Mars-Venus Marriages: Culture and Cross-Border M&A

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Abstract

We explore factors affecting the long-term performance of cross-border M&A, with a special focus on cultural distance between the countries of the two firms. Using a sample of over 400 cross-border acquisitions in the period 1991-2000, we find that contrary to general perception, cross-border acquisitions perform *better* in the long-run if the acquirer and the target come from countries that are culturally more disparate. We use the Hofstede measure of cultural dimensions to define cultural distance and also examine alternative measures such as language, religion and legal origin to capture cultural differences. The positive effect of cultural distance persists after controlling for several deal-specific variables and country-level fixed effects, and is robust to alternative specifications and horizons of long-term performance. Divergence (convergence) in degree of individualism and hierarchy in power structures (attitudes towards uncertainty) beneficially impacts post-acquisition performance. Among deal characteristics, cash and friendly acquisitions tend to perform better in the long-run. There is also some evidence of synergies when acquirers from stronger corporate governance regimes acquire targets from weaker regimes.

Keywords: cross-border; mergers; acquisitions; culture
JEL Classifications: G34

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"Culture was a big issue in deciding to do the deal".
Proctor & Gamble CEO A.G. Lafly about the merger with Gillette [Fortune, 2005] [5]

"In Russia, 3M is showing how companies can turn cultural variations into business advantages."
Harvard Business Review [6]

1. Introduction

Cultural disparity between two merging partners is among the usual suspects blamed for ruining mergers and acquisitions. Practitioners admit that culture plays a crucial role in determining the long-term success of an M&A deal. Yet there is no systematic study of the effect of cultural difference on the performance of M&A. This void is probably due to the fact that corporate culture is difficult to define and even harder to measure. However, in the absence of such a study we can never be sure whether the "culture clashes" that we read about in the financial press are systematic widespread phenomena or just pertain to the handful of mega-deals that capture media attention.

Cultural issues dominate the discussion of cross-border M&A among practitioners. Pautler (2003), in a survey of recent studies by consultants on transnational M&A, cites managing cultural difference between organizations as central to the success of a deal. For instance, in the 1990 acquisition by GE of a well known Hungarian company, Tungsram, it reportedly took GE four years to assimilate the company. Cultural difference is blamed for this long drawn out integration. Individualism and individual responsibility seemed to define the GE culture but not that of Tungsram. Similarly the merger of Upjohn and Pharmacia AB of Sweden ran into considerable integration problems. Upjohn's culture involved largely hierarchical decision-making whereas Pharmacia employees were used to working in small teams. While some of these

[5] "It was a no-brainer", Fortune, Feb 21, 2005.
[6] "Making the Most of Culture Differences," Mikhail V. Gratchev, *Harvard Business Review*, Oct 2001, Vol. 79 Issue 9, 28-29.

differences doubtless stem from corporate-level practices, they also appear to conform to the respective national cultural traits.

While the stories about post-merger culture clashes have become prevalent, another channel through which cultural differences can affect the outcomes of these economic activities is equally interesting- the impact that *awareness* of cultural differences can have on economic interactions. The theories on the direct impact of cultural differences on potential success of cross-cultural economic outcomes are generally easier to understand. However, there is likely to be an indirect manifestation of the fact that the challenges associated with cultural differences are well known. This awareness of cultural differences could lead acquiring firms to complete deals involving culturally distant targets only when they are more convinced of significant economic synergies that can compensate for the risk of failure. This hypothesis finds support in Aguilera et al. (2004) who find that M&A announcements are more likely to be withdrawn when there is more cultural disparity between acquirer and target firms.

We are not aware of any academic research in the finance area probing the effect of culture on the performance of mergers and acquisitions. The issues of culture in relation to M&A performance have been studied to some extent in the international business literature but without consensus[7]. Many of these studies also suffer from serious methodological and sample limitations. It is fair to say that, in spite of it being a familiar anecdotal issue, the hypothesis about cultural differences influencing M&A performance is not backed by direct empirical evidence. Our empirical inquiry is based on the simple premise that cultural differences impact the future performance of M&A deals.

This premise is strongly supported by our empirical evidence. We study the performance of 405 cross-border acquisitions between 1991 and 2000, involving acquirers from 34 countries and targets from 37 countries. Using an event-study methodology, we study the effect of cultural distance on the stock market performance of the acquiring firms, and control for various factors

like deal and country-level characteristics. We use the Hofstede metric of cultural distance to determine cultural difference between the countries involved in the acquisition. We find that the Hofstede cultural distance is statistically and economically significant in explaining long-term stock market performance of the acquirer, as measured by the 36-month Buy-and-Hold Abnormal Return (BHAR). Moreover, the cultural distance between acquirer and target nations has a *positive* effect on subsequent performance of acquiring firms. A one standard deviation (≈23.8) increase in Hofstede distance increases the acquirer's 36-month BHAR by 30.9%. The magnitude of economic significance of the Hofstede measure is best explained by a hypothetical example, since absolute values of the Hofstede metric are not intuitive. For example, the cultural distance between United States and Greece is approximately 88.98, and the distance between United States and Sweden is approximately 63.4. So, for a U.S. acquirer, Greece is 25.58 unit distance more culturally disparate than Sweden. According to our empirical findings, *ceteris paribus*, this should cause a 33.25% outperformance of the U.S. acquirer's BHAR in case of a Greek target acquisition relative to a Swedish target acquisition.

Further, we examine the effect of divergence between acquirer and target country cultures along different dimensions of cultural distance on acquirer three-year BHAR. We find that acquirers from countries with more rigid power structures do better when they acquire targets from countries with less rigid power structures, potentially by impacting the post-acquisition integration process. Acquirers that come from more individualistic societies benefit from higher synergies when the target is from a collectivistic society. This is indicative of potential complementarities in organizational functions between the acquirer and target. On the other hand, the divergence in uncertainty avoidance attitudes has a negative effect on long-run performance. Similar attitudes towards uncertainty and unstructured situations may facilitate higher levels of understanding and coordination during the integration process. Observing the effects of different dimensions of cultural disparity lends support to the possibility that these differences are not

[7] See for example, Morosini, Shane and Singh (1998), Datta and Puia (1995).

necessarily incompatible, as would be predicted by a more simplistic view. Since Hofstede distance captures the divergence along several cultural dimensions, including the ones mentioned above, it is our primary measure of cultural disparity.

Our results seem surprising in the face of entrenched conventional wisdom about cultural differences being detrimental to post-acquisition performance of acquiring firms. Instead of corroborating these familiar (and simplistic) ideas, our empirical evidence points to a more complex and multi-dimensional impact of cultural disparity on business activities. For example, some of our results allude to benefits of cultural differences along certain dimensions, like individualism, that can impact the business interactions between target and acquiring firm. We propose certain hypotheses that can lead to our findings on the beneficial effects of cultural disparity but have been largely overlooked so far, and contribute by drawing attention to the substantially more complex role of culture in M&A than generally believed.

Cultural distance can be positively related to the long-term performance of M&A due to (i) *post-deal* cultural synergies that improve performance via diversity in organizational strengths of firms, (ii) *pre-deal* awareness of cultural differences and its potential difficulties leading to selection bias, where deals involving high cultural disparity materialize only when they have substantial economic potential. These alternative, but not mutually exclusive, hypotheses that propose different mechanisms by which culture plays a role in the performance of deals cannot be distinguished from each other in our empirical tests. However, both hypotheses support the main premise of our study. Both explanations support our original premise that cultural differences impact the post-acquisition performance of acquiring firms, albeit via different mechanisms.

While the first hypothesis seems counter-intuitive based on anecdotal evidence, there does exist some support for the notion that cultural disparity can be beneficial in M&A. As Weber, Shenkar and Raveh (1996) point out, cultural "distance" should not always be interpreted as cultural "incongruity". Morosini *et al* (1998) have reached a similar conclusion in their study of 400 cross-border acquisitions by Italian companies and attributed the positive role of cultural

disparity to synergies from different organizational strengths of acquirers and targets from culturally distant nations. Some practitioner studies have reached similar conclusions[8].

It is interesting to consider the possible drivers of the second explanation related to selection bias. This effect of cultural differences can impact the ex-post performance comparisons of the completed deals in several nuanced ways. It may indicate better screening, due-diligence and contracts due to awareness of cultural differences during the acquisition decision. In simple words, acquiring firms may be setting the bar higher for potential targets when they come from culturally distant nations. Cultural differences can therefore play the role of deterrent, discouraging ill-advised and sub-optimal acquisitions. Acquirers are also less likely to underestimate potential hurdles in integration when the firms are culturally disparate. Additionally, it may indicate that the sample of culturally distant deals is associated with more autonomous target firms, leading to better retention of pre-acquisition strengths and mitigation of integration issues. All of these will lead to certain systematic differences in the deal and target characteristics between the sample of culturally proximate and disparate deals.

