deals originally, before matching ISINs with the CIK codes to carry out any textual analysis. I excluded those deals where ISINs had no corresponding CIK codes matched in the database. Additionally, I excluded certain deals where the MD&A section carried less than 250 words. By doing so, I ultimately reached a sample comprised of 10,764 M&A deals from the US for the purpose of present study.

3.2. The Dependent Variable: Takeover Performance

In order to compute abnormal returns for each acquiring firm, I use ISINs to obtain daily stock returns for each firm and the corresponding daily market returns from DataStream. Following Chakrabarti et al. (2009) and Lehn and Zhao (2006), I employ a buy-and-hold approach based abnormal returns to capture long-term post-acquisition takeover performance. Lyon et al. (1999) regard this approach as a preferred way to analyze long-term returns, as it offers a precise estimate of investor returns from stock purchases. I follow Chakrabarti et al. (2009) and estimate the *BHAR* (buy-and-hold abnormal return) of the acquirer over the market returns to capture the overall investment returns of a share if it is purchased on the day of the announcement of merger and acquisition.

I compute the *BHAR* for a 36-month long time window after the takeover announcement in the present event-study. The regression model I employ for this purpose is as follows:

$$BHAR_{it} = \prod_{\tau=t-d+1}^{t}(1 + R_{i\tau}) - \prod_{\tau=t-d+1}^{t}(1 + R_{m\tau}). \tag{1}$$

$BHAR_{it}$ is the buy-and-hold abnormal return of acquirer i at time t, $R_{i\tau}$ is the daily return of the acquirer at time t, and $R_{m\tau}$ is the daily market return for $t-(t-d+1)+1 = d$ trading days over the 36 months after the acquisition.

3.3. The Key Independent Variable: Managerial Talk of Trust

Despite the inherent difficulty of gauging the abstract concept of trust many attempts have been made to do so, in particular, Butler and Cantrell's (1984) proposed five important components of trust (i.e., integrity, competence, consistency, loyalty, and openness). Guiso et al. (2015) have followed noteworthy approaches to substantiate the concept of trust. They outlined 10 'integrity' words and scrutinized their presence on web pages for Standard & Poor's 500 (S&P 500) firms. Additionally, they carried out employee surveys to investigate whether managers are ethical and honest in their business conduct and if their actions match their words. Audi et al. (2016), on the other hand, preferred to objectively investigate the word usage of 'trust' in the MD&A section of their 10-K reports as they believed that the MD&A section offers a clear illustration of a management's views about different aspects of the firm. They argued that the MD&A section is an important document that is carefully drafted by managers for the information of outside investors and other parties regarding a firm's general operations, past year performance, and future plans. They outlined a list of 21 distinctive 'trust' words based on the five components of trust suggested by Butler and Cantrell (1984). They used the list as a proxy for the level of trust in a corporate culture and hypothesized that the firms with a more frequent count of trust words have a culture that implicates greater trust.

My key variable *trust* words is based on the 21 unique *trust* words, proposed by Audi et al. (2016) and occurring in the MD&A section of the 10-K report. The 21 words forming the *trust* language are accountability, character, ethics, ethical, ethically, fairness, honest, honesty, integrity, respect, respected, respectful, responsible, responsibility, responsibilities, transparency, trust, trusted, truth, virtue, and virtues. I follow Breuer et al. (2018b) and

formulate my main variable of interest as a sum of total number of occurrences for each of the aforementioned 21 words.

3.4. Control Variables

In order to be sure that non-trust-related words or deal-, firm-, and country-specific characteristics do not determine my analysis, I include a number of relevant control variables and summarize them in Table 1.

3.4.1. Deal-Specific Control Variables

I control for a number of deal-specific variables obtained from Standard & Poor's Capital IQ database. First, I control for *synergy* benefits linked to the relatedness of the acquirer and target firms. It is constructed as a dummy, which takes the value of 1 if both the acquirer and the target belong to the same industry, and 0 if not. If both the acquiring and target firms share the same industry, overall takeover returns increase due to reduced post-acquisition integration costs (Morck et al., 1990). Next, research reveals that M&As from the *financial* sector bring in higher takeover gains owing to their high experience in carrying out deals and more access to useful information (Cybo-Ottone and Murgia, 2000). Hence, I control for this and develop a dummy variable that takes the value of 1 if an acquirer is from the *financial* sector, and 0 if not. Further, how a merger is funded – exclusively through stocks or through other ways (such as cash only or a combination of cash and stocks) – is an important determinant of takeover returns (Shleifer and Vishny, 2003). I also control for *method of payment,* defining a dummy variable with a value of 1 if a merger payment is made through stocks only, and 0 if not.

Next, I identify whether a merger deal is *hostile* and carried out forcefully or in a friendly manner where the target management is taken into confidence. For this purpose, I formulate a dummy variable that assumes the value of 1 if mergers are *hostile*, and 0 if not. Research discloses mixed results for hostile acquisitions, some arguing that hostile bids yield lower

returns (Servaes, 1991), while others find no noteworthy bearing of hostile deals on takeover outcomes (Guo and Petmezas, 2012). Thus, I control for *cross-border* deals, by introducing a dummy variable, which takes the value of 1 if deals are *cross-border*, and 0 if not. Some recommend higher returns associated with going across the border (Doukas and Travlos, 1988), while others confirm reduced takeover gains for such deals (Moeller and Schlingemann, 2005). Additionally, I control for the possible effect of *deal size*, calculated by taking the natural logarithm of transaction value. Some findings suggest higher returns for larger deals (Linn and Switzer, 2001), while others exhibit lower takeover performance, owing to higher integration costs and complications linked to bigger deals (Alexandridis et al., 2013; Ahern, 2010). Finally, I account for the *relative size* of a deal, computed by dividing the transaction value by acquirer's size. Some propose that larger targets are found to reduce operating synergies and takeover returns owing to greater integration costs (Clark and Ofek, 1994), while others find no substantial influence on takeover gains (Powell and Stark, 2005).

