

The Impact of Corporate Cultural Distance on Mergers and Acquisitions

George Alexandridis¹, Andreas G. F. Hoepner¹,
Zhenyi Huang^{1†}, and Ioannis Oikonomou¹

¹University of Reading

February 12, 2016

Abstract

We study the effect of corporate cultural distance between acquirers and targets on mergers and acquisitions based on our unique corporate culture data, and using a sample of 220 domestic and cross-border international deals announced between 2004 and 2012. Our results show that deals with larger corporate cultural distance have lower acquirer cumulative abnormal returns (CARs) around the deal announcements and lower synergy returns. These results provide evidence for the “cultural clashes” theory documented in the previous literature and suggest that market perceives corporate cultural distance as a major risk in the post-acquisition integration process. Furthermore, we find that corporate cultural distance reduces the probability of deal completion and increases the time taken to complete a deal, reflecting the existence of negotiation frictions under cultural disparity. In addition, the percentage of payment made by stock is found to be lower for deals with larger corporate cultural distance. The results are robust after controlling for national cultural distance and also firm and deal characteristics. This is the first study that formally looks into the effect of corporate culture on M&A. We conduct a comprehensive event study and demonstrate that corporate cultural distance has a substantial impact on multiple aspects of M&A.

Keywords: Mergers and Acquisitions; Culture; Acquirer Returns; Performance; Integration

[†]Corresponding author: Zhenyi Huang. Email: z.huang@icmacentre.ac.uk. ICMA Centre, University of Reading

*This paper is under revision. Please do not cite without authors' consent.

1. Introduction

It has been documented that synergy gains are commonly expected at the time of acquisition, but are rarely realized. According to Deloitte (2012), 70% of the value erosion in M&A deals is associated with inadequate post-merger integration. Corporate culture plays a key role in such a process which the operations of the target company are absorbed into the buyer. Based on the study produced by the Society for Human Resource Management (SHRM), 30% of mergers failed because of culture incompatibility. The Sprint and Nextel acquisition completed in 2005 is a well known example of failed deals due to culture clash. A Washington Post article written two years into the merger stated: “The two sharply different cultures have resulted in clashes in everything”. Academic literature (Eg: David and Singh, 1994) has also documented that cultural differences represent a source of “acquisition cultural risk” and a potential obstacle to achieve integration benefits. In this paper, we investigate the effect of corporate cultural distance on multiple aspects of M&A, for both domestic and cross-border acquisitions.

Corporate culture is a relatively new entrant in the field of finance literature. The notion of corporate culture has been referred more frequently in the management literature, from the perspective of organization behaviour. We are not aware of any empirical research in the finance area extensively examining the effect of corporate cultural distance on M&A performance and deal transactions as to today. Hence, we are devoting this study to explore in this field.

Culture is a complex concept which is hard to quantify. Previous studies have made various attempts to measure corporate culture (Eg: Cronqvist, et al., 2009; Fiordelisi and Martelli, 2011; Bargeron, et al., 2012). However, most of those measurements suffer from serious methodological and data limitations. In this paper, we study 220 domestic and

cross-border acquisitions between 2004 to 2012 covering acquirers and targets from 22 developed countries. We construct corporate cultural distance variables based on individual firm culture data from EIRIS, which is a non-profit organization collecting data on the constituents of the FTSE All World Developed Index over multi-dimensions. Our proxy covers a few important aspects of corporate culture such as corporate governance, employees, products and customers, ethics, etc. The coherent culture data from EIRIS enables us to measure corporate cultural distance in a consistent way and hence to make fair comparisons across all our sample deals.

Using standard event study methodology, we examine the effect of corporate cultural distance on short-run announcement value changes, issues related to deal transaction process and also long-run acquisition performance. We find that corporate cultural distance has a significantly negative impact on acquirer announcement returns. A one standard deviation increase in corporate cultural distance on average reduces acquirer's announcement returns by approximately 1.09%, which is very significant economically. To examine the source of acquirer value destruction, we perform tests on the expected synergy from the merged firm. We find that corporate cultural distance has a significantly negative impact on the synergy returns. It indicates that acquirers' value destruction is mainly caused by lower expected synergy from acquiring a culturally distant target. This result supports the "cultural clash" theory of post-acquisition integration as documented in the literature. We also find that deals with larger corporate cultural distance have lower probabilities of deal completion and on average take longer time to complete. This suggests that corporate cultural distance imposes significant frictions between two firms during the deal negotiation stage. In addition, our test also shows that deals with larger corporate cultural distance tend to make payments with lower percentage of stock, possibly for the sake of sellers trying to minimize information

asymmetry problem from the buyers. Furthermore, we also examine the long-run M&A performance three years after the acquisitions. Our results show that bidders acquiring firms with more different corporate culture tend to perform better in the long-run, both in stock market returns and accounting measures. This provides some evidence that corporate cultural distance creates learning opportunity between the two parties involved and hence can be a source of value creation in the long-run, especially after having overcome the integration difficulties happening immediately after the merger. It is important to note that the focus of this study is “corporate culture” as opposed to “national culture”. Although the two are expected to be related, they are different concepts. In our tests, we control for national cultural distance in order to isolate the effect of corporate cultural distance on M&A outcomes.

Our paper contributes to the literature by more tangibly measuring corporate cultural distance which enables a fair and consistent comparison across deals. This makes a significant development in capturing and quantifying corporate culture in the general finance literature. More importantly, we contribute by thoroughly documenting the effect of corporate cultural distance on both short and long-run M&A performance and also issues related to deal transactions. Our empirical evidence brings some new insights to the issue of corporate culture differences, which has often been discussed in the media and academic, but never been examined in a formal framework.

The rest of the paper is organized as follows. Section 2 discusses the related literature. Section 3 develops hypothesis and empirical predictions. Section 4 describes the data sample, variable definitions and summary statistics. Section 5 presents our main empirical results and Section 6 discusses robustness tests. Finally, Section 7 concludes the paper.

2. Related Literature

This paper stands on two major fields in the business literature. One is on the notion of culture, which is more extensively discussed in the organization studies. Another is the conventional event study on mergers and acquisitions in the finance literature. In this section, we briefly review these two areas, namely culture and the impact of culture on M&A performance, and meanwhile discuss how this paper relates to the existing literature.

2.1 Culture Measurements

Culture is a complex concept. It is hard to define and way much more difficult to measure. The notion of culture is so complicated that even anthropologists argue over the definition of culture. According to Hofstede, culture is “the collective programming of the mind which distinguishes the members of one human group from another”. Quantifying culture has always been a challenge that researchers have been constantly trying to tackle. Below we briefly review the attempts made by previous work in measuring corporate and national culture and discuss how our proxies make an improvement based on that.

A few attempts have been made to quantify corporate culture. For example, Cronqvist, Low and Nilsson (2009) use employee relations indices to proxy for corporate culture. However, it is not clear that all the dimensions included in the indices truly capture key aspects of culture. Bargeron, Smoth and Lehn (2012) define a strong culture dummy based on whether the firm has appeared at least once on the annual list of the “100 Best Companies to Work For in America”. By construction, their study leans towards more established firms since companies must have at least 1000 employees in order to be qualified for this list. In addition, there might be potential selection bias since companies are volunteered to be evaluated. It may be the case that only good culture

firms apply to be assessed. Furthermore, Fiordelisi and Martelli (2011) use text analysis on company annual reports in attempting to capture the level of corporate culture. It seems to be a big challenge to select the proper words that can accurately reflect culture. Moreover, a few studies measure organizational cultural difference based on surveys to managers to describe the extent of cultural differences across key organizational functions (Chatterjee et al. 1992; Lubatkin et al. 1999; Weber, 1996; Weber et al., 1996). An obvious problem with this measurement method is that scores are computed based on respondents' subjective views and hence are not standardized across different companies.

In this study, our unique culture data from EIRIS well covers multiple important dimensions of corporate culture such as governance, employees, products and customers. This comprehensive and unbiased culture data provides an objective assessment on the company culture. Thus, it enables us to make tangible construction of cultural distance between acquirers and targets and as a result, to make fair comparison of cultural distances across our sample deals.

Besides the notion of corporate culture, national culture has also been measured in the previous literature. As noted by Weber, Shenkar and Raveh (1996), corporate culture and national culture, though related, are different constructs. One of the most commonly used methods in measuring national cultural distance is the Hofstede national cultural distance (Hofstede, 1980) which computes culture scores based on the five dimensions: individualism, power distance, uncertainty avoidance, masculinity and long term orientation (was later added). Other studies have constructed different dimensions of culture for cross-border M&A analysis. For example, Ahern et al (2012) use national data on two dimensions, namely "Egalitarianism vs. Hierarchy" and "Collectivism vs. Individualism" from the World Value Survey (WVS) to study the impact of national cultural distance on cross-border M&A deals. Similar to their method, we compute the

Euclidean national cultural distance based on these two dimensions. In our tests described in section 5, we use it as a control variable to account for the difference in national culture while we examine the impact of corporate cultural distance on M&A outcomes. We also control for whether the acquirer and target are from the same country, as some studies use domestic vs. cross-border deals to proxy for national cultural distance (Eg: Anand et al, 2003; Krug and Hegarty, 2001).

2.2 Impact of cultural distance on M&A performance

There are two conflicting theories existing in the management literature in regarding to the impact of cultural distance on M&A performance. The first is the “culture clashes” theory, which argues that firms merged from different cultural background unavoidably will encounter cultural collisions during the post-acquisition period and hence encounter problems in the integration process (Jemison and Sitkin, 1986; Buono et al., 1985; Cartwright and Cooper, 1993; David and Singh, 1994; Javidan and House, 2002). The other is the “cultural synergy” theory which states that cultural distance creates opportunity for transfer of resources embedded in the culture and leaves space for learning and value creation (Stahl, Bjorkman and Vaara, 2004). As pointed out by Sarala and Vaara (2010), both national and corporate cultural distance promotes knowledge transfer in acquisitions.

Although neglected in the finance literature, there are a few studies, especially in the management literature, have examined the relationship of certain aspects of corporate culture on M&A performance. For instance, Chatterjee et al. (1992) use surveys to managers as the measure of corporate cultural distance and showing a negative effect on short-run acquirer announcement CARs. Datta (1991) uses management style dissimilarity as the proxy and also finds a negative influence on post-acquisition

performance index (based on accounting variables ROI, EPS, stock price, cash flow, and sales growth). In contrast, other studies have found corporate cultural differences to be positively related to M&A success. For example, Larsson and Risberg (1998) document a positive relationship between corporate cultural distance and acquisition synergy realization. Similarly, Very, Lubatkin & Calori (1997) show positive relationship of cultural incapability on acquisition performance index. As corporate culture is hard to measure, its relationship to M&A performance has far from being well examined, not to say a consensus. Hence, the main contribution of this paper is that it is the first study that formally examines the impact of corporate culture on multiple aspects of M&A under the comprehensive event study framework.

In comparison to corporate cultural distance, national cultural distance is more observable, especially with the clear differences in terms of geographical location, language, religion and legal system. Thus, much more studies in the finance literature have been done on examining the relationship of national cultural distance and M&A performance.