An important caveat in interpreting our results is the distinction between *national* and *corporate* cultures, since differences in the latter frequently pose serious challenges to post-merger integration and performance. The two concepts are expected to be related, with the latter likely to be influenced by the former. Schneider and Constance (1987) find that corporate culture is heavily influenced by national culture. For example, in Chinese societies, deep-rooted human relationships is a mainstay of business management and is derived from Confucianism, which remains a dominant influence despite being 2500 years old. However, like AOL and Time Warner, it is possible to have considerable differences in corporate cultures of firms belonging to

[8] In a recent paper, practitioners Langford and Brown (2004) argue that the recipe of success through acquisitions is to buy small, buy often and *buy cross-border*. Gratchev (2001) discusses the case of 3M which he states has turned cultural differences between U.S. and Russia into synergistic gains in the global marketplace. In a recent article in the New York Times *("The Multinational as Cultural Chameleon")*, William Holstein discusses the benefits of an American multinational being a "cultural chameleon" when it ventures abroad.

the same countries. While corporate cultural differences are an important topic for investigation, we do not attempt to examine this considerably (more) challenging task separately within this paper. Nevertheless, the part of corporate cultural difference that is a reflection of national cultural difference would be largely subsumed in our cultural distance metric.

Culture is a relatively new entrant within the ambit of finance and economics literature. Guiso, Sapienza, and Zingales (GSZ) (2004) show that generalized trust, meaning the trust that people of a country have in a random member of another country, plays a significant role in economic exchange between the two nations. Chui, Titman and Wei (2005) show that individualistic countries' stock markets have more active trading and momentum in stock returns. In a series of papers, La Porta et al (1997, 1998, 1999, 2002) have demonstrated the importance of investor protection in the laws on ownership, external finance and corporate governance. More recently, Stulz and Williamson (2003) argue that the culture of a country, as reflected in its religion and language, has a greater role to play in determining creditor rights than the origin of a country's legal system. While our study is related to the existing literature on culture and finance, we focus on an uncharted effect of culture and our approach to measuring culture is different. We adopt the measures that are most established in the international business literature – national scores along all the different dimensions of culture developed by Geert Hofstede in his seminal work in 1980. We also cross-check our results using alternative proxies for culture, namely, religion, language and legal origin.

The other strand of literature our study relates to is that on transnational M&A. Recent literature on cross-border deals has focused on the role of law and the degree of shareholder and creditor protection in the acquiring firm's country[9]. However, the literature on long-term performance of cross-border M&A is limited. Also, the impact of cultural differences has

[9] For example, Kupiers, Miller, and Patel (2003) find evidence that the rule of law and the degree of shareholder and creditor rights protection in the acquiring firm country explains the observed variation in target, acquirer, and portfolio returns.

remained a topic that is often discussed but has never been empirically analyzed for a broad cross-section that is more representative of average firms than those involved in mega-deals.

In summary, we find that the long term performance of acquirers is positively and significantly related to the cultural distance between the target and acquirer. On average, acquirers' stocks underperform their respective country market indices in the three years following the acquisition. There is also some evidence that cash, friendly (tender offers) purchases do better (worse) than other acquisitions and that there are synergies that can be derived from acquisitions involving acquirers from strong corporate governance regimes and targets from weaker regimes. We also find some support for a positive acquirer size effect on long-term performance.

The rest of the paper is organized as follows. Section 2 discusses the related literature. Section 3 describes the data. Section 4 discusses the effect of culture on long-term performance of the acquiring firms. Section 5 presents some robustness tests for these effects. Section 6 studies the effect of cultural distance on market reaction to M&A announcements. Section 7 concludes with suggestions for future research.

2. Related Literature

This paper stands at the confluence of at least two distinct bodies of literature – that on mergers and acquisitions, particularly transnational M&A, and that on culture, or more specifically, on cross-national cultural *differences*. In this section, we briefly review the two branches and describe how the present paper relates to the extant literature.

2.1 Cross-national cultural differences

Culture is hard to define and far more difficult to measure. Societies often differ from one another in several respects including race, language and religious beliefs – dimensions that are easily

observable and definable. Yet culture encompasses and often extends beyond most of these. One of the more accessible definitions of culture identifies it as "the man made part of the environment" (Herskovits (1955)). In effect, quantifying and measuring culture becomes a considerable challenge. Nevertheless, cross-national differences in culture comprise an important topic in international business. These differences affect almost every aspect of international business, particularly the strategic and organizational aspects. Metrics of culture are therefore important not just for anthropologists but scholars and practitioners of business as well.

Language and religion are often used as proxies of culture. Historically distant societies developed distinct languages and cultures, making them intrinsically related. Religious norms and beliefs have a great impact on the way of life in a society. However, in recent years, more direct metrics of culture (independent of other variables) have gained wide acceptance in the international business arena.

Geert Hofstede, in his landmark book on international management, *Culture's Consequences: International Differences in Work Related Values*, divided culture into four orthogonal dimensions – individualism, power distance, uncertainty avoidance and masculinity – to which a fifth, long term orientation, was later added. Scores were developed for several countries on these different dimensions. Since then, researchers have used the Hofstede measures to calibrate the different dimensions of a society's culture and then used the difference in the measures to capture the idea of "cultural distance" within the vast and growing literature using Hofstede dimensions. Licht, Goldschmidt and Schwartz (2003) use Hofstede distances to show the heterogeneity within the broad groups used by LLSV (1998) to characterize corporate governance systems. Kirkman et al (2005) provide an exhaustive survey of the literature that has emerged since the publication of Hofstede's book. While Hofstede measures have not been free from criticism, it is fair to say that they have become the mainstay of formal analysis of culture and cross-cultural differences. The Hofstede framework is by far the most used and cited cultural framework in international business, management and applied psychology and has been used in

several other business disciplines (see **Appendix I** for more information on the Hofstede framework).

Power distance focuses on the degree of equality, or inequality, between people in the country's society. Societies with strict hierarchies (e.g. Japan) exhibit greater power distance. *Individualism* refers to the extent the society reinforces the individual versus the collective achievement and interpersonal relationships. The USA, for instance, is more individualistic than Italy. *Masculinity* reflects the degree to which the society reinforces, or does not reinforce, the traditional masculine-work role model of male achievement, control, and power. If a society rewards assertiveness and aggressiveness more, it is a more masculine society. It also relates to the strictness of the gender role. Japan, for example, is one of the most "masculine" countries in this regard while Scandinavian countries are the least "masculine." *Uncertainty Avoidance* captures the society's attitude towards uncertainty and ambiguity (i.e., unstructured situations). These aspects constitute four dimensions along which any society can be "scored" or calibrated and therefore, along which the "distance" between different societies can be measured. Defining these dimensions and calibrating different nations along them have made the Hofstede system an extremely useful tool for studies involving cross-national cultural distance. We discuss the nature and influence of Hofstede measures in greater detail in **Appendix I**.

Cultural differences between countries contain the element of mutual trust that is embedded in generalized beliefs and prejudices of individuals from the countries. Generalized beliefs about trustworthiness are the focus of Guiso, Sapienza and Zingales (GSZ) (2004). GSZ use a matrix of stereotypical beliefs of European managers about trustworthiness of managers from other countries. Their matrix of trust was obtained from a survey conducted by the 3i/Cranfield European Enterprise Center and included five European countries. The countries included (United Kingdom, Germany, France, Italy, Spain) are a sub-sample of the countries in our sample of cross-border M&A. We conjecture that mutual trust between generic individuals of different nationalities is likely to be related to the inherent cultural differences between the

countries. We convert the 5x5 matrix measure of trust used in GSZ (that allows for asymmetries between nations) to a 9x1 matrix of "mutual trust" by computing the average trust between individuals of two nationalities. We exclude own-country trustworthiness measures since they are not applicable to our study. For example, the Germans rank Italians the least trustworthy with a rank of 5 (on a scale of 1 (most trustworthy) to 5 (least trustworthy)). Italians, on the other hand, rank the Germans the most trustworthy with rank 1. We translate these measures to a German-Italian "mutual distrust" measure computed as (5+1)/2 = 3. Higher values indicate lower trust rankings and a higher degree of distrust. Hofstede's cultural distance is positively correlated with the mutual distrust measure (although the power of the test is weak due to a small sample size), indicating that countries with higher cultural distance also display higher mutual distrust. For instance, Hofstede distance (mutual distrust) between Britain and France is 67.4 (4) while between Britain and Germany is 37.3 (2).