3.4.2. Acquirer-Specific Control Variables

Among acquirer-specific characteristics, I control for *firm size,* which is regarded to be a prominent determinant of takeover performance. It is calculated as a natural logarithm of total assets of the acquiring firm, similarly to Gabaix and Landier (2008). It is argued that large sized acquirers may have reduced post-acquisition performance due to greater agency issues (Jensen and Meckling, 1976). Next, I account for *cash flow,* measured as the free cash flow normalized by total assets of the acquiring firm. Jensen (1986) contends that investment decisions motivated by free cash flow generally result in reduced returns. Further, I control for *leverage* of the acquirer, measured as the total debt to total assets ratio. There are mixed outcomes, where some advocate a negative impact of leverage on takeover gains (Ammann et al., 2011), while others perceive no noteworthy influence on mergers (Aggarwal, 2009). Furthermore, the level of firm *investment* is regarded an important determinant of firm performance (Heshmati and

Lööf, 2008). Following Malmendier and Tate (2008), I compute *investment* as capital expenditures and normalize it by total assets. Past returns are also considered to significantly affect post-acquisition takeover returns (Ahern et al., 2015; Brown & Sarma, 2007). Hence, I control for return on assets (*ROA*) to account for an acquirer's profitability in comparison to its total assets. Additionally, I consider an acquirer's overall financial performance measure, more specifically earnings before interest, taxes, depreciation, and amortization (*EBITDA*). Lastly, I account for *firm risk* (also known as systematic risk) to be sure that it does not drive regression results and that the construction of the model of the present study is risk adjusted. Research regards systematic risk to be the only pertinent risk that captures how sensitive firm returns are to the changes in corresponding market returns (Lubatkin, 1983). I compute it as a slope coefficient of regression of daily returns of the individual acquiring firm on daily market returns over a 3-year time period.

3.4.3. Country-Specific Control Variable

I control for cultural differences between the acquiring and the target firms by estimating *cultural distance* between their respective countries. Following Chakrabarti et al. (2009), I compute this measure by obtaining information on cultural characteristics (i.e., individualism, masculinity, uncertainty avoidance index, long-term orientation, and power distance index) from Hofstede et al. (2010). Mergers and acquisitions are expected to outperform when both the acquiring and the target firms are culturally close (Ahern et al., 2015; Chakrabarti et al., 2009).

3.4.4. Additional Word Controls

In addition to the main variable of interest: the *trust* word count, I account for *audit* and *control* words appearing in the MD&A Section of 10-K reports. Following Audi et al. (2016), I check for the frequency count of *audit* words that include audit, audits, audited, auditor, and auditing and *control* words that include controls, procedure, and procedures. It is suggested that those

firms that have a higher frequency count of *trust* words in their MD&A section are also found to have more auditing and controlling words in their discourse because they deem it necessary to build *trust* by highlighting their controlling mechanisms and auditing verification to outside investors (Audi et al., 2016). Hence, in order to be sure that my results are not driven by *audit-* and *control*-related words, I control for their frequency count in the current model. Furthermore, I control for *total words*, computed as the natural logarithm of the total number of words appearing in the MD&A section.

Table 1 defines the main dependent and independent variables in addition to deal-specific, acquirer-specific, country-specific, and other word controls. Additionally, it demonstrates descriptive statistics i.e. mean values and standard deviation.

>>> Table 1 goes about here <<<

Table 2 displays the correlation matrix.

>>> Tables 2 about here <<<

4. EMPIRICAL FINDINGS

I conduct a multivariate regression analysis in order to substantiate whether *trust* words appearing in the MD&A section offer any predictions for long-term gains to the acquirer. I compute ordinary least squares with robust standard errors in order to test the hypothesis outlined earlier. For the purpose of my study, I formulate the following regression model:

$$BHAR_{it} = \alpha + \beta_1 \cdot Trust_{it} + \sum_{j=1}^{m} \beta_j \cdot Control_{itj} + \varepsilon_{it}. \tag{2}$$

$BHAR_{it}$ refers to the abnormal return of acquirer i at time t, as explained in (1). $Trust_{it}$ captures the predictive power of *trust* words for acquirer i at time t, whereas $Controls_{itj}$ accounts for the deal-specific, acquirer-specific, country-specific and other words-related control variables at time t that may influence an acquirer's abnormal returns ($BHAR_{it}$). The mean variance

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inflation factor values (vif) are discernibly low in my regression models and multicollinearity among the variables in the sample employed in my study is also observed to be quite low.

>>> Table 3 goes about here <<<

Table 3 reports the initial regression analysis that is carried out at five levels. First, in Model 1 I regress unique word counts of *trust* against *BHAR* for a 36-month time window. Subsequently, I introduce other word lists-, deal-, acquirer-, and country-specific controls into Model 1 and exhibit them as Models 2, 3, 4, and 5. In order to reduce the potential problems of serial correlation and to reach better estimates of standard errors, I cluster standard errors at the acquirer's industry level in all of the above-mentioned regression models. Additionally, I control for industry and year fixed effects to reduce the likely glitches of unobserved heterogeneities.