Previous studies show mixed evidence on the impact of national cultural distance on M&A performance. Datta and Puia (1995) focus on national cultural distance and document a negative impact on acquirer CAR. Similarly, Ahern et al (2012) show that national cultural distance is a barrier for synergy gains in cross-border acquisitions reflected from the announcement returns. Studies have attempted to explain this negative effect of national cultural distance with reasons such as manager resistance, trust issues and most commonly the post-acquisition integration challenges. Reus and Lamont (2009) show that national cultural distance has a negative impact on acquirer announcement CAR, nevertheless with good communication this impeding effect could be overcome with learning benefits.

In addition to the short-run announcement returns, studies have also examined the impact of national cultural distance on long-run M&A performance. For example, Shane (1992), Hofstede (1980), Chakrabarti et al. (2009) provide evidence of “cultural synergies” for national cultural difference in cross-border M&A long-run performance. They document that the transfer of value is enhanced with larger national cultural distance. Meanwhile, with larger cultural distance, the acquirer might be more careful in selecting and screening targets. Steigner and Sutton (2011) document a positive influence of national cultural distance on long-run operating performance for acquirers with high intangibles which further supports the “learning” theory.

Overall, the existing findings regarding the impact of both national and corporate cultural distance on M&A performance are highly mixed. We here aim to make a contribution to this unexplored field regarding corporate cultural distance. In this study, we focus on the effect of corporate cultural distance on the multiple aspects of acquisition outcomes, while control for national cultural distance in all our tests. In section 5, we first examine the short-run effect to capture the market’s expectation on acquisitions at the time of announcement for deals with different degrees of corporate cultural distance. In addition, we also study whether corporate cultural distance matters during the deal transaction process. To study the long term impact of corporate cultural distance on M&A performance, we also examine the long-run stock and accounting performance on completed deals.

3. Hypothesis and Empirical Predictions

Previous empirical studies have no consensus as to what the impact of corporate cultural distance between the acquirer and target has on the acquirer cumulative abnormal returns (CAR) over the announcement period. Stahl and Voigt (2008) document that

cultural distance has a negative impact on sociocultural integration, especially with regard to perceptual and cognitive factors. Acquirers and targets with large culture differences are likely to face conflicts in the post-acquisition integration hence dampen the realization of expected synergy (Jemison & Sitkin, 1986). Meanwhile, acquirers that are more culturally different than targets are likely to face opposing forces in the process of deal negotiation and resulting in the weakening of its bargaining power and overpayment. Note that these two potential reasons are not mutually exclusive. For these reasons, we predict that the market would take large cultural distance as a negative wealth factor at the time when the deals are announced. Hence, we hypothesize that acquirer CARs around M&A announcement are lower for deals with larger corporate cultural distance.

- **Hypothesis (H1):** Acquirer CARs around M&A announcements are lower for deals with larger corporate cultural distance.

To support our first hypothesis, we further investigate the possible causes of acquirer CAR wealth impairment. The first reason of value destruction is the high level of obstacles that acquirers will face in the post-acquisition integration process after acquiring a very culturally different target firm. As a result, the wealth creation from realizing synergies will be reduced. This is called the “synergy” hypothesis in the general M&A literature. We predict that the expected synergy will be lower for deals with larger cultural distance.

- **Hypothesis (H2):** Lower synergy returns for deals with larger corporate cultural distance.

As pointed out by Kale et al. (2003) and Golubov et al. (2012), acquirer CARs can be influenced by both the “synergy” hypothesis and also the “bargaining power” hypothesis in which the acquirer firms lose value around the announcement due to poor ability to negotiating the deal. In this case, acquirers which are more culturally different

than the targets are more likely to face opposing forces during the deal negotiation and hence resulting in the loss of bargaining power and potentially overpayment if they have a strong will in proceeding with the deals for other reasons such as increased debt capacity. Therefore, we hypothesize that acquirer's bargaining power as measured by the bidder's percentage share of synergy value (following Golubov, Petmezas & Travlos, 2012) is lower for deals with larger cultural distance.

- **Hypothesis (H3):** Bidder's Percentage share of synergy value (i.e bargaining power) is lower for deals with larger corporate cultural distance.

Acquirers and targets with larger cultural differences are more likely to have different business priorities and also different decision making and administrative processes. As a result, those deals are more likely to face disagreement and conflict during the acquisition negotiation stage. Hence, we expect that cultural distance reduces the probability of deal completion. Meanwhile, due to the higher degree of frictions during the negotiation and potentially distinct ways in handling disagreement in general, acquirers and targets with larger cultural differences are expected to take long time to complete deals.

- **Hypothesis (H4):** Deals with larger corporate cultural distance have lower probability of completion.
- **Hypothesis (H5):** Deals with larger corporate cultural distance have longer completion time.

Previous literatures (Eg: Coval and Moskowitz, 1999; French and Poterba, 1991; Grinblatt and Keloharju, 2001) have documented the investors' home bias pattern which sellers have lower demand for unfamiliar foreign stocks in cross-border M&A deals. The unfamiliarity of target to bidder's stock does not only apply to foreign acquisitions, but

also in this case to deals with large culture difference. With distinct and unfamiliar ways of business ethics and operating behavior, target has less confidence in accepting acquirer's stock as payment. With low level of certainty about bidder's equity value and future business prospect after the merger of two highly distinct firms, sellers are more likely to accept cash as the method of payment over stock in order to avoid potential problem of information asymmetry. Hence, we hypothesize that sellers are more reluctant to accept bidder's stock as payment when the two firms are more culturally different.

- **Hypothesis (H6):** The percentage of payment made in stock is lower for deals with larger corporate cultural distance.

We are also interested in exploring the relationship between corporate cultural difference and acquirer's long-run performance. Vaara (2004) argues that culture difference can be a source of value creation and learning in the M&A deals, and may show its positive effect in the long-run. We predict that larger cultural distance creates learning benefits and also space for ability transfer in the long-run, which can potentially offset the short-run post-acquisition collisions.

- **Hypothesis (H7):** The negative impact of corporate cultural distance on short-run M&A performance will be offset with learning benefits in the long run.

4. Sample and Descriptive Statistics

In this section, we discuss our sample selection and the construction method of the key corporate cultural distance variables. We also present summary statistics for our sample characteristics.

4.1 Basic sample selection

The initial sample of acquisition is collected from the Thomson Reuters Securities Data Company (SDC) Platinum Mergers and Acquisitions database, following a list of restrictions below:

1. The deals were announced between January 1, 2004 and December 31, 2012. We choose this time period because our culture data source is available from 2003 to 2011. Since the culture data is reported at the end of each calendar year and we are studying the impact of culture on acquisition performance, we need to match culture data recorded in year $(t - 1)$ to deals announced in year t for both the acquirers and targets.
2. Both acquirer and target are public firms, as we need stock market returns available to examine the wealth effects.
3. The status of the deal is completed or withdrawn.
4. As the study focus on deals that involve clear change in control, we exclude all transactions that are labeled as minority stake purchases, acquisitions of remaining interest, privatizations, spinoffs, recapitalizations, self-tenders, exchange offers or repurchases.
5. The transaction value is at least \$1 million.
6. Since we focus on deals that bear post-acquisition integration process, we exclude deals that acquirer and target are under the same parent company. To be specific, we exclude deals which “acquirer CUSIP=target CUSIP”, “acquirer SEDOL=target SEDOL” or “acquirer ultimate parent CUSIP=target ultimate parent CUSIP”.

We require acquirers and targets are from the same set of developed countries as our culture data base coverage: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hong Kong, Republic of Ireland, Israel, Italy, Japan,

Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom, and United States of America.

These criteria result in 5404 deals being obtained from the SDC. Since we are examining the corporate cultural distance between acquirer and target, we need to match all the firms to our culture database as described in the next section. There are 1420 deals with acquirers being covered by the culture database, while there are 406 deals with targets having culture data available. After imposing the data requirement that both the acquirer and target having culture data available, we result in 290 deals. Furthermore, we require relevant variables to be available from SDC, Worldscope and Datastream to be available to construct control variables. After imposing these data availability requirements, we left with 220 deals as our final sample.

4.2 Corporate Culture variables

The culture data that we used in this study is provided by EIRIS.² EIRIS compiles hundreds of individual environmental Social and governance (ESG) inquiries on over 80 ESG research areas for the constituents of the FTSE All World Developed Index (one of the leading global stock market indices for developed countries). EIRIS is an independent, non-for-profit organization with over 25 years of experience in assessing corporate ESG performance which does not offer any additional financial or legal advice to its clients. As a result, it produces unbiased and high quality firm level ESG reports which we use as our basis for measuring corporate culture.

EIRIS files their assessment reports at the end of every calendar year. In our study, we match the deal acquirers and targets to their corresponding culture data filed at the end of the year prior to announcement. Our deals were announced from 2004 to 2012 (require

² Acknowledgement: We are very thankful to EIRIS for providing culture data for this research.

at least three years of realized returns available for long-run stock performance analysis) with the corresponding culture data filed from 2003 to 2011. After matching with the EIRIS provided culture data, our sample consists of domestic and international deals with acquirers and targets from 22 developed countries: Australia, Austria, Belgium, Canada, Finland, France, Germany, Greece, Hong Kong, Republic of Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, United Kingdom, and United States of America.

In our final sample of 220 M&A deals, on average each acquirer responds to 55 inquiries while the target responds to 47 inquiries. We categorize EIRIS inquiries into seven categories: Corporate Governance, Employees, products and customers, community, environment, controversial business issues, and ethics. Total there are 329 different inquiry items covered in our sample of culture data. On average, there are 47 different inquiries covered in each category. The summary statistics of inquiries are illustrated in Appendix B. A major advantage of using this database is that we are able to see the detailed answer for each individual inquiry under each category by all the sample firms. As a result, we are able to capture the exact difference between the acquirer and target in treating various culture related issues. This level of data precision provides obvious advantage in our measure of cultural distance compared to other database such as MSCI KLD which only provides scores at an aggregate level. Although these categories do not cover the whole spectrum of culture, they represent a few very important dimensions of culture, such as the attitude of the company in treating their employees, customers and products. These dimensions of business ethics and behaviours are highly likely to have an impact on whether the acquirer and target can seamlessly integrate together after the acquisition. This is also the main focus of our study. Our measure of corporate cultural distance is more comprehensive and precise than many other proxies

used in previous studies. For example, Crongvist, Low and Nilsson (2009) use Employee relations indices as the proxy for corporate culture, which has the problem of missing other dimensions of culture in their measurement. While we attempt to capture corporate culture in multi-dimensions, we understand that corporate culture is a complex notion and obtaining a precise measurement of it remains as a challenge for future research.

In this study, we construct the Euclidean distance of corporate culture (Euclidean Cul Dis) based on the EIRIS reported inquiries responses as our main measurement of corporate cultural distance. We also construct alternative measurements of corporate cultural distance for robustness check in section 6. We define “large cultural distance” dummies based on the sample median of corporate cultural distance measurements: Euclidean Cul Dis_large. All our corporate cultural distance measures are scaled in the range of [0, 1]. The detailed construction procedures are explained in Appendix B.