In summary, Hofstede distance measures several representative dimensions of cultural disparities, and is perhaps related to other aspects indirectly. In face of the considerable challenges faced when quantifying culture, the use of Hofstede distance has been an appealing measure spurring a large literature in international business management.

2.2 Empirical evidence on acquirer returns

Takeovers are among the most important and increasingly common events in corporate finance. Nearly $4 trillion worth of mergers were conducted in the U.S. alone between 1998 and 2000 – a greater figure than that of the previous 30 years combined[10]. Not surprisingly, there is a large body of literature investigating both the short-term stock market performance of the acquirers and targets and the long-term stock market performance of the acquirers, primarily focusing on U.S. acquirers. However, there exists very limited empirical evidence on long-term performance of acquirers who acquire firms from a foreign country.

There have been some studies of short-run returns of acquirers in cross-border acquisitions[11]. Bruner (2004)[12] summarizes the results of 14 studies that focus their attention on returns to buyers of foreign targets. Two of them detect significantly negative returns, two significantly positive while the remainders do not find any significant effects. Moeller and Schlingemann (2004) provide evidence that U.S. acquirers experience significantly lower stock and operating performance from cross-border than from domestic transactions, and attribute it to the inability of acquirers to correctly value synergies in the acquisitions.

In contrast to the limited research on cross-border M&A, a large literature focuses on U.S. domestic M&A activities. In a recent survey article, Bruner (2002) summarizes the findings of 130 studies conducted during 1971-2001. The results of the studies that focused on short-term returns suggest that target shareholders earn significantly positive abnormal returns and bidders earn zero risk-adjusted returns. However, a wide cross-sectional variation exists among these bidder returns[13]. Mitchell and Stafford (2000) show that the measurement of the acquiring firm's long-term performance is sensitive to the methodology employed. In summary, the findings of previous studies indicate that acquiring firms earn zero or negative abnormal returns in both the announcement period and the post-merger period when making domestic acquisitions.

The study of effects of cultural differences on post-acquisition performance have remained an issue that has been recognized as being crucial but have not been explored in a rigorous academic framework within the finance literature. There have been a few studies in international business that focus on the issue of cultural differences, but the results have been mixed and far from conclusive.

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[10] Business Week (2002).
[11] See Cakiki, Hessel and Tandon (1996) and Eun, Kolodny, and Scheraga (1996), for instance.
[12] Table 5.8 pp.111-112.
[13] For example, Agrawal, Jaffe, and Mandelker (1992) using a methodology that adjusts for firm size and beta, report significant underperformance of acquiring firms for mergers and insignificant performance for tender offers. Loughran and Vijh (1997) report similar results.

Conflicting views on the effect of cultural differences on performance of cross-border acquisitions exist in the management literature. One side argues that benefits from "cultural synergies" improve long-term performance of cross-border acquisitions; the other side contends that the costs of culture clashes reduce post-acquisition performance. The theory in support of enhanced performance argues that the national cultural distance improves cross-border acquisition performance by providing access to the target's and the acquirer's diverse set of routines embedded in national culture (Shane (1992); Hofstede (1980); Kogut and Singh (1988); Barney (1986)). The opposing view states that the cultural distance between firms tends to result in unavoidable cultural collisions during the post-acquisition period (Jemison and Sitkin (1986); Buono et al. (1985)).

Empirical evidence is scant and equally divided. Datta and Puia (1995) analyze completed U.S. cross-border acquisitions between 1978 and 1990 and find a detrimental effect of acquirer-target cultural distance on shareholder wealth in acquiring firms. On the other hand Morosini, Shane and Singh (1998) provide evidence that national cultural distance enhances cross-border acquisition performance. In spite of their contribution to the literature, both of these studies have serious limitations. Datta and Puia (1995) examine windows of up to 30 trading days from the first press report of the cross-border acquisition in the *Wall Street Journal* – an approach that is evidently susceptible to dating errors, and which at best only captures "announcement effects" and not the long-term performance of the acquiring firm. Morosini et al (1998) on the other hand, conduct a survey of 400 companies that engaged in cross-border acquisition activity in Italy between 1987 and 1992. Their usable sample for empirical analysis consists of only 52 observations. As the authors themselves acknowledge, their study suffers from serious limitations. First, by design their sample consists of acquisitions in which one of the partners is an Italian firm. Second, the performance proxy they use is the percentage sales growth for the two years following the acquisition – not a stock market based performance measure.

There exist some management studies that distinguish between corporate and national culture in the context of cross-border M&A. For instance, Weber, Shenkar and Raveh (1996) find that for international M&A, it is the difference in national culture, rather than in corporate culture, that better explain some critical success factors – attitudes and cooperation. The role of cultural diversity in determining the success of mergers and acquisitions may therefore be investigated by focusing on national cultural differences.

2.3 The present paper

Our study focuses on the effect of cross-national cultural differences on the short and long-term stock performance of cross-border acquirers. We analyze a sample of 405 acquisitions with acquirers from 34 countries and targets from 37 countries. Our horizon for long-run stock performance extends up to three years after the effective date of the acquisition.

3. Data and Variables

Our empirical tests are based on a sample of cross-border acquisitions that occurred in the ten-year period 1991 to 2000. The data on acquisitions is obtained from the SDC Platinum Mergers & Acquisitions database. We apply several criteria to choose the sample. We include transactions which are (1) completed, (2) over $100 million in value, (3) where the acquirer owns 100% target shares after the transaction, (4) where the acquirer and target are from different countries, (5) acquirer is publicly traded, (6) both the acquirer's and target's nation is known. We use the announcement date of the acquisition in constructing the sample. The acquirer firms are then matched with available stock market returns data from DataStream. From DataStream, we also obtain monthly stock market returns of acquiring firms as well as total market index returns for the country of the acquiring firm. In order to have uniformity across the countries, we use the Datastream stock market indices. Next, in order to avoid contamination of the stock returns in our

horizon from multiple events, we drop acquirers conducting multiple cross-border acquisitions within a three-year period. Finally, we exclude observations from Bermuda, Bahamas, British Virgin Islands and Puerto Rico, to avoid including "shell" operations. Our final sample consists of 405 unique acquisitions with 34 different acquirer countries and 37 different target nations covering all the six continents.

The SDC database also provides us with certain important characteristics about the acquisitions. We note whether the acquisitions were friendly or hostile, whether there was a cash purchase of shares and whether there was a tender offer for shares – variables that have been identified in prior research as affecting the success of the acquisitions. We construct dummy variables based on these characteristics. For additional tests, we also note if the acquisitions are related or not by matching the SIC codes of the two firms involved, both at the 3-digit level and at the 4-digit level. Undistributed cash flow of the acquirer prior to the acquisition is also considered as a possible explanatory variable, for which we obtain firm-level data from Global Compustat.

We begin by presenting the salient features of our data. In Table 1 we present a partial country-wise breakdown of the data. Clearly the United States dominates our dataset as the host country with both the most acquiring firms as well as the most target firms. In both categories, UK is a distant second, followed by Canada. Much of the cross-border M&A activity appears to be restricted to acquirers from developed countries, with South Africa, Hong Kong and Singapore being the only emerging markets involved. The US-Canada and US-UK combinations are the most common ones. While we have excluded multiple cross-border acquirers to arrive at our sample, this pattern may still be indicative of the distribution of overall cross-border M&A activity in the world.

Table 2 presents a summary of the characteristics of deals covered in our dataset. We note that 97% of cross-border acquisitions in our sample are friendly. Cash purchase of shares is the likely method of acquisition in close to two-thirds of the cases, while a tender offer is made in only about 20% of cases. While a majority of the acquisitions are related, a significant number

(about 40%) are unrelated acquisitions. Thus, we find considerable variation in the mode of acquisitions as well as the relatedness of the parties involved in the deal.

Apart from the features of the deal, country-level characteristics are likely to influence the success of a cross-border acquisition. We therefore investigate the effect of economic and cultural differences between the acquirer's country and that of the target on the performance of the acquirer. We use the relative difference in per capita income (PCI_DIFF) to capture the economic disparity between the two countries. In addition, we use the volatility of the exchange rate between the two countries (FOREX_STDEV), the target country's openness to foreign trade (OPENNESS_TARGET) and extent of bilateral trade (LOG_BILATERAL_TRADE) as explanatory variables. In order to account for the differences in corporate governance systems between acquirer and target nations, we use data on antidirector indices obtained from LLSV (1998). Finally we use several alternative measures of "cultural distance" – the Hofstede distance, Religion, Language and Legal Origin – to capture the cross-country differences in culture.