In order to discuss the current results and to conduct a further sensitivity analysis to confirm the robustness of initial conclusions, I proceed with Model 5, which is the most refined regression model with all the pertinent control factors taken into account. Findings indicate that *trust* is negatively associated with long-term takeover performance in all of the aforementioned regression models. It suggests that managerial talk of *trust* predicts reduced long-term gains for the acquirers. Hence, the hypothesis H2 outlined earlier in Section 2 receives initial confirmation. In contrast, current empirical inferences offer no support to the hypothesis postulating that managerial talk of *trust* predicts a positive post-acquisition performance of the acquirer. Results clearly illustrate that managerial talk of *trust* is a mere display of inflated virtuous talk aimed at creating a trustworthy image towards investors, which, in practicality, is not an indication of improved takeover performance. These findings are completely in line with those put forward by Breuer et al. (2018b), suggesting that managerial virtuous talk to advertise

their trustworthiness towards investors is a manufactured speech that distracts investors and hides an otherwise poor performance.

Next, I discuss the economic significance of the initial outcomes from Model 5. All of the main dependent, independent, and control variables used in all of the regression models are based on standardized values. The mean and standard deviation values of *BHAR* before standardization are −27.70% and 97.03% respectively. Such a reduced *BHAR* is typical, as achieving a positive abnormal holding period return is usually difficult in the case of mergers and acquisitions. In Model 5, *trust* has a coefficient of −0.0318, which suggests a one-standard-deviation in the use of a *trust* word count in the acquirer's financial reporting will induce a $-0.0318 \times 97.03\% = 3.09$ percentage points drop in the measure of *BHAR.* In comparison to the absolute mean value of *BHAR,* this equals an 11.16% decline in *BHAR*. Hence, my findings are economically significant; underlining that managerial talk of *trust* is a significant predictor of reduced gains for the acquirer in the long run.

The findings regarding control variables are generally in line with the earlier literature. Acquirers from the *financial* sector do not demonstrate higher post-acquisition returns. Consistent with the signaling theory proposed by Myers and Majluf (1984), the stock-financed M&As result in significantly reduced takeover returns. Similar to findings from Ahern (2010), large sized targets, as determined by *deal size*, exert a significant negative effect on post-acquisition takeover gains. Targets larger relative to the acquiring firm, however, have no noteworthy influence on takeover performance, consistent with Powell and Stark (2005). The level of *leverage* has a significant negative association with takeover gains, same as claimed by Ammann et al., (2011). *Firm risk* is also observed to significantly reduce long-term takeover gains. Overall, it is maintained that the control variables outlined in the model assume the expected signs in regression outcomes.

5. ROBUSTNESS CHECKS

In order to confirm the strength of my initial conclusions, I carry out the following tests.

5.1. Controlling for Alternate Performance Measures

First, I use return on assets (*ROA*) and market to book ratios (*MTBR*) based on a 36-month window as alternative measures of takeover performance. The revised results, as reported in Table 4, reveal that managerial talk of *trust* continues to signal negative long-term post-acquisition performance. Hence, these findings confirm the robustness of my early inferences.

 >>> Table 4 goes about here <<<

5.2. Controlling for Window Length

Next, I reproduce regression outcomes for an alternative measure of long-term post-acquisition takeover performance by reducing the window length from 36 months to 24 months. The results, as reported in Table 5, suggest a significant negative association of *trust* with 24-month long gains to the acquirer (*BHAR*). Hence, these conclusions confirm that managerial talk of *trust* has a significant predictive power for the long-term post-acquisition takeover performance. Additionally, I continue to shorten the time windows to 12, 9, 6, 3, and 1 month(s) and replicate my basic regression model results. Managerial talk of *trust* is found to have no predictive power for short-term gains of 1-month to 9-month time windows. From 12 months onwards, a significant negative association between *trust* and *BHAR* can be observed. It is imperative to observe that the predictive power of managerial talk of *trust* gains strength as I increase the window length.

Finally, I check for announcement effects based on 3- and 5-day time windows. I, however, do not find any significant predictive power of managerial virtuous talk over these announcement windows. I summarize all of these findings in Table 5.

These findings regarding different time windows unveil very attention-grabbing relationship between managerial virtuous talk and takeover performance. Generally, there can be two transmission possibilities of managerial virtuous talk that is used to create managerial trustworthiness towards investors. First, managerial virtuous talk directly influences the behavior of market participants. In this scenario, one may expect much faster market reactions in terms of short-term to medium-term takeover performance effects. The findings from current study, however, do not endorse this transmission mechanism. Seconds, managerial virtuous talk bears a predictive power for the takeover outcomes and the subtle textual information takes some time before more evident quantitative information is processed by market participants. In this setting, managerial virtuous talk has no direct impact on post-acquisition gains, de facto, managerial virtuous talk has a correlation with the takeover outcomes. Since I do not observe any short-term performance effects, my findings favor the second transmission mechanism, where managerial virtuous talk to create a trustworthy image acts as a predictor of long-term takeover performance that investors ignore mistakenly. Breuer et al. (2018b) also recognize market participants to be irrational and/or boundedly rational, who miss subtle textual cues and fail to exploit all the available information in entirety. They further suggest this failure to exploit the information maybe because managers intentionally use deceptive language to keep investors from paying attention and figuring out managers' opportunistic behavior.

>>> Table 5 goes about here <<<

5.3. Controlling for Time Effects

Furthermore, I investigate how the most recent financial crisis has affected the outcomes. To do so, I divide the overall sample into two sub-groups, pre-crisis period (2000 to 2007) and post-crisis period (2008 to 2016), and I replicate the regression results. The findings, as outlined in table 6, reveal quite an interesting pattern. *Trust* talk by the management during the pre-crisis period is found to have insignificant association with long-term takeover performance; however

quite interestingly, during the post-crisis period managerial virtuous talk has a significant prediction of the poor post-acquisition gains for the acquirer. It highlights a very interesting phenomenon that due to relatively higher uncertainty surrounding post-crisis M&A deals, evaluating such kind of deals on the basis of hard information alone becomes difficult and the predictive power of textual information on trust rises even more.