4.3 Other control variables

For the final sample of 220 deals, we obtain the accounting data from Worldscope. We also use SDC reported accounting variables to construct acquirer and deal characteristics variables. We download the stock return and index return data from Datastream. Since the focus of this study is the impact of corporate cultural distance on M&A, we also control for national cultural distance. Following Giannetti and Yafeh (2011), we use data from the World Value Survey and constructed the Euclidean national cultural distance based on two dimensions: “Traditional/Secular rational values” and “Survival/Self-Expression Values”. All the variable definitions are listed in the Appendix A.

4.4 Descriptive Statistics

Panel A in Table 1 presents the number of acquirers and targets for each of 22 developed countries covered in our sample. Our final sample includes 220 M&A deals with 143 (65%) domestic and 77 (35%) cross border deals. Although our sample size is limited by the coverage of EIRIS culture data which requires the companies to be constituents of the FTSE All World Developed Index, the sample is well distributed over domestic and cross-border deals. With the control of national cultural distance, we can more fairly examine the impact of corporate cultural distance on M&A using this domestic and cross-border mixed sample. Out of the total 220 sample deals, there are 162 completed deals and 58 withdrawn deals. This distribution enables us to test the impact of corporate cultural distance on deal completion probability in the next section of the paper.

Panel B in Table 1 presents the number of deals announced in each year covered in our sample period, ranging from 2004 to 2012. There is a certain fluctuation in the number of deals over the sample period, which reflects changes in the global macro-economic conditions. The number of deals drops after the global financial crisis in 2008. To control for the fluctuation of economic conditions over the years, we control for year fixed effects in all our regression tests.

Table 2 presents descriptive statistics for the overall sample and for the large and small corporate cultural distance subsamples respectively (defined based on the large culture dummy: Euclidean Cul Dis_large). All variables are defined in Appendix A. We report the number of observations, means and standard deviations of each variable. The last column asterisks denote the statistical significance of mean difference tests between the large and small cultural distance sub-samples.

Panel A describes the summary statistics for the acquirer characteristics. From the t-tests of the means, large and small cultural distance sub-samples seem not to have a significant difference on the acquirer characteristics. We will control for those acquirer characteristics in our regression tests as previous studies have documented them for having significant impact on acquirer's returns. For example, we will control for acquirer book-to-market ratio as Dong et al (2006) show that acquirers with higher book-to-market ratios tend to have higher announcement returns. We also control for acquirer's cash-to-asset ratio to address the potential issue of empire building as documented by Jensen (1986). Acquirer run-ups will also need to be controlled for in order to account for the possible negative effect on bidder's value as reported in Rosen (2006). Furthermore, we will also include acquirer leverage in our main regressions in the next section to control for the potential positive impact on bidder's returns as reported in Maloney, McCormick and Mitchell (1993).

Panel B describes the summary statistics for the deal characteristics. From the t-test, small corporate cultural distance deals tend to have acquirers and targets from the same country. As one would expect, firms from the same country might grow under the same social and cultural environment and hence have similar business culture. It then follows naturally that deals with smaller corporate cultural distance tend to have smaller national cultural distance. Similar logic apply, smaller cultural distance deals tend to have acquirers and targets from the same industry due to comparable business settings. Hence in our regression tests in the next session, we will control for all these factors in order to isolate the effect of corporate cultural distance.

Panel C describes the summary statistics for deal outcome variables. Based on the univariate comparison here, apparently deals with larger cultural distance tend to have lower acquirer announcement returns, lower expected synergy, lower probability of deal

completion, and also higher percentage of payment made in stock. These observations seem to support our hypotheses discussed in section three. Although a univariate test is not a robust way in examining a relationship, it sheds some light to help us better understand the sample. In the next section, we will add in the acquirer and deal characteristics in the cross-sectional regressions and thoroughly examine the relationship of corporate cultural distance with various aspects of M&A outcomes.

5. Empirical Results

5.1 Acquirer announcement CARs

To study the wealth effect of corporate cultural distance on acquirers, we study the acquirer announcement CARs estimated by the market model. We use the Datastream Total Market Index for the respective acquirer's country as the appropriate market returns. Following Golubov et al. (2014), the market model is estimated using at least 30 non-missing daily return data over the (-300, -91) period prior to deal announcements. Acquirers' CARs are calculated over a window of (-5, +5), where day 0 is the deal announcement date. ³

Table 3 reports the results of OLS regressions for the 220 completed and withdrawn M&A deals which include both domestic and cross-border transactions. The dependent variables in all four regressions are acquirer CAR (-5, +5) around deal announcements. The key independent variable of interest is the corporate cultural distance (Euclidean Cul Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. We control for year and Fama and French 12 industry fixed effect in all regressions. In all the four regressions, we control for firm and deal characteristics which

³ The results are robust to alternative windows such as (-10, +10)

have found to influence acquirer CAR in the finance literature. The detailed definition of all control variables are listed in Appendix A.

In column 1, we do not include any control variables. Next, we control for deal characteristics in column 2 and then add acquirer characteristics in column 3. In column 4, we add one more control variable, national cultural distance, to control for the impact of national cultural difference on acquirer announcement returns (Datta and Puia, 1995). In all the four regressions in Table 3, the coefficients of corporate cultural distance are all significantly negative at 5% level. All these regressions results show that deals with larger corporate cultural distance have lower acquirer CAR at the time of announcement. This impact is not only statistically significant, but also highly economically significant. Using Regression 4 as an example, having a one standard deviation increase in the Euclidean Cul Dis will result in an average 1.09% decrease in acquirer CARs.

In all the regressions, we control for serial acquirers as some previous literature (Eg: Aktas, et al., 2011; Fuller, et al., 2002) point out that acquirers with previous acquisition experiences have higher (under the “Learning” hypothesis) or lower (under “CEO overconfidence and over-investment” hypothesis) acquirer CARs. In our results, we find that past acquisition experience has no significant impact on acquirer CARs, probably due to the offsetting of these two opposing effects.

It is interesting to note that National Cultural Distance has no significant impact on acquirer CARs. To the best of our knowledge, we are the first studying the corporate cultural distance together with national cultural distance at the same time when examining acquirer announcement CAR. Contrary to studies (Eg: Datta & Puia, 1995) which only focus on national cultural distance and document negative impact on acquirer CAR, our

study finds that it is mainly the corporate cultural distance rather than the national cultural distance that destroys acquirer values at the time of announcement.

Overall, we find evidence supporting our hypothesis (H1) that deals with larger cultural distance have lower acquirer announcement CARs, after controlling for various acquirer and deal characteristics.

5.2 Synergy Returns

It is interesting to examine what the sources for the acquirer value loss at the time of M&A announcement are. With larger corporate cultural distance, acquirer and target firms have distinct business ethics and behaviours. This incapability in business culture may create obstacles in the post-acquisition integration process, and hence impair the realization of expected synergy gain. This is especially true for the planned collusive and operational synergy which successful integration of the two firms is essential.

To study the expected synergy gain from the merged firm, we follow the method used by Bradley, Desai and Kim (1988) and compute synergy returns (VWCAR) defined as the market value weighted average of acquirer CAR and target CAR for each deal. The weights are the market value of equity 4 weeks prior to announcement of the respective firms. Acquirer and target CARs are calculated based on market model estimated using at least 30 non-missing daily return data over the (-300, -91) period prior to deal announcements. All CARs are calculated over a window of (-5, +5), where day 0 is the deal announcement date.

Table 4 reports the results of OLS regressions for the 220 completed and withdrawn M&A deals which include both domestic and cross-border transactions. The dependent variables in all regressions are the synergy returns VWCAR (-5, +5) around deal

announcements. The key independent variable of interest is the corporate cultural distance (Euclidean Cul Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. We control for year and Fama and French 12 industry fixed effect in all regressions. In all the regressions, we control for firm and deal characteristics. The detailed definition of all control variables are listed in Appendix A.

In column 1, we do not include any control variables. Next, we control for deal characteristics in column 2 and then add acquirer characteristics in column 3. In column 4, we add national cultural distance as an additional control variable. In all the regressions in Table 4, the coefficients of corporate cultural distance are all strongly negative at 1% significance level. For example in regression 4, a one standard deviation increase in the Euclidean Cul Dis reduces the synergy returns by 1.86%, which has a significant economic impact. These results show that market perceives cultural distance as a negative factor for post-acquisition integration. Hence deals with larger corporate cultural distance have lower expected synergy at the time of announcement. This finding supports our hypothesis (H2) and provides evidence that large corporate cultural distance creates problems in the post-acquisition integration.

We note several other interesting results. The negative coefficient on acquirer runup, the positive coefficients on competing bid and related industry dummy are generally in line with the literature. The positive coefficient on relative size draws our attention. Some early works such as Alexandridis, et al. (2013) points out that “additional complexity associated with large targets makes it more difficult for acquirers to attain the assumed economic benefits”. The business culture compatibility in our study to a certain extent captures the unobserved deal complexity. After taking the business culture and the ease of post-acquisition integration into account, larger target size relative to acquirer in

fact may bring more opportunity for resource sharing and also space for synergy value creation.

5.3 Acquirer Bargaining Power

As pointed out by Kale et al. (2003) and Golubov et al. (2012), there are two potential sources for the acquirer value change at the time of M&A announcement. On the one hand, acquirer value is influenced by market's expect synergy from the merged firm. This is the "synergy" hypothesis that we have just discussed and validated in the previous test. On the other hand, acquirer's loss in value around announcement could be caused by its lower bargaining power in negotiating the deal with the target. This might happen when the target opposes a deal due to large cultural difference while the bidder has a strong will in proceeding with the deal for reasons such as planned financial synergy in boosting its debt capacity. These two hypotheses are not mutually exclusive. We have validated the "synergy" hypothesis in the previous test. Here we develop tests to examine this "bargaining power" hypothesis.

To test acquirer's bargaining power, we construct the bidder's share of synergy (BSOS) following Golubov et al. (2012). We first compute the dollar-denominated synergy gain (SG) as the sum of bidder and target dollar-denominated gains, with dollar-denominated gains being the product of market value of equity 4 weeks prior to the announcement and the CAR (-5, +5) of the respective firms. The BSOS variable is computed as the bidder dollar denominated gain divided by SG when SG is positive, and (1-bidder dollar-denominated gain) divided by SG when SG is negative. The key independent variable of interest Euclidean Cul Dis is the same as used in the previous synergy regressions. The detailed definitions and construction methods of culture variables can be found in Appendix B. We control for year and Fama and French 12

industry fixed effect in all regressions. In all the regressions, we control for firm and deal characteristics. The detailed definition of all control variables are listed in Appendix A.

The regressions (1)-(2) of Table 5 present the cross-sectional regressions of BSOS on corporate cultural distance. The coefficients on cultural distance variables are both insignificant. This indicates that corporate cultural distance has no significant impact on acquirer's bargaining power.