Economic difference between the two nations may be expected to have a considerable effect on the performance of the acquisition. Differences in per capita income are often associated with major socio-economic differences between countries. Our measure of such "economic distance", PCI_DIFF, is computed as:

$$PCI\_DIFF = \frac{[(per\ capita\ GDP\ of\ Acquirer\ Nation) - (per\ capita\ GDP\ of\ Target\ Nation)]}{[(per\ capita\ GDP\ of\ Acquirer\ Nation) + (per\ capita\ GDP\ of\ Target Nation)]}$$

Openness of the target nation to the world economy may have an important bearing on the functioning of acquired business. It can influence the ease with which the acquirer can manage and support the new division as well as the efficiency with which it can employ its profits. Our variable, OPENNESS_TARGET, captures the degree of openness of the target nation to international trade, and is computed as:

$$OPENNESS\_TARGET = \frac{(Target\ Nation\ Import + Target\ Nation\ Export)}{(Target\ Nation GDP)}$$

We also control for economic synergies between the two countries in our analysis. We do this by obtaining information on bilateral trade between countries. The specific proxy we use is the natural logarithm of the summation of target nations' exports to and imports from the acquirer nation in the year prior to the effective year of acquisition (LOG_BILATERAL_TRADE).

There is considerable debate in the literature about the relationship between exchange rate changes and Foreign Direct Investment (FDI) flows (see for example Chakrabarti and Scholnick (2002) among others). Exchange rate volatility is likely to have an impact on the FDI vs. trade choice and hence affect cross-border M&A decisions. We therefore include foreign exchange volatility as a factor that can play a role in determining the success of a cross-border acquisition. Our measure, FOREX_STDEV, is the standard deviation of monthly exchange rates between the acquiring and target nations, in the 36 months immediately preceding the effective date of the acquisition.

We primarily obtain economic data from DataStream, although we use other sources to augment economic data when it is unavailable in DataStream. **Appendix II** describes the variables we use in this paper and indicates their sources.

Our primary measure of cultural distance, the Hofstede measure, is obtained from data available on the Institute of Training in Intercultural Management (ITIM) website http://www.itim.org/4aba.html, a company that specializes in organizational and national cultures. The distances are calculated from the numerical values of the four orthogonal Hofstede dimensions, namely, Individualism (IDV), Uncertainty Avoidance Index (UAI), Power Distance Index (PDI) and Masculinity (MAS). The measure is computed as follows:

$$\textbf{Hofstede\_distance} = \frac{\sqrt{\sum_{i=1}^{4}(S_{A,i} - S_{T,i})^2}}{4}$$

where $S_{A,i}$ = Acquirer Score on Dimension i ; $S_{T,i}$ = Target Score on Dimension i

As alternative measures of cultural distance, we use three other cultural proxies – language, religion and legal origin. We follow Stulz & Williamson (2003) for the language and religion proxies. We obtain the legal origin proxy from La Porta et al (1998). We use the broad categories of common and civil law in our regression analyses and do not differentiate between French, Scandinavian and German civil law. Dummy variables based on these three characteristics are used to measure the cultural match between the acquirer and the target country. We assign a value of one if the proxies are an exact match and a value of zero otherwise.

In the remaining sections, we seek to test whether national-level economic and cultural differences, together with deal characteristics, can explain the cross-sectional variation in long-run performances of cross-border acquisitions. We justify the use of Hofstede distance as our primary measure of cultural distance because language, religion and legal origin are all found to be highly correlated with the Hofstede measure[14]. It is also worth pointing out that economic disparity and cultural disparity are distinct notions, with the Hofstede distance variable being practically uncorrelated with the economic distance (PCI_DIFF) variable (an insignificant correlation coefficient of 0.05). We consider several specifications of the regression models and check robustness of the results.

4. Cross-border M&A – Long-term performance

The measure we use to capture the long-run performance of the acquiring firm is the *buy-and-hold abnormal return* (BHAR). The BHAR essentially indicates the excess return over the market that an investor buying the shares of the acquiring company will be enjoying if she made the purchase in the month of the acquisition. Since our focus is on the actual post-merger performance rather than the "announcement effect" on the stock, we construct our windows for

[14] The correlation of Hofstede distance with our language, religion and legal origin dummies are -0.791,

event-study analysis beginning from the month of the *effective date* of the merger rather than the announcement date. We look at two different window lengths of 30 and 36 months following the acquisition. The BHAR over a relevant window is then computed in the following manner. The cumulative return over the window is computed by compounding the monthly returns on the acquiring firm's stock during this period. The cumulative market return for the country of the acquirer is computed in an analogous way. The difference between the two returns is the BHAR for the acquiring company, in the event window. Buy and hold returns measure the total returns from a buy and hold strategy where a stock is purchased at the month end following merger completion and held until its third year anniversary.

The BHAR methodology is standard in studies of long-term stock performance. Barber and Lyon (1997) argue that the BHAR is the appropriate measure because it "precisely measures investor experience". However, Mitchell and Stafford (2000) question the assumption of independence of multi-year event-firm abnormal returns made by studies using BHARs. They advocate usage of the calendar-time portfolio returns (CTAR) approach which accounts for dependence of event-firm abnormal returns. We decide to use the BHAR methodology for two main reasons. First, the problem of cross-sectional dependence is likely to be less for our sample of over 400 acquisitions with 34 different acquirer countries and 37 different target nations, and should be at least partially accounted for by country fixed-effects. Second, our focus in this study is to explain the cross-sectional variation in returns as a function of cultural differences between the acquirer and target, and the CTAR methodology does not lend itself to such cross-sectional analysis.

For computing abnormal returns, we use the market-adjusted returns approach – i.e. the simple excess of stock returns over market returns[15]. Table 3 presents the summary statistics for the BHARs of the acquiring company over different windows. Since data is not available for all

-0.378, and -0.516 respectively.

[15] In our robustness checks, we also use the Fama-French factors to adjust for risk for the US acquirers.

acquiring companies for the entire 36-month post-merger period, the number of observations decline as the length of the window increases. One trend evident in Table 3 is the negative performance of the average acquirer vis-à-vis its country index. The mean BHAR is negative in every window and becomes increasingly significant and negative with time. This is evident in the 30-month and the 36-month windows. The long-term decline observed here is in agreement with the consensus view of the effect of domestic acquisitions on stock returns for U.S. acquirers.

In Panel A of Table 4, we present the summary statistics for the key explanatory variables in our study, the Hofstede measure of cultural distance. Table 4 (Panel B) shows the five country pairs with maximum similarity in culture and the five pairs with most dissimilar cultures. We provide the Hofstede cultural distance measure for these ten country pairs. In our sample, Australia and United States have the most similar cultures, while New Zealand and Malaysia have the most dissimilar cultures.

In Table 5, we present the results of our regression of long-term performance on various independent variables. The dependent variable is the BHARs of acquiring companies over 36 months. The explanatory variables are the various deal-specific, economic and cultural country-level variables. The variables used in the regression analysis have been discussed previously and are also presented in summary form in Appendix II. We use effective year fixed-effects to control for all time-related factors (eg. macroeconomic conditions, merger waves etc.). Regressions are done under OLS with robust standard errors that allow clustering of errors for acquirer-target country directional pairs. This accounts for potential measurement errors in the cultural distance variables, thereby avoiding downward-bias in estimated standard errors.

We present seven models in Table 5. The dependent variable in each of these regression models is the 36-month BHAR. The first model contains only the deal-specific variables as explanatory variables. Only the friendly dummy and acquirer size measure are positive and statistically significant at the 1% (t-stat of 3.19) and 10% (t-stat of 1.81) levels respectively. In model 2, we add country-level economic variables to the existing deal-specific variables to

capture potential country-specific economic synergies from the deal. None of the economic variables are significant in explaining long-term performance. The coefficient of friendly dummy and cash dummy are positively significant at the 10% (t-stat of 1.84) and 5% (t-stat of 1.95) levels respectively. Additionally, tender dummy is negatively significant at the 10% level. This suggests that, on average, acquiring firms that pay cash and conduct friendly deals perform better in the long-run, while deals involving tender offers made by the acquirer to target firm shareholders perform worse. This evidence is very similar to the evidence for U.S. acquirers acquiring domestic targets (see for example Loughran and Vijh (1997)). In unreported specifications we use relatedness of acquirer and target, undistributed cash flows of acquirers, among others, as additional variables but they are insignificant in all specifications. We discuss some of these additional variables in the later section where we conduct further robustness checks.

Bris and Cabolis (2002) argue that cross-border mergers allow firms to alter the level of protection they provide to their investors, because target firms usually import the corporate governance system of the acquiring company. Using measures of the change in investor protection induced by cross-border mergers in a large sample, they find that the Tobin's Q of an industry increases when firms within the industry are acquired by foreign firms coming from countries with better corporate governance. We use a measure of the difference in investor protection between the acquirer and target nations (CORP_GOV_DIFF) as a control variable. These results are reported in model 3. The proxy for corporate governance differential is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. Though the coefficient is positive, it is not statistically significant in this specification.