>>> Table 6 goes about here <<<

6. ADDITIONAL CHECKS

In order to gain a better understanding of the matter, I carry out the following additional analyses:

6.1. Cross-Border vs. Domestic Mergers

The research outcomes regarding the performance impact of cultural distance have generally remained inconclusive (e.g. see Stahl and Voigt, 2008; Weber and Drori, 2008). However, there is evidence that shared norms and values enhance *trust* (Lewicki et al., 1998; Sarkar et al., 1997), while differences in basic values erode *trust* (Sitkin and Roth, 1993). In any case, it is intuitive to investigate the role of managerial *trust* in different kinds of mergers (i.e. domestic vs cross-border). For that purpose, I split the overall sample into two sub-samples, and replicate the regression results in order to evaluate the predictive power of managerial *trust* for takeover performance for the sub-samples.

>>> Table 7 goes about here <<<

Findings, as outlined in Table 7, reaffirm my earlier inferences and reveal that managerial virtuous talk continues to predict poor merger performance.

6.2. Pessimistic Tone and Trust Talk

Lastly, I check how the significance of managerial virtuous talk varies with a pessimistic tone. For that purpose, I gradually introduce *pessimism* and the interaction term of *trust* with *pessimism* to the basic regression model and present the outcomes as Models M1 and M2 in Table 8. I obtain the most updated sentiment word lists from Loughran and McDonald (2018) and compute the pessimistic tone as below,

Pessimism = LM Negative Word Count – LM Positive Word Count. (3)

>>> Table 8 goes about here <<<

Results from Model M1 convey that both *trust* and *pessimism* predict poor long-term gains for the acquirers. Findings from Model M2 depict the interesting and convincing pattern that, in addition to the unique significant predictive power of managerial *trust* talk and pessimistic tone, the combined predictive power of *trust* and *pessimism* gives a significant negative signal of deteriorated post-acquisition performance in the long run. It is evident that if managers use exaggerated virtuous talk together with a higher pessimistic tone, the ability of trust language to create a trustworthy image and to distract investors in order to hide managerial opportunistic behavior and underlying performance problems reduces significantly. It maybe because investors take negative and pessimistic talk more seriously and are no more lulled by 'good talk'; hence, the predictive power of managerial *trust* talk rises more significantly. Literature already suggests that investors pay more attention to negative information (Tetlock et al., 2008), hence when it is coupled with trust talk it becomes difficult for managers to hide behind deceptive trust talk. However, as discussed earlier investors still do not react to such information immediately until more obvious 'quantitative' information becomes available and subsequently processed by investors.

7. CONCLUSION

This research aims to gain a deeper insight of managerial virtuous talk in corporate financial reporting and how it may come a long way towards predicting post-acquisition gains for the acquirer over an extended period of time. To draw inferences from the current study, I apply textual analysis to the MD&A Section of SEC filings (Form 10-K) of M&A deals that occurred between 2000 and 2016 in the United States. I specifically try to decode the managerial virtuous talk based on 21 unique *trust* words from (Audi et al., 2016) and what signal it conveys for long-term takeover performance.

Findings suggest that managerial talk of *trust* is negatively associated with merger outcomes and has a strong prediction of bad long-term takeover performance. The empirical results offer no support to the hypothesis that managerial talk of *trust* predicts higher post-acquisition returns for the acquirers. The current study reaffirms earlier findings by Breuer et al. (2018b) and unveils that managerial virtuous talk is a mere depiction of 'talking a talk', which managers use to construct their 'honest self-view' in order to support their undercover objectives based on opportunism. Very interestingly, takeover returns are not found to instantly reflect textual information on *trust*. It makes a clear distinction that managerial virtuous language does not cast a direct impact on market participants; in fact, it correlates with the takeover performance and predicts future takeover performance, which investors fail to notice. It takes some time for the textual information on trust to start reflecting in prices after investors have overcome their inattention due to more obvious information is made available later.

Another very interesting observation is that the significance of virtuous talk for mergers becomes relevant in the post-crisis period. It may be because, after a period of financial turmoil, evaluating already risky M&A deals based on quantitative information alone becomes insufficient. Finally, it is witnessed that an exaggerated virtuous talk once used together with a more pessimistic tone indicates an even increased predictive power of managerial *trust* talk. It

is because investors pay more attention to pessimistic tone and once used together with the trust talk, managers fail to hide poor results by distracting investors.

Overall, it is concluded that managerial virtuous talk should not be regarded as 'cheap talk' even if managers are just 'talking a talk', since it is very significant for predicting future takeover returns in the long run. Keen observant investors, who process textual information on *trust* used in the corporate filings timely, may earn greater returns by making quick reactions to such information. For example, in this case investors may earn more by shorting stocks where managers are observed to overly engage in virtuous talk through making frequent use of unique *trust* words.

These findings may be useful for policy makers who can try to curb managerial opportunistic behavior of creating an overly virtuous self-view, by devising profit contingent remuneration packages. Such measures, however, may help to mitigate the problem rather than completely eliminating it. Policy makers should try to create embedded relationships that work on the basis of faith and *trust* instead of self-interest. Lewis and Weigert (1985) and Mayer et al. (1995) also suggest that in the wake of uncertainty, the presence of trust-based relations is particularly important for controlling opportunistic behavior. It is, however, acknowledged that although it may sound simple, many restraints may occur, such as inner 'we versus them' barriers, and economic considerations may get in the way of achieving trust-based embedded relationships that may work even in the absence of external controls.