In regression (3)-(4) of Table 5, we further test the impact of cultural distance on acquisition premium paid in the M&A deals to examine if the targets are overpaid for cultural reasons. The cross-sectional regression results show that the coefficients on the corporate cultural distance proxy are insignificant. This result is in accordance with the finding from the BSOS regressions indicating that acquirers do not lose bargaining power and make overpayment to target in deals with large corporate cultural distance. Hence, our empirical tests refute the hypothesis (H3) and suggest that acquirers' loss in value at the announcement is due to the lower expected synergy from the merged firm rather than acquirers' lower bargaining power in negotiating the deals.

5.4 Deal Completion Probability

In this section, we explore whether deals with large corporate cultural distance have a significant impact on completion probability. Due to the different business ethics and behaviours, deals with larger cultural difference may face more frictions in the process of negotiation which may reduce the success rate of finally being completed.

The dependent variable in Table 6 is a binary variable that takes the value of one if the deal was completed and zero otherwise. Column (1)-(2) reports the results of the logit regressions of deal completion probability on corporate cultural distance (Euclidean Cul

Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. The coefficients on the corporate cultural distance variable are significantly negative. This result is robust when a probit model (column 3-4) is estimated with the same control variables. Hence, we have evidence to support our hypothesis (H4) that deals with larger corporate cultural distance have lower probability of being successfully completed.

Apart from the impact of corporate cultural distance, we find that tender offer has a positive effect while competing bid and hostile deals have negative effects on deal completion probability. These results are generally in line with previous literature (Eg: Golubov et al, 2012).

5.5 Deal Completion time

Another interesting aspect of acquisition to explore is the time taken from the announcement until completion for a successfully completed deal. As discussed in Section 3, deals with larger cultural distance may face more severe frictions during the negotiation. Meanwhile, with different business conduct and convention, firms tend to resolve disagreement in different ways which may drag the deal settlement process.

Table 7 reports the Tobit regressions results of deal completion time on corporate cultural distance. The dependent variable is Completion time, which is defined as the number of calendar days between the deal announcement and deal completion as reported by Thomson Financial SDC. In order to make an intuitive interpretation of the marginal impact of corporate cultural distance on the deal completion time, here we use large corporate cultural distance dummy (Euclidean Cul Dis_Large) as our key independent variable of interest. The detailed definitions and construction methods of culture variables

can be found in Appendix B. As with all our tests, we include acquirer and deal characteristics as control variables.

In column 1, we do not include any control variables. Next, we control for deal characteristics in column 2 and then add acquirer characteristics in column 3. In column 4, we add national cultural distance as an additional control variable. The coefficients on corporate cultural distance variable are generally significantly positive. This suggests that deals with larger corporate cultural distance tend to take longer to be completed. For example in regression 4, deals with large Euclidean corporate Cultural Distance on average take around 54 more days to be completed than small Euclidean Cultural Distance deals. This effect is highly economically significant. This result provides evidence in supporting hypothesis (H5) and suggests that acquirers and targets which are more culturally different tend to experience higher level of frictions during the negotiation and hence take longer to complete deals.

Besides corporate cultural distance, it is also interesting to note that national cultural distance has an incremental effect on deal completion time. The coefficient on national cultural distance is significantly positive in regression 4. This suggests that apart from the corporate culture, national culture itself has a significant impact on deal completion time. This seems reasonable considering the different legal, administrative and working styles in different countries. For instance, it might take longer for a Japanese acquirer to complete a deal with French target due to different working pace in the public and administrative systems in these two countries, despite the fact that these two firms may have similar corporate culture.

It is also interesting to find that the coefficient on serial acquirer is positive. This suggests that for acquirers which have more previous acquisition experience tend to take

longer to settle a deal. This is probably because more experienced acquirers tend to be more deliberate and cautious during negotiation stage. They may tend to settle deals in ways that can better benefit subsequent business performance of the merged firm after the acquisition. We will look more into it when we examine the long-run performance in the later tests to see if serial acquirers indeed perform better after acquisitions.

5.6 Method of Payment

Previous literature has pointed out that sellers tend not to accept stock as the method of payment when the acquirer is from an unfamiliar environment. For example, cross-industry deals tend to be paid in cash in order to avoid information asymmetry problem. Also, investors' home bias pattern, which sellers have lower demand for unfamiliar foreign stocks in cross-border M&A deals, has been documented in some early work such as Coval and Moskowitz (1999), French and Poterba (1991), Grinblatt and Keloharju (2001). Since corporate cultural difference may lead to uncertainty in the post-acquisition business performance, sellers tend to have lower confidence in accepting acquirer's stock as the method of deal payment.

Table 8 reports the Tobit regressions results of percentage of payment made in stock on corporate cultural distance. The key independent variable of interest is the corporate cultural distance (Euclidean Cul Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. As with all our tests, we include acquirer and deal characteristics as control variables.

In column 1, we do not include any control variables. Next, we control for deal characteristics in column 2 and then add acquirer characteristics in column 3. In column 4, we add national cultural distance as an additional control variable. The coefficients on corporate cultural distance variable are all significantly negative. This result suggests that

deals with larger cultural difference carry higher degree of information asymmetry and uncertainty to the target shareholders. Hence, stock is less accepted as the method of payment in the transactions. This empirical evidence supports our hypothesis (H6) suggested in the section 3.

It is also interesting to notice that in addition to corporate cultural distance, national cultural distance in regression 4 also indicates a significantly negative impact on the percentage of payment in stock. This suggests that sellers are aware of the risk caused by the different macro environment in the various financial markets. For example, US sellers who are more familiar with free-market style of financial market may be reluctant to accept shares from Hong Kong acquirers, because the Hong Kong stock market is influenced by the Chinese government policies. In contrast, US sellers may be more likely to accept shares from UK acquirers since the macro environment in these two countries are more similar.

5.7 Long-run Performance

The above findings related to short-run stock market reaction and deal transactions indicate that in the short-run corporate cultural distance is perceived as a negative factor for an acquisition due to the expected post-acquisition integration difficulty. However, as studies such as Vaara (2004) have pointed out that culture difference can be a source of value creation and learning in the M&A deals, we next examine if the long-run performance can show some positive indication on the corporate cultural distance. In section 5.7.1 we focus on the long-run stock performance, while in section 5.7.2 we use ROA to reflect the acquirer long-run accounting performance.

5.7.1 Long-run Stock Performance

To study the long-run stock performance, we compute the acquirer stock buy and hold abnormal returns $BHAR = \prod_{t=1}^T (1 + R_{i,t}) - \prod_{t=1}^T (1 + R_{Benchmark,t})$, where $R_{i,t}$ is the return of acquirer i at month t , $R_{Benchmark,t}$ is the return of the corresponding benchmark, and T is the number of months. Since our acquirers are from a range of 22 developed countries, here we use the Datastream Total Market Index for the respective acquirer country as the benchmark. To mitigate the potential problem of cross-correlation of abnormal returns in long-run stock performance studies as pointed out by Duchin and Schmidt (2013), we control for year and industry fixed effect while use robust standard errors clustered at acquirer nation level.

In Table 9, we present the OLS results of acquirer buy and hold abnormal returns (BHAR) on corporate cultural distance. BHARs are measured 3, 4, and 5 years after the respective deal announcement. The key independent variable of interest is the corporate cultural distance (Euclidean Cul Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. In all the regressions, we control for firm and deal characteristics. The coefficients on the corporate cultural distance variable in this panel are all significantly positive, especially for longer periods (Eg: four and five years after announcement). This result provides some indication that corporate cultural distance might be a source of learning benefit and create values which gradually come into effect a few years after the merger. This effect can potentially offset the short-run integration problem happened immediately after the acquisition. For example, an acquirer with an excellent employee welfare system in place may have a significantly positive influence on the target firm who used to pay little attention in this matter. As a result, the overall employee loyalty and work efficiency could be improved. This gain from increased value of human capital may be gradually reflected years after the acquisition.

In the regressions, we also find that national cultural distance carries an additional positive effect on the long-run stock performance. This result is consistent with the findings reported by Chakrabarti et al. (2009) which documents a positive relationship between national cultural distance and long-run stock performance in their sample of cross-border acquisitions. As they explained, “mergers between firms from culturally disparate countries may arm the acquirer with higher synergies and organizational strengths that help in their functioning in the global marketplace”. Thus, we conclude that both cultural and national cultural distance leave space for value creation and are reflected in the long-run stock performance.

5.7.2 Long-run Accounting Performance

Previous literature raise a number of concerns in regarding to the regressions performed based on long-run stock returns (Eg: Barber and Lyon, 1997; Fama 1998; Mitchell and Stafford, 2000; Brav, 2000). Perhaps the most salient concerns are the assumption of stock market efficiency and a model of market equilibrium. To mitigate these concerns, we further to examine the long-run accounting performance in order to determine the long-run impact of corporate cultural distance.

To study the long-run accounting performance, we computed changes of operating returns on assets (ΔROA). In Table 10, the dependent variable ($\Delta ROA_{t,t+k}$) is the average of k years ROAs after the announcement year minus announcement year ROA. We take the average of k years ROAs after announcement in order to minimize the fluctuation of ROAs caused by firm year specific events. In regressions 1 and 2, we look at the average of two years ROAs after the announcement year minus announcement year ROA, while in regressions 3 and 4 we examine the average of three years ROAs after the announcement year minus announcement year ROA. The key independent variable of

interest is the corporate cultural distance (Euclidean Cul Dis). The detailed definitions and construction methods of culture variables can be found in Appendix B. As in all tests, we control for year and acquirer industry fixed effects.

In Table 10, we present OLS regression results of long-run change in ROA on corporate cultural distance. The coefficients on corporate cultural difference variable are all significantly positive. This result is consistent with our finding from the long-run stock performance tested in the last section. Taken together, the results in Table 9 and 10 suggest that deals with larger cultural distance in general have better long-run stock returns and operating performance. These results are robust to different benchmark and to other controls found to affect post-merger performance in previous studies. Hence, we conclude that there is evidence in supporting our hypothesis (H7) indicating that corporate cultural distance is a value adding factor in the long-run.

It is also interesting to notice that the coefficients on serial acquirer are all positive in both the long-run stock (Table 9) and accounting performance (Table 10). This result is consistent with what we have found in Table 7 that serial acquirers on average take longer time to complete a deal. The superior long-run performance for serial acquirer found here provides evidence supporting our conjecture that serial acquirers tend to be more cautious during the negotiation stage and to settle deals in ways that can better benefit their long-run business development.

6. Robustness Tests

In all the tests presented in the previous section, we used the Euclidean distance of corporate culture (Euclidean Cul Dis) as our main proxy for corporate cultural distance. In order to add robustness to our test findings, we also compute three alternative measures of corporate cultural distance based on our culture data: 1) the absolute of average

categorical cultural distance (Cul Dis); 2) the average of absolute categorical cultural distance (Avg Cat Cul Dis); 3) culture unrelatedness (Cul Unrelatedness). With the advantage of our unique culture data from EIRIS, we are able to do precise comparison of acquirer's and target's culture based on the detailed reports of inquiry items covering a spectrum of corporate dimensions. This data superiority enables us to construct alternative corporate cultural distance measures for robustness check. We also define the corresponding "large cultural distance" dummies based on the sample median of these measurements respectively. All our corporate cultural distance measures are scaled in the range of [0, 1]. The detailed construction procedures are explained in Appendix B.