The variable measuring extent of bilateral trade, indicating possible country-pair economic exchange synergies, is also insignificant in explaining long-term BHARs.

In model 4, we begin our analyses of the impact of cultural distance between acquirer and target on long-term post-acquisition performance. In addition to deal-specific and country-level economic variables, we use the Hofstede measure of cultural distance between the acquirer and the target nation. The Hofstede cultural distance variable is positive and significant at the 1% level (t-stat of 4.59). The positive sign of the coefficient indicates that as cultural distance increases, so does the BHAR of the acquiring firm, *ceteris paribus*. The magnitude of the effect of Hofstede distance on the BHAR of acquirer is also economically significant. A one standard-deviation increase in the Hofstede distance (≈23.8), with all other independent variables remaining unchanged, causes an increase of 30.9% in BHAR. The friendly dummy and cash dummy variables also have a significantly positive impact on 36-month BHAR. Therefore, we do not find support for the view that cultural distance between target and acquirer necessarily harms post-acquisition performance of acquiring firm.

The Hofstede measure of cultural distance that we use in our analysis is one of several measures of the degree of dissonance between socio-legal characteristics of different countries. Other recent studies in finance (Stulz and Williamson (2003)) have used differences in religion and language to capture cultural differences while La Porta et al (1998, 1999, 2000) used origin of legal system as another salient feature that determines the financial structure of a country. To establish that all the proxies of culture are closely related, we compute the correlations between the different measures of socio-legal differences. Our dummy variables for religion, language and legal origin take the value 1 when two countries have the same feature and 0 when they are different. Hofstede distance measures are highly correlated with language (-0.79), religion (-0.38) and legal origin (-0.52) variables, suggesting that the differences in the various aspects of societies are closely related.

All these variables can be viewed as being representative of the culture of a country. We use the four alternative measures in models 5 through 7 in the regression tables, but do not use them in the same regression due to high correlations. It turns out that the language dummy performs slightly better than the Hofstede measure, and performs considerably better than religion and legal origin in explaining the variation in the three year buy-and-hold returns for firms making cross-border acquisitions. The religion dummy is the only culture proxy that is not significant in our analysis. Overall, the evidence shows that M&A deals involving culturally distant firms perform better in the long run. This result can be interpreted as indicating the role of cultural distance as a source of value to the firms or due to different selection criteria applied in choosing target firms depending on cultural distance. These two effects cannot be separated in our empirical analyses, but provide support for the significant role played by cultural disparity in determining outcomes of these business transactions.

Panel B of Table 5 attempts to better understand the relative effect of the different dimensions of the Hofstede measure on long-run performance of cross-border M&A. We explore the impact of the difference in Hofstede dimensions (Acquirer – Target) on the 36-month BHAR, after controlling for various other factors. The difference in power distance has the most positive effect on performance. Therefore, acquirers from countries with more rigid power structures do better when they acquire targets from countries with less rigid power. This dimension of cultural differences can potentially impact the post-acquisition integration process, wherein target firms associated with rigid hierarchical power structures resist smooth assimilation into the acquiring firm's organizational system. The potential for conflict is higher if both firms follow rigid power structures and the target resists any loss of autonomy. The difference in individualism of the acquirer and target societies also has a positive impact on BHAR. In other words, acquirers that come from more individual-oriented societies benefit from higher synergies when the target is from a collectivistic society. This is indicative of potential complementarities in organizational

functions between the acquirer and target. Interestingly, the difference in uncertainty avoidance has a negative effect on long-run performance. So, acquirers and target that have similar uncertainty avoidance perform better than when the disparity is high. This indicates that synergies from the deal are likely to be higher when the acquirer and target have similar attitudes towards uncertainty and unstructured situations, possibly facilitating higher levels of understanding and coordination during the integration process. Although the different dimensions of cultural distance are interesting, the Hofstede distance provides a more comprehensive measure of the various facets of national culture and we continue using it as our primary measure of cultural disparity.

One major challenge in studying the determinants of cross-border M&A performance is to satisfactorily control for country-specific effects which are not related to our variables of interest. In our OLS regressions, we have a common problem arising in regressions involving cross country regressions. While we include several country-level variables, there may be many unknown country specific variables that are difficult to control for. The simplest solution to this problem is to eliminate all the country-level explanatory variables and include fixed-effects of acquirer country and target country. This serves as a robustness check to eliminate the possibility that the cultural distance variables are controlling for some other characteristics of the country and to show that the results are not driven by one particular country fixed effect.

In Table 6, we report the regressions results including country fixed effects. The robust standard errors account for country-pair clustering of errors. We primarily include target country fixed-effects, to capture target country-specific synergies to the acquirer. The results are even stronger when we include acquirer instead of target country fixed-effects, and we do not report them for all the specifications. When we include both target and acquirer country fixed-effects we get similar results for cultural distance variables. However, since our dataset is not very large,

including both country fixed-effects significantly reduces the degrees of freedom and decreases the power of the tests.

We present seven models in Table 6, using deal-specific and cultural distance as explanatory variables. Unlike in Table 5, we do not include any country-level economic variables. The dependent variable in each of these regression models is the 36-month BHAR. In the first model, we control for target country fixed effects in addition to year fixed effects. Only the friendly dummy and acquirer size are positive and significant at the 5% and 10% levels respectively. In Model 2, we include acquirer country fixed effects instead of target country, and the cash dummy and acquirer size turn out to be significantly positive.

In model 3, in addition to deal-specific variables, we use Hofstede measure of cultural distance. This variable remains positive and significant at the 5% level (t-stat of 2.12), after controlling for target country fixed effects. Model 4 shows that the results become stronger when acquirer country fixed effects are used. As in Table 5, where results without country fixed effects were presented, the coefficients of language dummy and legal origin dummy are significant (Models 6 and 7). Thus, our results remain very similar when we include country fixed effects to eliminate the possibility of cultural variables controlling for other unknown country fixed effects.

Overall, we find that the impact of cultural difference is positive and highly significant in various specifications of the empirical tests. Our reasons explaining the positive influence of cultural differences fall into two categories based on their method of impact: first, the direct impact of culture on individual and organizational mechanisms and consequently the success of the transactions (cultural synergies); second, the indirect impact where the manner in which the deals are conducted differ systematically based on awareness of cultural differences (selection bias). While the first explanation indicates *post-deal* cultural synergies arising out of complementarities between the target and acquirer, the alternative explanation alludes to *pre-deal* differences in target selection criteria.

In the international business literature, Morosini et al (1998) point out the beneficial impact of cultural synergies, stating that the acquisition of diverse "routines and repertoires" helps a company to function in the global marketplace. Cultural distance enhances the variety of the organizational practices embedded in the target firm and the acquiring firm, thus helping the combined entity to perform better. Of course, this benefit has to be measured against the possible "collision" effects of firms from disparate cultures in the post-merger integration process, thus making the issue resolvable only by empirical evidence. Our results suggest that in context of cross-border M&A, the former value-enhancement effect might outweigh the latter obstacles. This may be because of the likelihood of cultural synergies increasing when the acquirer and target have different sets of organizational strengths, which are not necessarily incompatible. As included in the definition of culture by Hofstede (1980), we would expect the strengths and capabilities of firms to be strongly influenced by the cultural environment under which they have developed. In this case, the positive influence of synergies between the special characteristics of the target and the acquirer is higher when there is a wider set of cultural influences.

Cultural differences can also have a positive impact on long-term acquirer performance by giving rise to selection bias in the sample of deals that have been successfully completed. It may be the case that acquirers complete deals in culturally unfamiliar environments only when they are confident of significantly large economic synergies that compensate for the risk. GSZ (2004) find strong evidence that cultural biases affect economic exchange between nations. They show that in a world where incompleteness of contracts is inevitable, trust plays a major role in economic transactions. In the context of our study, cultural distance between the acquirer and target may be associated with distrust arising from unfamiliarity, thereby prompting better screening, evaluation and potentially more complete contracts between firms. The acquirers do better due diligence particularly about "cultural fit" when the target is from a culturally distant nation. Rosenbloom (2002) emphasizes the importance of due diligence in all transactions-especially those involving parties across national borders. In particular, he documents a checklist

of strategic, operational, financial, tax, legal, and cultural due diligence a typical acquirer should perform to be successful. Imagine a situation where a US firm acquires a Canadian firm versus when it acquires a Malaysian firm. One could argue that the acquirer will be inclined to be more (justifiably or unjustifiably) confident of their understanding of the Canadian environment than the Malaysian environment. In that case, it is likely that the acquirer will conduct better due diligence in the second case, knowing fully well that the Malaysian target might have very disparate organizational culture and form. This view is supported by the evidence in Aguilera *et al* (2004) who show that the greater the cultural distance between the acquirer and the target, the more likely it is that an announced merger would fall through at the due-diligence stage. The completed mergers we study are the ones that have survived this due diligence process, thereby being inherently superior in economic potential than deals that have undergone less severe screening.