There are certain caveats to be considered when interpreting these results. The current research explores managerial *trust* talk only and that how it signals takeover performance. However, it does not capture market participants' personalities, as someone's ability and willingness to *trust* is also a function of his/her disposition and personality. Future research is expected to address these research gaps and to add to the M&A literature in this direction.

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Table 1: Description of Variables

Variables	Description	Mean	Standard Deviation
	Panel A: Managerial Trust Talk and Takeover Performance		
Trust Words	A total count of unique trust words from Audi et al. (2016).	4.729	11.427
Long-Term Performance	A measure of the buy-and-hold abnormal return (BAHR) over a 36-month window post-acquisition.	−0.277	0.970
	Source: *Audi et al. (2016) and DataStream*		
	Panel B: Deal-Specific Variables		
Synergy	Dummy variable indicating the merger as inter or intra industry, it undertakes the value of 1 if intra-industry, and 0 if inter-industry.	0.704	0.456
Financial	Dummy variable indicating if the acquirer is from financial sector or not. It assumes the value of 1 if financial and 0 if not.	0.170	0.375
Method of Payment	Dummy variable that categorizes the payment method of acquisition. It equals 1 if stock and 0 otherwise.	0.126	0.332
Hostile	Dummy variable that explains the nature of a bid. It equals 1 if bid is hostile and 0 if not.	0.003	0.050
Cross-Border	Dummy variable that describes the nature of a merger. It has a value of 1 if merger is cross-border and 0 if domestic.	0.209	0.407
Deal Size	Natural logarithm of the transaction value (in million US dollars) of the acquisition.	12.683	2.987
Relative Size	Transaction value to the total assets of the acquiring company (in percentage).	5.835	2.583
	Source: *Bloomberg and DataStream*		
	Panel C: Acquirer-Specific Variables		
Firm Size	Natural logarithm of the book value of total assets (in million US dollars).	13.761	2.164
Cash Flow	Cash flow to book value of assets ratio (in percentage).	−0.443	14.299
Leverage	Total debt to book value of assets ratio (in percentage).	0.339	5.894
Investment	Total investment normalized by total assets (in percentage).	0.087	1.584
ROA	Net income to total assets ratio (in percentage).	2.619	129.09
EBITDA	Earnings before interest taxes depreciation and amortization (in million US dollars).	0.709	3.532
Firm Risk	Systematic risk computed as a slope co-efficient of longitudinal regression of daily individual firm returns against daily market returns for a period of 3 years.	0.717	31.322
	Source: *DataStream*		
	Panel D: Country-Specific Variables		
Cultural Distance	Euclidian distance of the target's cultural values from that of the acquirer's by accounting for all five cultural values obtained from Hofstede et. al. (2010). **Source:** *Hofstede et. al. (2010)*	1.973	4.597
	Panel E: Other Word Lists		
Audit Words	Total count of audit words from Loughran and McDonald (2018).	3.605	6.326
Control Words	Total count of control words from Loughran and McDonald (2018).	2.196	5.297
Ln Total Words	Natural logarithm of total words in MD&A Section.	9.273	0.614
	Source: *Hofstede et. al. (2010)*		

This table presents the main independent variable *trust* Audi et al. (2016), long-term takeover performance, and control variables along with their mean values and standard deviation.

Table 2: Correlation Matrix

Variables	BHAR	Trust Words	Audit Words	Control Words	Ln Total Words	Synergy	Financial	Method of Payment	Hostile	Cross-Border	Deal Size	Relative Size	Firm Size	Cash Flow	Leverage	Investment	ROA	EBITDA	Firm Risk	Cultural Distance
BHAR	1																			
Trust Words	−0.01	1																		
Audit Words	−0.02*	0.13*	1																	
Control Words	0.01	0.25*	0.20*	1																
Ln Total Words	0.00	0.30*	0.26*	0.27*	1															
Synergy	−0.05*	0.08*	−0.04*	0.04*	0.01	1														
Financial	0.00	0.41*	−0.01	0.14*	0.18*	0.12*	1													
Method of Payment	−0.09*	0.03*	−0.05*	0.01	−0.13*	0.03*	0.09*	1												
Hostile	0.01	0.01	0.00	0.02*	0.01	0.02	−0.02	0.00	1											
Cross-Border	−0.04*	−0.06*	0.05*	−0.01	0.05*	−0.04*	−0.14*	−0.10*	0.00	1										
Deal Size	−0.21*	0.07*	0.11*	0.02*	0.28*	−0.01	−0.06*	−0.06*	0.02	0.05*	1									
Relative Size	0.04*	−0.01	0.00	0.01	−0.05*	−0.02*	−0.01	0.03*	−0.00	0.01	0.01	1								
Firm Size	0.02*	0.26*	0.13*	0.16*	0.48*	0.06*	−0.28*	−0.17*	0.03*	0.06*	0.53*	−0.09*	1							
Cash Flow	0.02*	0.01	0.00	0.00	0.02	0.01	−0.02*	−0.00	0.00	−0.02	0.00	−0.09*	0.05*	1						
Leverage	−0.03*	−0.01	−0.01	−0.01	−0.04*	−0.03*	−0.00	−0.00	−0.00	0.00	0.01	0.16*	−0.09*	−0.98*	1					
Investment	−0.02	−0.01	−0.01	−0.01	−0.04*	0.02*	−0.01	0.04*	−0.00	0.00	−0.02*	0.01	−0.06*	−0.00	−0.00	1				
ROA	0.03*	0.01	−0.01	0.01	0.03*	0.00	−0.03*	0.00	0.00	0.00	−0.00	−0.03*	0.08*	0.99*	−0.30*	−0.00	1			
EBITDA	−0.02*	0.11*	0.08*	0.05*	0.09*	−0.03*	−0.03	−0.04*	0.00	0.05*	0.22*	0.00	0.39*	0.00	−0.00	−0.01	0.01	1		
Firm Risk	−0.01	−0.00	0.00	−0.00	−0.03*	0.01	−0.00	−0.00	−0.00	−0.00	−0.02	0.15*	0.02*	0.01	−0.01	−0.01	0.03*	−0.00	1	
Cultural Distance	−0.03*	−0.06*	0.04*	−0.01	0.04*	−0.04*	−0.12*	−0.08	0.01	0.84*	0.04*	0.04*	0.05*	0.00	−0.00	−0.00	0.01	0.04*	−0.00	1