The results from using the alternative corporate cultural distance measures are similar to what we have found in section 5. In general, deals with larger corporate cultural distance have lower acquirer CAR and synergy returns around the announcement, and experience more frictions during the transactions. Meanwhile, we observe some positive effect of corporate cultural distance on post-acquisition long-run performance. Hence, with the consistent results obtained from alternative culture measures, we show that the Euclidean Cul Dis used in our main tests in section 5 is a robust proxy for corporate cultural distance.

7. Conclusions

This is the first study that formally looks into the effect of corporate culture on M&A. We explore the roles of corporate cultural distance on the multiple aspects of M&A outcomes under a comprehensive event study framework. Using culture data from EIRIS, we quantify corporate cultural distance between acquires and targets which can be fairly compared across our sample deals. We find that in general, deals with larger corporate cultural distance on

average have lower acquirer returns around the announcement period which reflects the lower expected synergy gain from merged firm. This result provides empirical evidence on the “cultural clashes” theory of integration documented in the previous literature. Such a pattern is reversed in the long-run. Our results show that acquisitions work better in the long-run, both in terms of stock market returns and also accounting measures, if acquirers and targets are culturally more disparate. This suggests that cultural distance may allow space for mutual learning and create opportunities for value creation which gradually come into effect years after acquisitions. This positive long-run effect can possibly offset the short-run integration obstacles. Also, it is possible that target firms may be allowed to function with greater autonomy if it is more culturally different from the acquirer, and hence reduces the power-sharing conflicts between two parties after the acquisition. These results show that markets are more cautious about acquisitions of targets from dissimilar corporate culture background at the time of announcement, while the realized long-run performance nevertheless demonstrates some positive consequence of cultural distance. This pattern is similar to the findings documented by Chakrabarti et al., (2009) which show that national cultural distance has a negative impact on acquirer announcement CAR while has a positive effect on long-run abnormal returns in their study of cross-border deals.

Corporate culture is a complex notion. Our proxy in this study includes a few important dimensions of corporate culture and has made a significant improvement over measurements used in the previous studies. However, it has not covered the whole spectrum of the concept. Developing a more comprehensive measurement of corporate culture remains as an on-going challenge in the finance literature. Furthermore, the relationship between various dimensions of corporate culture and M&A performance is also an area needs further investigation. We leave the exploration of these issues for future research.

Reference

- Ahern, K.R., Daminelli, D. and Fracassi, C., 2012. Lost in translation? The effect of cultural values on mergers around the world. *Journal of Financial Economics*.
- Aktas, N., De Bodt, E. and Roll, R., 2011. Serial acquirer bidding: An empirical test of the learning hypothesis. *Journal of Corporate Finance*, 17(1), pp.18-32.
- Alexandridis, G., Fuller, K.P., Terhaar, L. and Travlos, N.G., 2013. Deal size, acquisition premia and shareholder gains. *Journal of Corporate Finance*, 20, pp.1-13.
- Anand, J., Capron, L. and Mitchell, W., 2005. Using acquisitions to access multinational diversity: thinking beyond the domestic versus cross-border M&A comparison. *Industrial and Corporate Change*, 14(2), pp.191-224.
- Barber, B.M. and Lyon, J.D., 1997. Detecting long-run abnormal stock returns: The empirical power and specification of test statistics. *Journal of financial economics*, 43(3), pp.341-372.
- Bradley, M., Desai, A. and Kim, E.H., 1988. Synergistic gains from corporate acquisitions and their division between the stockholders of target and acquiring firms. *Journal of financial Economics*, 21(1), pp.3-40.
- Brav, A., 2000. Inference in long-horizon event studies: A Bayesian approach with application to initial public offerings. *Journal of Finance*, pp.1979-2016.
- Buono, A.F., Bowditch, J.L. and Lewis, J.W., 1985. When cultures collide: The anatomy of a merger. *Human relations*, 38(5), pp.477-500.
- Cartwright, S. and Cooper, C.L., 1993. The role of culture compatibility in successful organizational marriage. *The Academy of Management Executive*, 7(2), pp.57-70.
- Chatterjee, S., Lubatkin, M.H., Schweiger, D.M. and Weber, Y., 1992. Cultural differences and shareholder value in related mergers: Linking equity and human capital. *Strategic Management Journal*, 13(5), pp.319-334.
- Coval, J.D. and Moskowitz, T.J., 1999. Home bias at home: Local equity preference in domestic portfolios. *Journal of finance*, pp.2045-2073.
- Cronqvist, H., Low, A. and Nilsson, M., 2009, February. Persistence in firm policies, firm origin, and corporate culture: Evidence from corporate spin-offs. In *EFA 2007 Ljubljana Meetings Paper* (pp. 2007-1).
- Datta, D.K. and Puia, G., 1995. Cross-border acquisitions: An examination of the influence of relatedness and cultural fit on shareholder value creation in US acquiring firms. *MIR: Management International Review*, pp.337-359.
- Datta, D.K. and Puia, G., 1995. Cross-border acquisitions: An examination of the influence of relatedness and cultural fit on shareholder value creation in US acquiring firms. *MIR: Management International Review*, pp.337-359.
- David, K. and Singh, H., 1994. Sources of acquisition cultural risk. *The Management of Corporate Acquisitions*, Macmillan: Basingstoke, pp.251-292.

- Dong, M., Hirshleifer, D., Richardson, S. and Teoh, S.H., 2006. Does investor misvaluation drive the takeover market?. *The Journal of Finance*, 61(2), pp.725-762.
- Duchin, R. and Schmidt, B., 2013. Riding the merger wave: Uncertainty, reduced monitoring, and bad acquisitions. *Journal of Financial Economics*, 107(1), pp.69-88.
- Fama, E.F., 1998. Market efficiency, long-term returns, and behavioral finance. *Journal of financial economics*, 49(3), pp.283-306.
- Fiordelisi, F. and Martelli, D., 2011. Corporate Culture and M&A Results in Banking. Available at SSRN 1784016.
- French, K.R. and Poterba, J.M., 1991. Investor diversification and international equity markets (No. w3609). National Bureau of Economic Research.
- Fuller, K., Netter, J. and Stegemoller, M., 2002. What do returns to acquiring firms tell us? Evidence from firms that make many acquisitions. *The Journal of Finance*, 57(4), pp.1763-1793.
- Giannetti, M. and Yafeh, Y., 2012. Do cultural differences between contracting parties matter? Evidence from syndicated bank loans. *Management Science*, 58(2), pp.365-383.
- Golubov, A., Petmezas, D. and Travlos, N.G., 2012. When it pays to pay your investment banker: New evidence on the role of financial advisors in M&As. *The Journal of Finance*, 67(1), pp.271-311.
- Golubov, A., Yawson, A. and Zhang, H., 2015. Extraordinary acquirers. *Journal of Financial Economics*, 116(2), pp.314-330.
- Grinblatt, M. and Keloharju, M., 2001. How distance, language, and culture influence stockholdings and trades. *Journal of Finance*, pp.1053-1073.
- Herskovits, M.F., 1955. *Cultural anthropology*.
- Hofstede, G., 1980. Motivation, leadership, and organization: do American theories apply abroad?. *Organizational dynamics*, 9(1), pp.42-63.
- Javidan, M. and House, R.J., 2002. Leadership and cultures around the world: Findings from GLOBE: An introduction to the special issue. *Journal of world business*, 37(1), pp.1-2.
- Jemison, D.B. and Sitkin, S.B., 1986. Corporate acquisitions: A process perspective. *Academy of Management Review*, 11(1), pp.145-163.
- Jensen, M.C., 1986. Agency cost of free cash flow, corporate finance, and takeovers. *Corporate Finance, and Takeovers. American Economic Review*, 76(2).
- Kale, J.R., Kini, O. and Ryan, H.E., 2003. Financial advisors and shareholder wealth gains in corporate takeovers. *Journal of Financial and Quantitative Analysis*, 38(03), pp.475-501.
- Krug, J.A. and Hegarty, W.H., 2001. Research notes and commentaries: predicting who stays and leaves after an acquisition: a study of top managers in multinational firms. *Strategic Management Journal*, 22(1), pp.185-196.

- Larsson, R. and Lubatkin, M., 2001. Achieving acculturation in mergers and acquisitions: An international case survey. *Human Relations*, 54(12), pp.1573-1607.
- Larsson, R. and Risberg, A., 1998. Cultural awareness and national versus corporate barriers to acculturation. *DE GRUYTER STUDIES IN ORGANIZATION*, pp.39-56.
- Licht, A.N., Goldschmidt, C. and Schwartz, S.H., 2005. Culture, law, and corporate governance. *International review of law and economics*, 25(2), pp.229-255.
- Lubatkin, M., Schweiger, D. and Weber, Y., 1999. Top Management Turnover M Related M&A's: An Additional Test of the Theory of Relative Standing. *Journal of Management*, 25(1), pp.55-73.
- Maloney, M.T., McCormick, R.E. and Mitchell, M.L., 1993. Managerial decision making and capital structure. *Journal of Business*, pp.189-217.
- Mitchell, M.L. and Stafford, E., 2000. Managerial decisions and long-term stock price performance*. *The Journal of Business*, 73(3), pp.287-329.
- Reus, T.H. and Lamont, B.T., 2009. The double-edged sword of cultural distance in international acquisitions. *Journal of International Business Studies*, 40(8), pp.1298-1316.
- Rosen, R.J., 2006. Merger Momentum and Investor Sentiment: The Stock Market Reaction to Merger Announcements*. *The Journal of Business*, 79(2), pp.987-1017.
- Sarala, R.M. and Vaara, E., 2010. Cultural differences, convergence, and crossvergence as explanations of knowledge transfer in international acquisitions. *Journal of International Business Studies*, 41(8), pp.1365-1390.
- Shane, S.A., 1992. Why do some societies invent more than others?. *Journal of Business Venturing*, 7(1), pp.29-46.
- Stahl, G.K. and Voigt, A., 2008. Do cultural differences matter in mergers and acquisitions? A tentative model and examination. *Organization Science*, 19(1), pp.160-176.
- Stahl, G.K., Bjorkman, I. and Vaara, E.E.R.O., 2004, August. National cultural differences and capability transfer in cross-border acquisitions. In *Academy of Management Conference*, New Orleans (pp. 6-11).
- Very, P., Lubatkin, M., Calori, R. and Veiga, J., 1997. Relative standing and the performance of recently acquired European firms. *Strategic Management Journal*, 18(8), pp.593-614.
- Weber, Y., 1996. Corporate cultural fit and performance in mergers and acquisitions. *Human relations*, 49(9), pp.1181-1202.
- Weber, Y., Shenkar, O. and Raveh, A., 1996. National and corporate cultural fit in mergers/acquisitions: An exploratory study. *Management science*, 42(8), pp.1215-1227.