While the two alternative, but not mutually exclusive, interpretations of our results are indistinguishable in the empirical tests, they provide strong evidence that culture plays a significant role in influencing outcomes of cross-border business transactions via M&A. The evidence points to the need for a deeper understanding of the mechanisms by which cultural differences impact business transactions. The widespread view that regards cultural differences as necessarily detrimental in the context of M&A seems to be simplistic and clearly requires more critical analysis.

5. Robustness Tests

We conduct several additional tests to check the robustness of our results to alternative specifications. In section 5.1, we discuss the issue of using 30- versus 36-month BHARs as alternative windows for the long-term returns. In section 5.2, we focus on the performance of U.S. firms making cross-border acquisitions. In section 5.3, we investigate if the culture effects

that we detected using buy-and-hold returns are robust to an alternative measurement of performance – the cumulative abnormal returns (CAR). Finally, in section 5.4, we reexamine our results after controlling for "undistributed cash flows" and relatedness of the acquisitions.

5.1 Results using 30-month BHAR

In Table 7, we present the regression results using 30-month BHAR as our dependent variable. The results are qualitatively similar to the ones presented in Table 5 using 36-month BHAR. The Hofstede measure is statistically significant at the 1% level. Interestingly, the differential corporate governance proxy is positive and significant in all specifications, indicating potential synergies due to differences in corporate governance regimes. This is consistent with Bris and Cabolis's (2002) evidence that the target firms that import better corporate governance of the acquiring firm do better. There is also some evidence of positive effects of cash payments and economic exchange between the acquirer and target country via bilateral trade. As before, the language and legal dummies are statistically significant.

We also run OLS regressions with robust standard errors for 30-month BHAR using as control variables target country, acquirer country and year fixed-effects, in addition to deal-specific variables. The Hofstede distance remains significant at the 5% level and qualitative results are similar to Table 7. We do not report these results.

In un-tabulated findings, we also examine the regression results using 24-month BHAR as our dependant variable. The results are qualitatively similar to the ones presented in Tables 5 and 6 using 36-month and 30-month BHARs. The Hofstede measure is statistically significant at the 1% level. The language and legal dummies are also statistically significant.

5.2 Results using long-term performance of US acquirers

Since a large body of the recent literature on cross-border M&A has focused on US acquirers, we also look at the performance of US firms making cross-border acquisitions. As over a third of our

total sample falls into this category, it is important to ascertain their performance separately. Table 8 shows the regression results for this sub-sample. The cash dummy is significant in most specifications. The Hofstede measure is again significantly positive, even when target country fixed effects are controlled for. The alternative measures of culture, namely religion and language dummy, are significant as well, indicating that cultural distance enhances long-term acquirer performance. Some evidence indicates synergies from differential corporate governance regimes across acquirer and target countries. Clearly, US acquirers also perform better in the long term when the targets are from nations which are culturally different from American culture.

5.3 Results using Cumulative Abnormal Returns (CARs)

We investigate if the cultural effects that we detected using buy-and-hold returns are robust to an alternative measurement of performance – the cumulative abnormal returns (CAR). The CARs are computed as the sum of monthly abnormal returns of the acquiring firms over the returns on the relevant national index. Thus the chief difference between BHARs and CARs comes from compounding. BHARs take into account the compounding while CARs do not. While BHARs are more frequently used in long-term studies, CARs are also used quite often in event-studies. Table 9 shows the regression results with the CARs for a 36-month horizon. Qualitatively, these results remain similar to those in Table 5. The Hofstede measure continues to be statistically significant at the 1% level. Cash payments continue to perform better. The coefficient of corporate governance differential proxy is significant in all the specifications as well. This suggests that part of the variability in long-term performance of the acquirer can be attributed to the better corporate governance the acquirer brings to the target firm. The other proxies for culture are not statistically significant.[16]

[16] In order to further control for risk factors that may have escaped our analysis, we also looked at risk adjusted CARs for US acquirers using the Fama French factors. While this analysis is difficult to do for cross-border acquisitions in general, the factor values for US acquirers were obtained from Professor

In unreported tests, we also rerun the regressions for 36-month CAR including target country, acquirer country and year fixed-effects, in addition to deal-specific control variables. The Hofstede distance continues to be significant at the 1% level.

5.4 Results with "undistributed cash flow" of acquirer prior to acquisition and relatedness of the acquirer and target

We examine additional variables that could be important in explaining the long-term performance of the acquisitions. We construct dummy variables for the relatedness of the acquirer and target using 4-digit and 3-digit SIC codes of the firms. We also use a measure of the acquiring firm's undistributed cash flows as in Lehn & Poulsen (1989), in the year prior to the acquisition[17].

On adding the relatedness and cash flow measures as explanatory variables, the results do not change and these variables prove to be statistically insignificant. They do not add any explanatory power in our regressions for long-term performance of cross-border acquirers. For space considerations, we do not report these results.

6. Announcement Effects

Since cultural distance appears to be a robust and significant determinant of post-acquisition performance of the acquirer, it is natural to inquire whether and how markets take note of this variable in their reaction to cross-border M&A announcements. We employ an event-study methodology to answer this question. We use the market model to measure the stock price effects

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French's website. Two of the measures of cultural distance – Hofstede distance and language dummy – continued to be significant.

[17] Undistributed Cash Flow is calculated using firm-level data from Global Compustat database, as: CASH_FLOW = INC – TAX – INTEXP – PFDDIV – COMDIV. Here, INC is the Operating Income before Depreciation (Item #13), TAX is calculated as (Total Income Taxes (Item #16) – Change in Deferred Taxes from previous year to present year (Change in Item #35)), INTEXP is the Gross interest expense on short- and long-term debt (Item #15), PFDDIV is the Total amount of preferred dividend

associated with the announcements of acquisitions. We estimate the abnormal returns for each acquiring firm during the period forty days preceding the acquisition announcement date through the five days following the acquisition announcement date. The ordinary-least-squares coefficients of the market-model regression are estimated over the period from t = -160 to t = -41 relative to the acquisition announcement date for each firm.[18] The daily abnormal return (AR_{it}) for security i on day t is computed by

$$AR_{it} = R_{it} - \hat{a}_i - \hat{b}_i R_{mt}, \qquad t = -40,\ldots,0,\ldots,5, \qquad (1)$$

where R_{it} is the return for the common stock of firm i on day t; R_{mt} is the return for the CRSP value-weighted index of NYSE, AMEX, and Nasdaq stocks on day t; and $\hat{a}_i, \hat{b}_i$ are the market model parameter estimates from period [-160, -41]. For a sample of N firms, the average cumulative abnormal return, $CAR_{T1,T2}$ is computed by

$$\mathrm{CAR}_{T1,T2} = \frac{1}{N}\sum_{i=1}^{N}\sum_{t=T1}^{T2}\mathrm{AR}_{it} \qquad (2)$$

The test statistic for $CAR_{T1,T2}$ is based on the average standardized cumulative abnormal return ($ASCAR_{T1,T2}$)[19]. Assuming that the individual abnormal returns are normal and independent across t and across securities, the statistic $Z_{T1,T2}$, which follows a unit-normal distribution, is used to test the hypothesis that the average cumulative standardized abnormal returns equal zero, where

$$Z_{T1,T2} = \sqrt{N} \times \mathrm{ASCAR}_{T1,T2} \quad . \qquad (3)$$

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requirement on cumulative preferred stock and dividends paid on non-cumulative preferred Stock (Item #19), and COMDIV is the Total dollar amount of dividends declared on common stock (Item #21).

[18] Of the 132 firms in our sample, 16 did not have the complete data dating back to 240 days preceding their acquisition announcement dates. In those cases, we use as many observations as we can get from CRSP over the estimation period to estimate the coeffic ients of the market-model regression, maintaining the restriction that there must at least be 36 observations. Because of this requirement, four sample firms are dropped from the calculation of the announcement abnormal returns.

[19] The methodology employed here is based on Dodd and Warner (1983). For more details on the computation, please refer to Dodd and Warner (1983).

Table 10 presents the announcement day abnormal returns and the cumulative abnormal returns for the entire sample for various event windows, expressed as percents. The numbers in parentheses are t-statistics.