This table reports the correlation coefficients (with *$p<0.05$) of our main independent variable *Trust Words* from Audi et al. (2016), long-term takeover performance, and control variables.

Table 3: Regression Results: Trust Talk and Long-Term Takeover Performance

Independent Variables	M1	M2	M3	M4	M5
Trust Words	−0.0129*	−0.0221*	−0.0200*	−0.0352***	−0.0346***
	(−2.11)	(−2.90)	(−2.25)	(−3.26)	(−3.26)
Audit Words		−0.0132	−0.0082	−0.0046	−0.0043
		(−0.76)	(−0.48)	(−0.25)	(−0.23)
Control Words		−0.0163	−0.0146	−0.0174	−0.0173
		(−0.90)	(−0.96)	(−1.00)	(−0.99)
Ln Total Words		0.0546***	0.0406***	0.0022	−0.0025
		(4.66)	(3.32)	(0.12)	(−0.13)
Synergy			0.0252**	0.01197	0.0122
			(2.55)	(1.20)	(1.19)
Financial			0.0304	0.0109	0.0155
			(1.32)	(0.42)	(0.49)
Method of Payment			−0.1000***	−0.0784***	−0.0780***
			(−4.04)	(−4.09)	(−4.05)
Hostile			0.0022	0.0032	0.0033
			(0.18)	(0.26)	(0.27)
Cross-Border			−0.0197	−0.0238	−0.0072
			(−1.24)	(−1.42)	(−0.28)
Deal Size			−0.0051	−0.1061***	−0.1070***
			(−0.28)	(−7.21)	(−7.54)
Relative Size			0.0532***	−0.8699	−0.8930
			(5.58)	(−0.96)	(−0.98)
Firm Size				0.1213***	0.1201***
				(4.78)	(4.92)
Cash Flow				−0.2575	−0.2450
				(−0.59)	(−0.56)
Leverage				−0.0717**	−0.0697**
				(−2.98)	(−2.99)
Investment				−0.0135	−0.0135
				(−1.41)	(−1.43)
ROA				1.4148	1.3851
				(0.97)	(0.96)
EBITDA				−0.0159	0.0158
				(−1.60)	(−1.60)
Firm Risk				−0.5030*	−0.5111*
				(−1.98)	(−2.00)
Cultural Distance					−0.0174
					(−0.68)
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.1218	0.1265	0.1289	0.1311	0.1304
Mean VIF	1.79	1.77	3.03	3.39	3.47
No. of deals	10,764	10,764	10,164	8,958	8,928

This table shows standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 4: Robustness Check: Controlling for Alternate Performance Measures

Independent Variables	M1: ROA		M2: MTBR	
Trust Words	−0.0049**	(−2.44)	−0.0612***	(−3.58)
Audit Words	−0.0027	(−1.18)	−0.0137	(−0.62)
Control Words	−0.0004	(−0.29)	0.0047	(0.30)
Ln Total Words	0.0031	(0.65)	−0.0148	(−0.84)
Synergy	0.0053	(0.87)	0.0058	(0.26)
Financial	−0.0033	(−0.80)	−0.1488***	(−9.77)
Method of Payment	−0.0170*	(−1.99)	0.0169	(1.05)
Hostile	−0.0003	(−0.93)	−0.0094	(−1.10)
Cross-Border	0.0017	(0.20)	0.0284	(1.22)
Deal Size	−0.0247**	(−2.26)	0.0472	(1.31)
Relative Size	−0.9270	(−0.53)	7.5044	(0.79)
Firm Size	0.0536	(2.60)	0.0488	(1.22)
Cash Flow	−0.3775	(−0.42)	−2.0594	(−0.30)
Leverage	−0.0931	(−0.94)	2.3207***	(3.91)
Investment	−0.0187	(−0.86)	−0.0499	(−0.80)
ROA	0.9778	(0.75)	−5.0227***	(−3.58)
EBITDA	−0.0119*	(−2.04)	0.0036	(0.15)
Firm Risk	0.8589	(1.41)	5.2790**	(2.73)
Cultural Distance	−0.0134	(−0.92)	0.02888	(0.65)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0246		0.1863	
Mean VIF	3.69		1.91	
No. of deals	7,303		6,458	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *ROA* and *MTBR* 36 months after acquisition for Model M1 and M2 respectively. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 5: Robustness Check: Controlling for Alternate Time Windows