Appendix A: Variable Definitions

Variable	Definition	Source
Deal Outcomes		
A_CAR[-300, -91]_[-5, +5]	Acquirer's cumulative abnormal return over the event window [-5, +5] days surrounding acquisition announcement, using the market model with Datastream Total Index returns for the respective firm's host country as benchmark. The market model is estimated using at least 30 non-missing daily returns data over the [-300, -91] period prior to the announcement.	Datastream
T_CAR[-300, -91]_[-5, +5]	Target's cumulative abnormal return over the event window [-5, +5] days surrounding acquisition announcement, using the market model with Datastream Total Index returns for the respective firm's host country as benchmark. The market model is estimated using at least 30 non-missing daily returns data over the [-300, -91] period prior to the announcement.	Datastream
VW_CAR[-300, -91]_[-5, +5]	The value weighted cumulative abnormal return over the event window [-5, +5] days surrounding acquisition announcement of the acquirer and target firm, using the market model with Datastream Total Index returns for the respective firm's host country as benchmark. The market model is estimated using at least 30 non-missing daily returns data over the [-300, -91] period prior to the announcement. The weights are based on market value four weeks prior to announcement.	Datastream, SDC
Bidder's share of synergy (BSOS)	Bidder dollar-denominated gain (computed as the market value of equity four weeks prior to the announcement from SDC times A_CAR(-5,+5)) divided by Synergy Gain if synergy gain is positive and (1-Bidder dollar-denominated gain) divided by Synergy Gain if Synergy Gain is negative. Synergy Gain is the sum of bidder and target dollar-denominated gains, computed as the sum of the market value of equity four weeks prior to the announcement from SDC times the CAR (-5,+5) for the two firms. (Golubov, Petmezas and Travlos, 2012)	SDC, Datastream
Completion	Dummy variable: one for deals that is completed, zero for withdrawn deals.	SDC
Complete_Time	Number of days between deal announcement date and effective date	SDC
Percentage Stock Payment	Percentage of payment made by stock	SDC
BHAR	Bidder buy-and-hold abnormal return with the benchmark being the Datastream Total Index returns for the respective firm's host country	Datastream
$\Delta ROA_{t,t+3}$	The difference between the average of ROAs three years after deal announcement year and the ROA in the announcement year.	Worldscope

Firm Characteristics		
Leverage	Bidder's ratio of net debt to book value of total assets at the end of the fiscal year prior to deal announcement	SDC
MTB	Acquirer's ratio of market capitalization to book value of total assets at the end of the fiscal year prior to deal announcement	Worldscope
Cash/Assets	Acquirer's ratio of cash and marketable securities to book value of total assets at the end of the fiscal year prior to deal announcement	SDC
ARunup	Market adjusted buy-and-hold return of the acquirer's stock over (-205, -6) window (Golubov et al., 2012)	Datastream
Serial Acquirer	The number of deals that the acquirer has completed in the past three years prior to announcement.	SDC
A_MV	Acquirer's market value of equity four weeks prior to announcement	SDC
Ln(A_MV)	Natural logarithm of acquirer's market value of equity four weeks prior to announcement	SDC
Assets	Bidder's book value of total assets	SDC
Deal Characteristics		
Transaction value	Value of transaction, in millions of dollars	SDC
Relative size	The ratio of transaction value to bidder market value of equity four weeks prior to announcement	SDC
Competing bid	Dummy variable: one for deals with more than one bidder, zero otherwise.	SDC
Tender	Indicator variable: one for tender offers, zero otherwise.	SDC
Toehold	Indicator variable: one if the bidder already hold certain percent of the target shares at the announcement, zero otherwise.	SDC
Same Country	Indicator variable: one if the bidder and target are from the same country, zero otherwise.	SDC
Related Industry	Indicator variable: one if the bidder and target have the same two-digit standard industry classification (SIC) Code, zero otherwise.	SDC
Premium	The ratio of offer price to target stock price 4 weeks prior to announcement minus one	SDC
Full Cash Payment	Indicator variable: one for deals financed fully with cash, zero otherwise.	SDC
Hostile	Indicator variable: one for hostile deals, zero otherwise.	SDC
Culture Distance Measurements		
Euclidean Cul Dis	The Euclidean distance of categorical inquiry average scores between acquirer and target.	EIRIS
Euclidean Cul Dis_Large	Dummy variable: one if the Euclidean Cul Dis is larger or equal to the sample median, zero otherwise.	EIRIS
Cul Dis	The absolute value of average categorical differences	EIRIS
Cul Dis_large	Dummy variable: one if the Cul Dis is larger or equal to the sample median, zero otherwise.	EIRIS
Avg Cat Cul Dis	The average of absolute categorical difference	EIRIS

Avg Cat Cul Dis_large	Dummy variable: one if the Avg Cat Cul Dis is larger or the equal to sample median, zero otherwise.	EIRIS
Cul Unrelatedness	One minus the absolute value of correlations on the overlapped inquiries between acquirer and target	EIRIS
Cul Unrelatedness_Large	Dummy variable: one if the Cul Unrelatedness is larger or equal to the sample median, zero otherwise.	EIRIS
National Cul dis	The Euclidean distance of two national culture dimensions: “Egalitarianism vs. Hierarchy” and “Collectivism vs. Individualism”. (Ahern, Daminelli, and Fracassi, 2012)	World Value Survey (WVS)

Appendix B: Culture Variables Construction

Stage 1: Assign a culture score in [0, 1] to each inquiry response answered by the sample firms

Culture inquiries score assign method:

For each inquiry, we first check what the theoretical maximum number of possible answers for this particular inquiry is from the EIRIS Inquiry List Guide.¹ We then partition the range [0, 1] into equal portions, and consistently assign a lower score (closer to 0) to “bad culture” responses, and assign a higher score (closer to 1) to “good culture” answers.² The summary statistics below illustrate the coverage of inquiries items under each category.³

Category	Number of inquiry items covered under the category	Number of inquiry responses collected from sample firms	Range of scores assigned to each inquiry responses
Corporate Governance	58	18049	[0, 1]
Employees	36	4331	[0, 1]
Products and Customers	36	411	[0, 1]
Community	11	2401	[0, 1]
Environment	77	10385	[0, 1]
Ethics	27	6854	[0, 1]
Controversial Business Issues	84	12705	[0, 1]
Total	329	55136	
Average	47	7877	

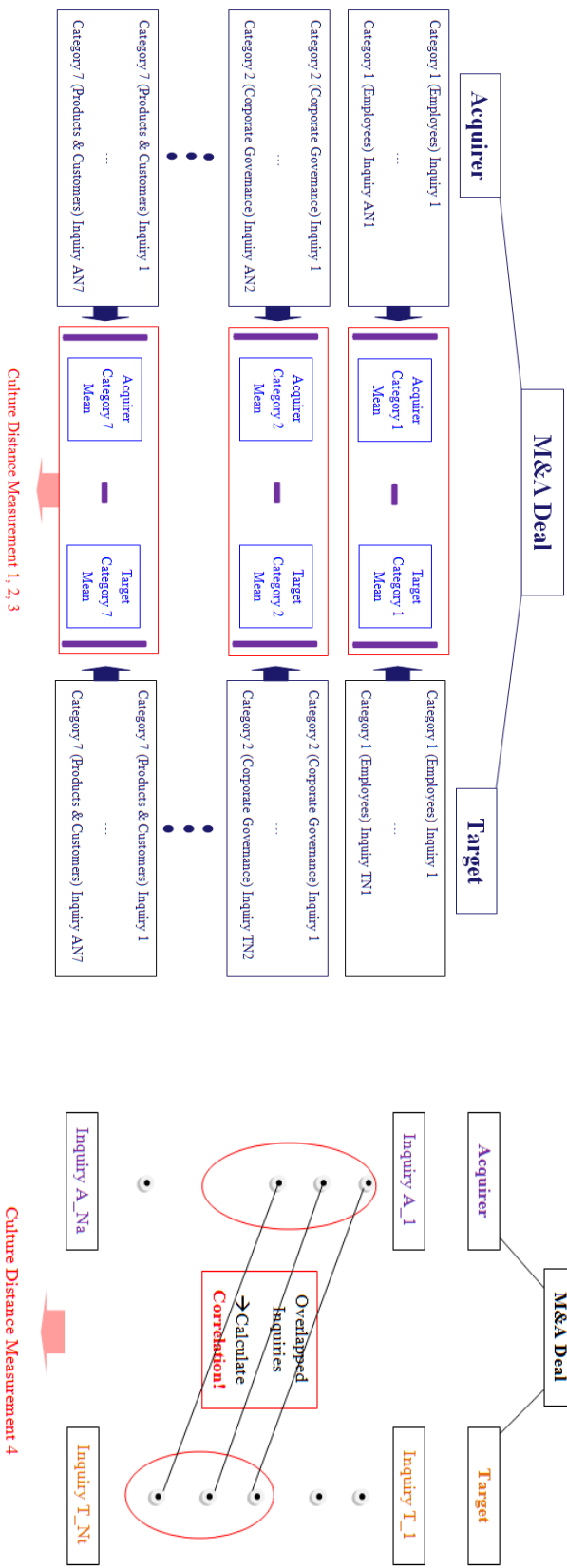
¹ If this inquiry is not covered in the EIRIS Inquiry Guide, we then check the actual number of possible answers for this inquiry from the entire 2003-2011 culture data and then calculate the proportion accordingly.

² For “Yes/No” binary inquiries, EIRIS only reports “Yes” responses while “No” responses are omitted for reporting convenience. In our process of culture score assignment, we manually fill back those “No” responses for the purpose of fair comparison of culture standard between acquirers and targets.

³ Due to the legal restriction of publically disclosing data provided by EIRIS, we are not able to display the detailed inquiry items here. However, more detailed description of the culture database inquiries can be shared upon readers’ request.

Stage 2: Compute Corporate Cultural distance based on acquirer's and target's assigned inquiries scores

After having assigned a culture score to each inquiry responded by sample firms in the first stage, we then construct the corporate cultural distance between the acquirer and target for each deal based on the four measurement methods described below.



Corporate Culture Distance	Calculation Method	Variable label	Formula Representation	Large Culture distance dummy defined based on respective variable sample median
Main Measurement:				
Measurement 1	The Euclidean distance of categorical inquiry average scores between acquirer and target	Euclidean Cul Dis ∈ [0, 1]	$= \frac{\sqrt{\sum_{i=1}^7 (S_{A,i} - S_{T,i})^2}}{7}$ <p>$S_{A,i}$ = mean inquiry score of acquirer in category i $S_{T,i}$ = mean inquiry score of target in category i¹</p>	Euclidean Cul Dis_Large ∈ {0, 1}
Alternative Measurements for robustness check:				
Measurement 2	The absolute value of average categorical differences	Cul Dis ∈ [0, 1]	$= \left \frac{\sum_{i=1}^7 (S_{A,i} - S_{T,i})}{7} \right $	Cul Dis_Large ∈ {0, 1}
Measurement 3	The average of absolute categorical difference	Avg Cat Cul Dis ∈ [0, 1]	$= \frac{\sum_{i=1}^7 S_{A,i} - S_{T,i} }{7}$	Avg Cat Cul Dis_Large ∈ {0, 1}
Measurement 4	One minus the absolute value of correlations on the overlapped inquiries between acquirer and target	Cul Unrelatedness ∈ [0, 1]	$= 1 - Corr_{A,T} $ <p>$Corr_{A,T}$ = Total Correlation of overlapped inquiries between acquirer and its corresponding target for each deal</p>	Cul Unrelatedness_Large ∈ {0, 1}

¹ If a deal does not have acquirer and target both covering inquiries in all the 7 categories, then we calculate the Euclidean distance based on the number of categories available (Eg: 6 categories instead of 7).