We find that acquiring firms on an average earn significant *positive* abnormal returns. The three-day CAR ([-1, 1]) is 0.71% and is significant at the 1% level. However, the results for other longer announcement windows are not statistically significant. Next, we try to explain the cross-sectional variation in the short-term returns using deal-specific variables, country-level economic variables, and the measures of cultural distance.

We present seven models in Table 11 as in the previous tables for the long-run returns. We replicate Table 5, but use the short-term cumulative abnormal returns as the dependent variable instead of BHAR. None of the measures of cultural difference seem to have any impact on the short-term announcement returns. The only variables that seem to have some impact on short-term acquirer returns are acquirer size and prior presence dummy. In fact, contrary to the long-term performance results, there is some evidence of a negative acquirer size effect. Also, the market seems to positively value the prior experience an acquirer has had in the target nation through joint-ventures and alliances. Including target and acquirer country fixed-effects, while excluding the country-level economic variables, does not change the results.

Among the variables considered, the markets do not seem to fear or favor any particular deal feature and pay no attention to the cultural distance between the relevant countries.

7. Conclusions

We investigate the effect of cultural distance on long-term (and short-term) performance of cross-border M&A. Our results show that acquisitions perform better in the long-run if the acquirer and the target come from countries that are culturally more disparate. This fact does not appear to be incorporated in the "announcement effect." We find that in general, cross-border acquisitions are

associated with long-term underperformance of acquirers relative to national stock market indices, partially dissipating significantly positive "announcement effect" on the acquirer's share value.

Among the determinants of long-term performance of acquirers' stock returns, cultural differences emerge as an economically significant beneficial factor. The positive impact of cultural differences is not captured in the announcement period returns. The "culture effect" remains after controlling for several deal-specific, economic and corporate governance variables, country fixed effects and is robust to alternative specifications and horizons of long-term performance. Among deal characteristics, friendly deals and cash acquisitions do better in the long-run. Larger acquirers seem to outperform smaller acquirers in the long run. We also find some evidence of synergies that can be derived when acquiring firms from strong corporate governance systems acquire targets in systems with weaker investor protection. When the acquirer and target are more disparate (similar) in the power structures and individualism (uncertainty avoidance) dimensions of cultural distance, the acquirer returns are higher.

Several recent papers have underlined the influence of culture on finance in general. Stulz and Williamson (2003) have demonstrated the effect of national culture on protection of creditor rights, which in turn determine the nature of financial markets around the world. Guiso, Sapienza and Zingales (2004) document the role of generalized beliefs and trust among member of different European countries in economic exchange between the nations. The effects of cultural difference in M&A situations, however, have so far not been documented in the finance literature.

Our results contradict the general perception created by media reports of "culture clashes" impeding M&A integration. The general perception is certainly intuitive, but it is not clear whether the prevalence and magnitude of integration troubles offset the benefits in a typical cross-border acquisition. Media reports typically focus on mega-deals. We show that the situation is quite different for the representative cross-border acquisition, even in the >$100 million deal size category. While differences in culture may lead to challenges during post-merger integration,

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. Additionally, we draw attention to differences in deal selection criteria via potentially better due-diligence, nature of contracts, screening and greater autonomy of targets in unfamiliar environments, pointing towards an unexpected effect of cultural differences in M&A— that of a deterrent to conducting of value-reducing deals. We find that these beneficial effects are stronger than integration problems stemming from cultural differences.

Clearly the effects of culture on finance and even cross-border M&A are multi-faceted. The channels through which they enter the M&A events, the exact nature of cultural synergies and how they help the acquirer's performance, as well as the challenges cultural dissonance poses in the integration process are all important questions in corporate finance. These answers have important implications for corporate policy regarding investments in mergers and acquisitions. Further, a deeper understanding of the role of cultural differences also facilitates the study of other forms of cross-border economic transactions. The relationship between corporate cultures and national cultures is also an area that needs further investigation. We leave the exploration of these issues for future research.

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APPENDIX I: Hofstede Measures — An Introduction

Culture, according to Hofstede is "…the collective programming of the mind which distinguishes the members of one human group from another." In 1980 he developed his framework using over 116,000 employee morale surveys from over 88,000 IBM employees during 1967-69 and 1971-73 in 66 countries. The number of countries was finally reduced to 40 due to low response rates. Later he added 10 new countries and three regions (i.e., Arab countries and East and West Africa).

The factors are constructed essentially by using a factor analysis of the country-level data. The identification of the dimensions is therefore data-driven rather than any theory-driven. Hofstede's definition of the four factors were: 1) *individualism*: "a loosely knit social framework in which people are supposed to take care of themselves and of their immediate families only," versus *collectivism* "a tight social framework in which people distinguish between in-groups and out-groups, they expect their in-group to look after them, and in exchange for that they feel they owe absolute loyalty to it."; 2) *power distance*: "the extent to which a society accepts the fact that power in institutions and organizations is distributed unequally"; 3) *Uncertainty avoidance*: "the extent to which a society feels threatened by uncertain and ambiguous situations and tries to avoid these situations by providing greater career stability, establishing more formal rules, not tolerating deviant ideas and behaviors, and believing in absolute truths and the attainment of expertise" and 4) *masculinity-femininity*: "the extent to which the dominant values in society are 'masculine' – that is, assertiveness, the acquisition of money and things, and *not* caring for others, the quality of life, or people". Later a fifth factor (Long-term orientation) was added to the analysis.

Since the publication of Hofstede's *Culture's Consequences*, Hofstede dimensions have become the standard tool for calibrating cultural differences in several business disciplines like marketing (e.g., Deshpande, Farley, and Webster, 1997), management (e.g., Kogut and Singh, 1988), organizational development (e.g., Adler and Bartholomew, 1992), accounting (e.g., Cohen, Pant, and Sharp, 1993), business ethics (e.g., Armstrong, 1996) and information decision science (Bryan, McLean, and Smits, 1995). They have been replicated several times (Punnett & Withane, 1990; Shackleton & Ali, 1990; Merritt, 2000; and Spector et al., 2001 for instance). Sivakumar and Nakata (2001) point out that Hofstede's *Culture's Consequences* has been cited over 1,100 times between 1987 and 1997 in the Sciences Citations Index, leaving rival Edward Hall's *Beyond Culture* (1976) a distant second with 147 citations. They note that Hofstede was the third most cited author in international business studies published between 1989 and 1994 (after John Dunning and Michael Porter). Fernandez et al (1997, pp. 43-44) call the Hofstede framework "a watershed conceptual foundation for many subsequent cross-national research endeavors" while Trompenaars (1993, p. iii) credits Hofstede "for opening management's eyes to the importance of the [cross-cultural management] subject."

Sivakumar and Nakata (2001) contend that the influence of Hofstede's work is still growing. "A search of ABI Inform and Wilson business literature databases from 1981 through the first half of 1998 yielded 134 conceptual and empirical studies, 98 of which have appeared since 1993." (Kirkman et al (2004) survey 181 studies appearing in 41 major international journals in their survey of the literature stemming from Hofstede's *Culture's Consequences* between 1981 and 2002.) They find that the number of doctoral dissertations during 1995-2000 that were founded on Hofstede's work was more than double that in the previous fourteen years.

For sure, the Hofstede framework has not been without criticism. Kirkman et al (2004) point out that the despite criticism like "an overly simplistic four or five dimension conceptualization of culture, a single multinational corporation sample, the malleability of culture over time, and the ignoring of within-country cultural heterogeneity" researchers have been drawn to it for its "clarity, theoretical parsimony, and resonance with managers".

APPENDIX II: Description of variables included in the study and their sources.