Independent Variables	24M	12M	9M	6M	3M	1M	5D	3D
Trust Words	−0.0304**	−0.0015*	−0.0007	0.0002	0.0001	0.0003	−0.0110	−0.0056
	(−2.264	(−1.89)	(−0.38)	(0.37)	(0.72)	(1.65)	(−1.63)	(−0.37)
Audit Words	−0.0060	−0.0000	0.0004	0.0002	0.0000	0.0001	−0.0075*	0.0000
	(−0.40)	(−0.03)	(0.26)	(0.65)	(0.47)	(1.33)	(−1.89)	(0.00)
Control Words	−0.0088	−0.0032**	−0.0052**	−0.0011**	−0.0002	0.0000	0.0103	0.0065
	(−0.78)	(−2.72)	(−2.73)	(−2.64)	(−1.20)	(0.10)	(1.33)	(0.99)
Ln Total Words	−0.0125	−0.0018	−0.0062*	−0.0018	−0.0009	−0.0006**	0.0208	0.0015
	(−0.68)	(−0.93)	(−1.85)	(−1.83)	(−1.93)	(−2.44)	(1.23)	(0.12)
Synergy	0.0113	0.0000	0.0005	0.0006	0.0009	0.0001	−0.0024	0.0008
	(1.08)	(0.01)	(0.19)	(0.12)	(0.62)	(0.41)	(−0.29)	(0.09)
Financial	0.0252	0.0022	−0.0070	−0.0009	−0.0005*	0.0000	0.0647**	0.0559**
	(0.67)	(0.35)	(−0.80)	(−0.89)	(−1.99)	(0.41)	(2.86)	(2.64)
Method of Payment	−0.0759***	−0.0041	−0.0049	−0.0007	0.0001	0.0005	−0.0192	−0.0207
	(−4.41)	(−1.44)	(−1.00)	(−0.83)	(0.34)	(1.26)	(−1.65)	(−2.03)
Hostile	0.0071	0.0017	0.0023	0.0005*	0.0001	0.0000	−0.0062	−0.0062
	(0.65)	(1.11)	(1.53)	(1.85)	(0.72)	(0.34)	(−0.67)	(−0.73)
Cross-Border	−0.0312	−0.0045	−0.0068	−0.0014*	−0.0003*	−0.0004***	−0.0039	0.0030
	(−1.26)	(−1.78)	(−1.58)	(−1.99)	(−2.19)	(−4.62)	(−0.26)	(0.14)
Deal Size	−0.1047***	−0.0103***	−0.0182***	−0.0015*	−0.0003	0.0004	−0.0085	0.0039
	(−7.20)	(−3.20)	(−4.06)	(−1.38)	(−0.92)	(0.83)	(−0.69)	(0.18)
Relative Size	−1.0859	−0.1559	−0.2918	−0.1124*	0.0506	−0.0171	−0.0304	−0.0596
	(−0.99)	(−0.63)	(−0.82)	(−1.95)	(1.04)	(−1.42)	(−0.04)	(−0.09)
Firm Size	0.1152***	0.0092**	0.0182***	0.0018	0.0002	−0.0011	0.0118	0.0025
	(4.34)	(2.39)	(4.65)	(1.77)	(0.57)	(−1.67)	(0.72)	(0.14)
Cash Flow	−0.3359	−0.1272*	−0.1772**	0.0789	0.0572	0.1070	−0.0305	0.3834
	(−0.97)	(−1.87)	(−2.44)	(0.67)	(0.92)	(0.95)	(−1.27)	(0.93)
Leverage	−0.0451	−0.0110	−0.0301*	−0.0051*	−0.0023**	−0.0009	0.0496	0.0016
	(−1.40)	(−1.55)	(−2.25)	(−2.02)	(−2.48)	(−0.37)	(0.75)	(0.03)
Investment	−0.0194*	0.0015	0.0027	0.0026	0.0014	0.0023*	0.0107**	0.0211***
	(−2.01)	(0.30)	(0.29)	(1.09)	(1.56)	(1.83)	(2.83)	(4.32)
ROA	1.9719	0.4996**	0.6981**	−0.2514	−0.1713	−0.3458	0.9138	−1.1404
	(1.81)	(2.34)	(3.07)	(−0.67)	(−0.84)	(−0.98)	(1.166)	(−0.90)
EBITDA	−0.0177	−0.0007	−0.0019	0.0001	0.0001	0.0003	−0.0036	0.0040
	(−1.65)	(−0.59)	(−1.27)	(0.19)	(0.73)	(1.78)	(−0.76)	(0.52)
Firm Risk	−0.4260	−0.0842*	−0.1460**	−0.0284	−0.0080	−0.0039	−0.1165	0.0162
	(−1.79)	(−2.25)	(−2.74)	(−1.57)	(−1.31)	(−0.93)	(−1.21)	(0.18)
Cultural Distance	0.0062	0.0023	0.0020	0.0005	0.0001	0.0003	0.0034	0.0021
	(0.29)	(0.80)	(0.39)	(0.49)	(0.50)	(1.60)	(0.22)	(0.10)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Adjusted R^2	0.1046	0.0745	0.0704	0.0614	0.0453	0.0584	0.0170	0.0124
Mean VIF	3.47	3.47	3.47	3.47	3.47	3.47	3.47	3.47
No. of deals	8,928	8,928	8,928	8,928	8,928	8,928	8,928	8,928

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for 24-, 12-, 8-, 6-, 3-, 1-month time windows, and *CAR* for 3- and 5-day time windows. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 6: Robustness Check: Controlling for Time Effects