Table 1: Deals Descriptive Statistics

Panel A: This panel presents the number of acquirers and targets for each of 22 developed countries covered in our sample. Our final sample includes 220 M&A deals with 143 (65%) domestic and 77 (35%) cross border deals.

Country	# Acquirers	# Targets
Australia (AS)	13	15
Austria (AU)	1	1
Belgium (BL)	2	0
Canada (CA)	7	13
Finland (FN)	1	0
France (FR)	7	3
Germany (GE)	11	3
Greece (GR)	1	1
Hong Kong (HK)	1	1
Ireland (IR)	1	0
Israel (IS)	1	0
Italy (IT)	2	1
Japan (JP)	15	12
Netherlands (NT)	4	3
New Zealand (NZ)	0	1
Norway (NO)	0	2
Singapore (SG)	2	0
Spain (SP)	4	3
Sweden (SW)	3	1
Switzerland (SZ)	13	3
United Kingdom (UK)	49	69
United States (US)	82	88
Total	220	220

Panel B: This panel presents the number of deals announced in each year covered in our sample period, ranging from 2004 to 2012.

Announcement Year	# Deals
2004	17
2005	37
2006	41
2007	30
2008	22
2009	20
2010	21
2011	15
2012	17
Total	220

Table 2: Sample Variables Descriptive Statistics

This table presents descriptive statistics for a sample of 220 domestic and cross-border international acquisitions announced between 2004 and 2012. Panel A, B and C describe the summary statistics for the acquirer characteristics, deal characteristics and deal outcome variables respectively. For each panel, descriptive statistics are presented for the full sample, large corporate cultural distance and small corporate cultural distance subsamples (defined based on the large culture dummy: Euclidean Cul Dis_large). Detailed definitions of all variables are in Appendix A. P-Values from t-tests for differences in means for each characteristic of large versus small corporate cultural distance are also presented. Asterisks denote statistical significance at the 1% (***) , 5% (**) or 10% (*) level.

Variable	Full Sample			Large Cultural Distance			Small Cultural Distance			t-test P-Value
	N	Mean	Std Dev	N	Mean	Std Dev	N	Mean	Std Dev	
Panel A: Acquirer Characteristics										
Market Value	220	636876.2	8845670.4	107	53343.4	163519.3	113	1189424.9	12342609.0	0.342
Ln(MV)	220	9.459	1.775	107	9.611	1.694	113	9.316	1.844	0.218
Assets	220	37763.5	62509.8	107	38139.8	49962.7	113	37407.1	72647.7	0.931
Book to Market	220	1.239	1.035	107	1.255	0.954	113	1.224	1.110	0.825
Leverage	220	0.119	0.227	107	0.097	0.237	113	0.139	0.216	0.162
Cash to Asset	220	0.112	0.114	107	0.125	0.115	113	0.101	0.112	0.113
Runup	220	0.052	0.257	107	0.052	0.268	113	0.051	0.247	0.986
Serial Acquirer	220	0.550	1.136	107	0.495	1.049	113	0.602	1.214	0.488
Panel B: Deal Characteristics										
Transaction Value	220	9376.3	16495.8	107	7925.4	12185.4	113	10750.2	19688.3	0.205
Relative size	220	0.898	3.940	107	0.472	0.574	113	1.302	5.450	0.118
Competing bid	220	0.173	0.379	107	0.178	0.384	113	0.168	0.376	0.854
Tender Offer	220	0.386	0.488	107	0.393	0.491	113	0.381	0.488	0.856

Toehold	220	0.136	0.344	107	0.150	0.358	113	0.124	0.331	0.582
Same Country	220	0.650	0.478	107	0.561	0.499	113	0.735	0.444	0.007
Same Industry	220	0.636	0.482	107	0.561	0.499	113	0.708	0.457	0.023
Full Cash Payment	220	0.477	0.501	107	0.561	0.499	113	0.398	0.492	0.016
Hostile	220	0.105	0.307	107	0.093	0.292	113	0.115	0.320	0.603
National Cultural Distance	220	0.434	0.719	107	0.524	0.746	113	0.350	0.686	0.073

Panel C: Deal Outcome

Acquirer CAR(-5, +5)	220	-0.019	0.071	107	-0.030	0.066	113	-0.008	0.074	0.017
Synergy (VWCAR)	220	0.025	0.072	107	0.010	0.062	113	0.039	0.077	0.003
Bidder's share of synergy	220	-2.604	13.490	107	-3.122	15.666	113	-2.113	11.094	0.580
Acquisition Premium	220	0.327	0.573	107	0.286	0.303	113	0.365	0.743	0.309
Complete	220	0.736	0.442	107	0.673	0.471	113	0.796	0.404	0.038
Completion Time	162	181.815	145.762	72	198.347	175.596	90	168.589	115.927	0.198
Percentage Stock Payment	220	34.796	41.690	107	26.629	38.931	113	42.530	42.895	0.005

Table 3: Effect of corporate cultural distance on bidder announcement CARs

This table presents the effect of corporate cultural distance on bidder cumulative abnormal returns (CARs) around M&A announcement. The OLS regressions are based on a sample of 220 completed and withdrawn deals that are announced between 2004 and 2012. Acquirers and targets are all public firms. This sample includes both domestic and cross-border acquisitions with the acquirers and targets meet EIRIS culture data availability and are from a range of 22 developed countries. The dependent variable is the bidder CAR over the 11-day event window (-5, +5) surrounding the deal announcement based on the market model estimated over the pre-announcement window of (-300, -91) with the benchmark of Datastream Total Market Index of firms' respective countries. All corporate culture distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistically significance at the 1% (***) , 5% (**) or 10% (*) level.

	Acquirer CAR (-5, +5)			
	1	2	3	4
Euclidean Cul Dis	-0.365** (0.044)	-0.390** (0.036)	-0.378** (0.042)	-0.386** (0.038)
Relative size		0.001 (0.487)	0.001 (0.396)	0.001 (0.351)
Competing bid		0.030** (0.033)	0.033** (0.021)	0.030** (0.036)
Tender		-0.010 (0.371)	-0.009 (0.427)	-0.008 (0.464)
Toehold		0.006 (0.696)	0.007 (0.650)	0.007 (0.638)
Same Country		-0.012 (0.303)	-0.009 (0.398)	-0.023 (0.218)
Related Industry		0.010 (0.353)	0.010 (0.366)	0.010 (0.341)
Premium		0.005 (0.568)	0.005 (0.589)	0.005 (0.593)
Full Cash Payment		0.017 (0.163)	0.017 (0.158)	0.018 (0.126)
Hostile		-0.022 (0.195)	-0.023 (0.176)	-0.023 (0.165)
Leverage			-0.019 (0.580)	-0.023 (0.513)
MTB			-0.000 (0.961)	-0.001 (0.922)
Cash/Assets			-0.159** (0.027)	-0.161** (0.025)
ARunup			-0.017 (0.375)	-0.019 (0.326)
Serial Acquirer			-0.000 (0.932)	-0.001 (0.862)
National Cul dis				-0.011 (0.364)
Intercept	0.027 (0.454)	0.010 (0.790)	0.021 (0.603)	0.034 (0.422)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	220	220	220	220
Adj R Square	0.033	0.060	0.084	0.083

Table 4: Effect of corporate cultural distance on synergy returns

This table presents the results of OLS regressions of synergy returns (VWCAR) around M&A announcement on corporate cultural distance. The dependent variable synergy returns (VWCAR) are defined as the market value-weighted average of acquirer CAR and target CAR over the 11-day event window (-5, +5) surrounding the deal announcement. CARs are calculated based on the market model estimated over the pre-announcement window of (-300, -91) with the benchmark of Datastream Total Market Index of firms' respective countries. The sample consists of both domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. All corporate culture distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistical significance at the 1% (***) , 5% (**) or 10% (*) level.

	VWCAR (-5, +5)			
	1	2	3	4
Euclidean Cul Dis	-0.689*** (0.000)	-0.632*** (0.001)	-0.656*** (0.000)	-0.658*** (0.000)
Relative size		0.003** (0.019)	0.003*** (0.009)	0.003*** (0.009)
Competing bid		0.026* (0.062)	0.028** (0.045)	0.027* (0.055)
Tender		-0.008 (0.492)	-0.008 (0.453)	-0.008 (0.464)
Toehold		-0.006 (0.688)	-0.005 (0.739)	-0.005 (0.743)
Same Country		-0.007 (0.513)	-0.005 (0.624)	-0.009 (0.645)
Related Industry		0.020* (0.073)	0.019* (0.087)	0.019* (0.086)
Full Cash Payment		0.017 (0.152)	0.020* (0.092)	0.020* (0.090)
Hostile		0.007 (0.699)	0.009 (0.611)	0.008 (0.618)
Leverage			-0.007 (0.830)	-0.008 (0.813)
MTB			-0.001 (0.887)	-0.001 (0.878)
Cash/Assets			-0.115 (0.106)	-0.116 (0.106)
ARunup			-0.032* (0.095)	-0.033* (0.093)
Serial Acquirer			-0.007 (0.144)	-0.007 (0.141)
National Cul dis				-0.003 (0.833)
Intercept	0.066* (0.073)	0.036 (0.364)	0.044 (0.268)	0.047 (0.267)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	220	220	220	220
Adj R Square	0.029	0.068	0.098	0.094

Table 5: Effect of corporate cultural distance on acquirer bargaining power

This table presents the OLS regression results of acquirer's bargaining power in the M&A transaction on corporate cultural distance. In regressions (1)-(2), the dependent variable is BSOS, following the construction method as in Golubov, et al. (2012). In regressions (3)-(4), the dependent variable is acquisition premium. The sample consists of both domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. Corporate culture distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistical significance at the 1% (***) , 5% (**) or 10% (*) level.

	BSOS		Acquisition Premium	
	1	2	3	4
Euclidean Cul Dis	-25.484 (0.469)	-16.092 (0.664)	-0.881 (0.555)	-1.110 (0.470)
Relative size		0.030 (0.909)		0.005 (0.669)
Competing bid		1.721 (0.542)		0.288** (0.015)
Tender		-3.822* (0.092)		-0.006 (0.948)
Toehold		4.965* (0.095)		-0.046 (0.709)
Same Country		2.032 (0.591)		0.046 (0.771)
Related Industry		4.564** (0.037)		0.054 (0.550)
Full Cash Payment		-1.426 (0.547)		0.266*** (0.007)
Hostile		3.444 (0.310)		0.049 (0.729)
Leverage		-2.211 (0.748)		-0.145 (0.613)
MTB		-0.478 (0.690)		0.083* (0.097)
Cash/Assets		-4.179 (0.770)		-0.733 (0.216)
ARunup		1.984 (0.608)		0.141 (0.379)
Serial Acquirer		0.523 (0.600)		-0.021 (0.607)
National Cul dis		1.258 (0.614)		-0.009 (0.929)
Intercept	1.798 (0.798)	-0.067 (0.994)	0.615** (0.040)	0.280 (0.428)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	220	220	220	220
Adj R Square	-0.019	-0.024	-0.014	0.024

Table 6: Effect of corporate cultural distance on deal completion probability

This table presents the cross-sectional regression results of deal completion probability on corporate cultural distance. Logit (column 1-2) and Probit (column 3-4) regressions are based on a sample of 220 domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. The dependent variable is a binary variable that takes the value of one if the deal was completed and zero otherwise. Corporate culture distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistically significance at the 1% (***) , 5% (**) or 10% (*) level.