Independent Variables	M1: Pre-Crisis		M2: Post-Crisis	
Trust Words	−0.0144	(−0.95)	−0.0472***	(−4.15)
Audit Words	−0.0163	(−1.46)	−0.0030	(−0.10)
Control Words	−0.0113	(−0.68)	−0.0173	(−1.17)
Ln Total Words	0.0040	(0.19)	0.0156	(0.44)
Synergy	0.0262*	(1.96)	−0.0046	(−0.29)
Financial	−0.0569***	(−4.30)	0.0094	(0.28)
Method of Payment	−0.0482*	(−2.09)	−0.0794**	(−2.82)
Hostile	0.0055	(0.38)	0.0146***	(6.17)
Cross-Border	−0.0039	(−0.14)	−0.0148	(−0.39)
Deal Size	−0.0881***	(−4.43)	−0.0822**	(−2.89)
Relative Size	0.0187	(1.31)	−1.1162	(−0.67)
Firm Size	0.0912***	(4.68)	0.1467***	(4.85)
Cash Flow	0.3350**	(2.63)	−0.5511	(−0.85)
Leverage	−0.0168	(−0.66)	−0.0851	(−1.58)
Investment	−0.0112	(−0.97)	0.0591	(0.56)
ROA	−0.3009*	(−2.19)	2.4337	(1.15)
EBITDA	−0.0034	(−0.30)	−0.0253	(−1.71)
Firm Risk	−0.0876***	(−3.78)	−0.4778	(−1.32)
Cultural Distance	−0.0123	(−0.39)	−0.0201	(−0.72)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.0802		0.1106	
Mean VIF	2.25		2.89	
No. of deals	4,532		4,396	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. The data are split at the end of 2007 and the baseline regression is re-estimated for two sub-samples. *Pre-crisis* comprises the period from 2000 to 2007, and *post-crisis* period comprises 2008 to 2016. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 7: Additional Check: Cross-Border vs. Domestic Mergers

Independent Variables	M1: Domestic		M2: Cross-Border	
Trust Words	−0.0302**	(−2.44)	−0.0355*	(−2.13)
Audit Words	0.0011	(0.06)	−0.0146	(−0.57)
Control Words	−0.0149	(−0.78)	−0.0230	(−1.69)
Ln Total Words	0.0013	(−0.06)	−0.0130	(−0.87)
Synergy	0.0138	(1.25)	0.0092	(0.45)
Financial	0.0927	(1.15)	−0.0464	(−1.09)
Method of Payment	−0.0779***	(−4.03)	−0.0532*	(−1.94)
Hostile	0.0107	(0.81)	−0.0230	(−1.81)
Deal Size	−0.1271***	(−8.24)	−0.0152	(−0.47)
Relative Size	−0.2374	(−0.75)	0.0333	(1.27)
Firm Size	0.1181	(4.38)	0.0801*	(2.00)
Cash Flow	0.0112***	(−0..24)	0.1270*	(2.18)
Leverage	−0.1375	(−0.72)	−0.0315	(−1.62)
Investment	−0.0711*	(−2.07)	0.0087	(1.08)
ROA	1.0246	(0.66)	0.0969	(1.70)
EBITDA	−0.0145	(−1.74)	−0.0122	(−0.66)
Firm Risk	−0.4999*	(−1.87)	−0.0295***	(−6.12)
Cultural Distance			−0.0177	(−0.55)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.1241		0.1843	
Mean VIF	4.05		2.32	
No. of deals	7,039		1,886	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. The data are split into two subsamples: one comprising *cross-border* M&A deals, while the other is based on *domestic* deals. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.

Table 8: Additional Check: Controlling for Interaction of Trust with Pessimistic Tone

Independent Variables	M1		M2	
Trust Words	−0.0267**	(−2.44)	−0.0242**	(−2.57)
Pessimism	−0.0701***	(−4.29)	−0.0690***	(−4.20)
Trust ×Pessimism			−1.0235*	(−1.89)
Audit Words	−0.0016	(−0.09)	−0.0014	(−0.08)
Control Words	−0.0059	(−0.36)	−0.0061	(−0.38)
Ln Total Words	0.0287*	(1.89)	0.0263	(1.71)
Synergy	0.0114	(1.14)	0.0113	(1.15)
Financial	0.0166	(0.59)	0.0169	(0.60)
Method of Payment	−0.0747***	(−4.07)	−0.0751***	(−4.08)
Hostile	0.0024	(0.20)	0.0024	(0.19)
Cross Border	−0.0074	(−0.28)	−0.0072	(−0.28)
Deal Size	−0.1092***	(−7.91)	−0.1088***	(−7.86)
Relative Size	−0.8489	(−0.97)	−0.8614	(−0.97)
Firm Size	0.1185***	(5.06)	0.1182***	(5.06)
Cash Flow	−0.1746***	(−0..39)	−0.0868	(−0.17)
Leverage	−0.0637**	(−2.97)	−0.0647	(−3.01)
Investment	−0.0139*	(−1.49)	−0.0134	(−1.44)
ROA	1.1559	(0.78)	0.8724	(0.52)
EBITDA	−0.0000	(−0.96)	−0.0000	(−0.97)
Firm Risk	−0.5089*	(−2.10)	−0.5098*	(−2.11)
Cultural Distance	−0.01721	(−0.68)	−0.0174	(−0.68)
Industry FE	Yes		Yes	
Year FE	Yes		Yes	
Adjusted R^2	0.1331		0.1332	
Mean VIF	3.44		3.41	
No. of deals	8,928		8,928	

This table presents standardized coefficients based on a multivariate regression analysis, where standard errors are clustered at the country level. The dependent variable is *BHAR* for a 36-month time window. The main independent variable regarding managerial virtuous talk is based on the word count of unique *trust* words from Audi et al. (2016). Data are comprised of 10,764 M&A deals from the United States, over the period from 2000 to 2016. In Model M1 *pessimism* is introduced, while in Model M2 *pessimism* and interaction term of *trust* with *pessimism* are introduced. The *t*-statistics are reported in parentheses. 1%, 5%, and 10% significance levels are denoted by ***, **, and *, respectively.