	Deal Completion Probability			
	Logit		Probit	
	1	2	3	4
Euclidean Cul Dis	-13.523** (0.035)	-24.919*** (0.006)	-7.835** (0.036)	-12.774*** (0.008)
Relative size		-0.051 (0.466)		-0.031 (0.429)
Competing bid		-2.690*** (0.000)		-1.487*** (0.000)
Tender		1.129** (0.050)		0.659** (0.041)
Toehold		1.585* (0.064)		0.902* (0.065)
Same Country		1.131 (0.187)		0.655 (0.183)
Related Industry		0.544 (0.298)		0.304 (0.308)
Premium		0.215 (0.563)		0.139 (0.506)
Full Cash Payment		0.704 (0.227)		0.360 (0.271)
Hostile		-3.247*** (0.000)		-1.811*** (0.000)
Leverage		0.576 (0.731)		0.461 (0.621)
MTB		-0.444 (0.146)		-0.261 (0.136)
Cash/Assets		9.526** (0.020)		5.562** (0.016)
ARunup		-2.733*** (0.008)		-1.491*** (0.008)
Serial Acquirer		0.315 (0.344)		0.197 (0.293)
National Cul dis		0.032 (0.958)		0.033 (0.926)
Intercept	1.973** (0.013)	1.007 (0.495)	1.121** (0.010)	0.308 (0.709)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	220	220	220	220
Pseudo R2	0.125	0.408	0.123	0.407

Table 7: Effect of corporate cultural distance on deal completion time

This table presents Tobit regressions results of deal completion time on corporate cultural distance. The dependent variable is the number of calendar days between deal announcement date and acquisition effective date. The sample consists of 162 completed domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. The key independent variable is the large Euclidean corporate cultural distance dummy. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistical significance at the 1% (***), 5% (**) or 10% (*) level.

	Deal Completion Time			
	1	2	3	4
Euclidean Cul Dis_Large	21.761 (0.330)	39.550* (0.077)	44.575** (0.046)	54.313** (0.017)
Relative size		3.463*** (0.007)	2.239* (0.099)	1.989 (0.135)
Competing bid		26.400 (0.576)	27.631 (0.569)	44.570 (0.358)
Tender		-73.434*** (0.009)	-62.378** (0.026)	-66.010** (0.016)
Toehold		67.685 (0.109)	68.648* (0.098)	68.034* (0.083)
Same Country		40.582 (0.100)	43.182* (0.093)	123.097*** (0.007)
Related Industry		14.201 (0.573)	19.882 (0.398)	17.411 (0.449)
Premium		-3.320 (0.957)	1.599 (0.979)	8.928 (0.884)
Full Cash Payment		-27.764 (0.269)	-37.842 (0.120)	-50.598** (0.034)
Hostile		-6.530 (0.868)	-11.796 (0.767)	-33.057 (0.395)
Leverage			24.039 (0.680)	36.373 (0.526)
MTB			-4.529 (0.607)	-2.029 (0.804)
Cash/Assets			-4.545 (0.975)	-0.847 (0.995)
ARunup			-69.824 (0.137)	-61.665 (0.192)
Serial Acquirer			17.167* (0.065)	20.030** (0.016)
National Cul dis				60.947** (0.015)
Intercept	129.008*** (0.000)	119.823** (0.026)	108.283* (0.059)	18.471 (0.782)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	162	162	162	162
Pseudo R2	0.019	0.030	0.033	0.035

Table 8: Effect of corporate cultural distance on method of payment

This table presents Tobit regressions results of payment method on corporate cultural distance. The dependent variable is the percentage of payment made by stock. The sample consists of 220 domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. All corporate culture distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. Year and Fama and French 12 Industry fixed effects are controlled for all regressions. P-Values are reported in the parentheses. Asterisks demote statistically significance at the 1% (***) , 5% (**) or 10% (*) level.

	Percentage Payment by Stock			
	1	2	3	4
Euclidean Cul Dis	-628.232*** (0.005)	-341.947* (0.074)	-425.677** (0.027)	-438.928** (0.021)
Relative size		0.348 (0.781)	0.309 (0.818)	0.633 (0.627)
Competing bid		-23.045 (0.122)	-25.237* (0.085)	-31.744** (0.031)
Tender		-41.818*** (0.000)	-42.834*** (0.000)	-39.275*** (0.000)
Toehold		-32.286** (0.037)	-27.712* (0.067)	-27.091* (0.072)
Same Country		59.895*** (0.000)	56.803*** (0.000)	14.603 (0.479)
Related Industry		10.737 (0.302)	7.141 (0.487)	7.793 (0.443)
Premium		-64.519*** (0.001)	-66.388*** (0.000)	-66.414*** (0.000)
Hostile		64.481*** (0.000)	66.130*** (0.000)	60.983*** (0.000)
Leverage			-41.147 (0.194)	-45.977 (0.142)
MTB			3.329 (0.524)	3.500 (0.501)
Cash/Assets			-17.975 (0.781)	-16.307 (0.799)
ARunup			1.942 (0.908)	-3.343 (0.843)
Serial Acquirer			-11.722** (0.021)	-12.554** (0.013)
National Cul dis				-35.100** (0.023)
Intercept	56.880** (0.018)	52.715** (0.040)	69.438** (0.011)	111.133*** (0.001)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	220	220	220	220
Pseudo R2	0.043	0.097	0.105	0.109

Table 9: Effect of corporate cultural distance on long run stock market performance (BHAR)

This table reports the OLS regressions results of acquirer long-run monthly buy-and-hold abnormal returns on corporate cultural distance. The dependent variable is the acquirer's buy and hold abnormal returns (BHARs) over 36 months, 48 months and 60 months respectively after deal announcement. BHARs are estimated as $BHAR = \prod_{t=1}^T (1 + R_{i,t}) - t=1T1 + RBenchmark,t$, where $R_{i,t}$ is the return of acquirer i at month t , $RBenchmark,t$ is the return of the corresponding benchmark, and T is the number of months. Here we use the Datastream Total Market Index for the respective acquirer country as the benchmark. The sample consists of completed domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. All corporate cultural distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. All regressions include year and Fama and French 12 industry fixed effects and robust standard errors (clustered at acquirer nation level). P-Values are reported in the parentheses. Asterisks demote statistical significance at the 1% (***) , 5% (**) or 10% (*) level.

	BHAR		
	1 36m	2 48m	3 60m
Euclidean Cul Dis	2.687* (0.072)	7.208*** (0.006)	7.379** (0.028)
Relative size	-0.002 (0.846)	0.002 (0.891)	0.004 (0.768)
Competing bid	0.163 (0.101)	0.056 (0.367)	0.079 (0.375)
Tender	0.001 (0.983)	-0.042 (0.484)	-0.039 (0.699)
Toehold	0.073 (0.615)	0.005 (0.970)	-0.050 (0.755)
Same Country	0.322* (0.060)	0.210 (0.141)	0.315* (0.053)
Related Industry	0.042 (0.534)	-0.110 (0.118)	-0.175** (0.021)
Full Cash Payment	-0.127 (0.373)	-0.117 (0.601)	-0.032 (0.900)
Hostile	-0.546*** (0.002)	-0.199 (0.373)	-0.167 (0.310)
Leverage	0.367 (0.281)	0.338 (0.217)	0.067 (0.843)
MTB	0.034 (0.231)	0.122** (0.047)	0.182*** (0.007)
Cash/Assets	-0.319 (0.587)	-1.311** (0.019)	-1.859** (0.017)
ARunup	0.109 (0.366)	0.405** (0.018)	0.231 (0.287)
Serial Acquirer	0.064* (0.069)	0.098** (0.017)	0.095** (0.036)
National Cul dis	0.306** (0.048)	0.124 (0.264)	0.270* (0.080)
Intercept	-0.632** (0.024)	-0.813*** (0.006)	-0.360 (0.173)
Year fixed effects	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes
N	159	143	129
R Square	0.194	0.321	0.352

Table 10: Effect of corporate cultural distance on long run accounting performance (ROA)

This table reports the OLS regressions results of acquirer long-run accounting performance on corporate cultural distance. Following Duchin and Schmidt (2013), we compute changes of operating returns on assets (ΔROA) to measure acquirer's long run operating performance after deal announcements. The dependent variable ($\Delta ROA_{t,t+k}$) here is the average of k years ROAs after the announcement year minus announcement year ROA. The sample consists of completed domestic and cross-border international M&A deals that are announced in 2004 to 2012. Acquirers and targets are all public firms. All corporate cultural distance variables are scaled values within the range of [0, 1]. Detailed definitions of all variables are in Appendix A. All regressions include year and Fama and French 12 industry fixed effects. P-Values are reported in the parentheses. Asterisks demote statistically significance at the 1% (***) , 5% (**) or 10% (*) level.

	$\Delta ROA_{t,t+2}$		$\Delta ROA_{t,t+3}$	
	1	2	3	4
Euclidean Cul Dis	1.104** (0.034)	1.149** (0.041)	0.892* (0.090)	1.106* (0.062)
Relative size		-0.004 (0.375)		-0.004 (0.363)
Competing bid		0.021 (0.652)		0.008 (0.859)
Tender		-0.000 (0.990)		-0.011 (0.746)
Toehold		0.011 (0.778)		0.002 (0.962)
Same Country		0.047 (0.396)		0.047 (0.434)
Related Industry		0.032 (0.291)		0.026 (0.395)
Full Cash Payment		0.036 (0.311)		0.010 (0.778)
Hostile		-0.024 (0.717)		0.047 (0.523)
Leverage		-0.038 (0.697)		-0.057 (0.576)
MTB		0.004 (0.823)		0.005 (0.783)
Cash/Assets		-0.527*** (0.006)		-0.492** (0.013)
ARunup		0.063 (0.323)		0.011 (0.862)
Serial Acquirer		0.024* (0.057)		0.025* (0.050)
National Cul dis		0.036 (0.297)		0.028 (0.456)
Intercept	-0.135 (0.152)	-0.229* (0.055)	-0.096 (0.294)	-0.173 (0.148)
Year fixed effects	Yes	Yes	Yes	Yes
Industry fixed effects	Yes	Yes	Yes	Yes
N	154	154	139	139
Ajd_R_Square	0.108	0.178	0.103	0.134