Deal-level Variables	
Friendly Dummy	Dummy variable with value 1 for friendly acquisition (i.e., recommendation of the target company's management or board of directors toward the transaction is friendly) and 0 otherwise Sources: SDC Platinum, provided by Thomson Financial Securities Data
Tender Dummy	Dummy variable with value 1 when acquisition was through a tender offer launched for the target and 0 otherwise Sources: SDC Platinum
Cash Dummy	Dummy variable with value 1 if the acquisition is entirely paid in cash and 0 otherwise. Source: SDC Platinum
Prior Presence Dummy	Measure of acquirer's prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. Dummy variable has value 1 if the acquirer had one or more joint ventures/alliances in the target nation prior to the acquisition and value of 0 otherwise. Source: SDC Platinum
Number of Bidders	Number of bids for a target, i.e., the number of challenging deals for one target. Source: SDC Platinum
Acquirer Market Value	Market Value of outstanding equity of acquirer in the month prior to the acquisition. Source: DataStream
Relatedness	Dummy variable measuring whether the acquisition is related. Two alternate measures of relatedness were based on matching of the 4-digit and the 3-digit SIC codes for the acquirer and the target. Dummy variable has value 1 if the acquisition is related and 0 otherwise. Source: SDC Platinum
Undistributed Cash Flow	Measures the acquiring firm's undistributed cash flows computed according to Lehn & Poulsen (1989) Source: Global Compustat
Economic Country-level Variables	
Openness of Target Nation	Extent to which the target nation's economy is open, measured by the ratio of its trade (exports plus imports) to GDP Sources: Datastream and Penn World Tables
Per Capita Income difference	Acquirer and target nations' income per person is measured as GDP divided by population. Per Capita Income difference is calculated as the ratio of the difference between per capita incomes of acquirer and target nations (acquirer – target) to the sum of per capita incomes. Source: Datastream

Forex Standard Deviation	Measure of exchange rate risk in the acquisition, arising due to uncertainty about the future value of exchange rate between the acquirer and target nation's currencies. We use historical data and compute standard deviation of the exchange rate between the two currencies for the -36 to -1 month window, where month of acquisition is 0. Source: Datastream, Penn World Tables, IMF
Log (Bilateral Trade)	Natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. Source: National Bureau of Economic Research (NBER), World Trade Data
Cultural and Legal Country-level Variables	
Hofstede Distance	Cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between Hofstede's four different cultural dimensions for the two nations. Data is obtained from Dr. Geert Hofstede's comprehensive study of how values in the workplace are influenced by culture. From 1967 to 1973, while working at IBM as a psychologist, he collected and analyzed data from over 100,000 individuals from forty countries. From those results, and later additions, Hofstede developed a model that identifies four primary dimensions to differentiate cultures. We use the values of the four dimensions for the nations included in our sample. Source: *Culture's Consequences* (by Geert Hofstede)
Religion Dummy	Measures whether the target nation and acquirer nation share the same primary religion. Dummy variable has value 1 when the two nations share a common primary religion and 0 otherwise. Source: CIA World Fact Book
Language Dummy	Measures whether the target nation and acquirer nation share the same primary language. Dummy variable has value 1 when the two nations share a common language and 0 otherwise. Source: CIA World Fact Book
Legal Dummy	Measures whether the target nation and acquirer nation share the same legal origin, according to the broad categories in LaPorta et al. (1998). Dummy variable has value 1 when the two nations share a common legal origin and 0 otherwise. Source: CIA World Fact Book
Corporate Governance Difference	Measures the difference in investor protection between the acquirer and target nations, computed as: $CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$ where antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations.

Table 1: Country-wise breakdown of sample of acquirers who conducted cross-border acquisitions during 1991-2000

Panel A: Major acquiring and target countries

Acquiring Nations	No. of acquisitions	Target Nations	No. of acquisitions
United States	144	United States	116
United Kingdom	70	United Kingdom	52
Canada	30	Canada	42
France	22	Germany	27
Japan	17	France	25
Germany	13	Netherlands	17
Switzerland	10	Australia	13
Netherlands	10	Sweden	11
Australia	10	Italy	9
Hong Kong	7	Switzerland	8
Finland	7	Norway	8
Sweden	6	Israel	7
South Africa	5	Denmark	7
Singapore	5	Spain	6
Italy	5	New Zealand	6
Others	44	Hong Kong	6
		Finland	5
		Others	40
TOTAL	405	TOTAL	405

Panel B: A few common pairs

		Target Country				
		USA	Canada	UK	Germany	France
Acquiring Country	USA		35	34	15	12
	UK	35	4		4	9
	Canada	18		3	0	1
	France	11	0	3	0	
	Japan	10	0	1	0	1

Table 2: Summary description of sample of cross-border acquisitions in 1991-2000

Cash vs. Non-cash, Friendly vs. Hostile, Tender Offer vs. Non-tender offer, Unrelated vs. Related (matched with 3-digit SIC code, or 4-digit SIC code) are the deal-level characteristics we use to categorize the acquisitions.

	Number	**Percent**
Total number of acquisitions	405	100
Cash	252	62
Non-cash	153	38
Friendly	391	97
Hostile	14	3
Tender offer	82	20
No tender offer	323	80
Unrelated	212	40
Related at 3-digit SIC level	193	44
Related at 4-digit SIC level	85	15

Table 3: Summary statistics for the Buy-and-Hold Abnormal Returns (BHAR) following the acquisition.

BHAR_12, BHAR_24, BHAR_30, BHAR_36 are the Buy-and-Hold Abnormal Returns for twelve, twenty-four, thirty and thirty-six month windows following the effective date of the acquisition, respectively.

	BHAR_12	**BHAR_24**	**BHAR_30**	**BHAR_36**
Observations	395	294	241	199
Mean	-0.049%	-0.082%	-0.011%	-0.149%
t-stat	-2.02	-1.58	-1.43	-1.92
Median	-0.058	-0.217	-0.262	-0.334
Maximum	3.69	7.37	7.63	5.07
Minimum	-1.11	-3.48	-2.50	-2.92
Std. Dev.	0.54	1.07	1.17	1.09
Skewness	1.28	3.04	3.00	1.61
Kurtosis	5.97	16.64	15.96	4.97
Jarque-Bera statistic (test of normality)	388.59	3028.17	2258.79	105.85
Probability	0.00	0.00	0.00	0.00

Table 4: Summary description of Hofstede measure of cultural distance

Panel A: Summary Statistics

	Hofstede Distance
Observations	405
Mean	38.67
Median	31.51
Maximum	98.82
Minimum	6.56
Std. Dev.	23.8
Skewness	0.452
Kurtosis	-1.043
Jarque-Bera statistic (test of normality)	32.9
Probability	0

Panel B: Country pairs with maximum and minimum cultural distance

Five country pairs with most similar cultures		**Hofstede Distance**
Australia	United States	6.56
Germany	Switzerland	8.19
United Kingdom	United States	12.88
Australia	Canada	14.11
Belgium	France	14.49

Five country pairs with most dissimilar cultures		**Hofstede Distance**
New Zealand	Malaysia	98.82
Netherlands	Japan	97.44
Australia	Malaysia	95.22
United States	Greece	88.98
Chile	United States	88.93

Table 5: Regressions for the Buy-and-Hold Returns of Acquirers for a 36- month period following the acquisition.

The dependent variable in these OLS regressions are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:

OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)

PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital\ GDP\ of\ Acquirer\ Nation) - (per\ capita\ GDP\ of\ Target\ Nation)}{(per\ capital\ GDP\ of\ Acquirer\ Nation) + (per\ capita\ GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. All regressions include fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer.

Independent Variable	**36-month Buy-and-Hold Return (BHAR_36)**						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INTERCEPT	-1.353 (-1.52)	-0.521 (-0.38)	-0.747 (-0.54)	-1.92 (-1.37)	-0.70 (-0.5)	-0.138 (-0.16)	-0.870 (-0.64)
FRIENDLY_DUMMY	**0.529*** **(3.19)**	**0.375*** **(1.84)**	**0.380*** **(1.85)**	**0.379**** **(2.30)**	**0.399**** **(2.05)**	0.112 (1.16)	**0.328*** **(1.80)**
TENDER_DUMMY	-0.119 (-0.58)	**-0.348*** **(-1.79)**	**-0.345*** **(-1.78)**	-0.288 (-1.45)	**-0.344*** **(-1.75)**	-0.236 (-1.41)	-0.240 (-1.40)
CASH_DUMMY	0.274 (1.62)	**0.339**** **(1.95)**	**0.334**** **(1.91)**	**0.323**** **(1.98)**	**0.337**** **(1.93)**	**0.311*** **(1.83)**	**0.351**** **(2.01)**
PRIOR_PRESENCE_DUMMY	0.216 (1.05)	0.128 (0.62)	0.144 (0.69)	0.156 (0.76)	0.146 (0.69)	0.144 (0.72)	0.161 (0.78)
NO_OF_BIDDERS	-0.123 (-0.32)	-0.067 (-0.18)	-0.051 (-0.14)	-0.010 (-0.04)	-0.05 (-0.16)	-0.130 (-0.37)	-0.060 (-0.17)
LOG_ACQUIROR_MV	**0.190*** **(1.81)**	0.102 (1.30)	0.105 (1.31)	0.046 (0.58)	0.103 (1.49)	0.068 (0.89)	0.090 (1.13)
OPENNESS_TARGET		-0.000 (-0.93)	0.000 (-0.83)	-0.000 (-0.60)	-0.00 (-0.86)	-0.000 (-1.08)	-0.000 (-0.88)
PCI_DIFF		0.186 (0.95)	0.208 (1.00)	0.264 (1.30)	0.203 (0.97)	0.220 (1.10)	0.231 (1.13)
FOREX_STDEV		0.014 (0.62)	0.015 (0.67)	0.004 (0.22)	0.014 (0.62)	-0.000 (-0.20)	0.009 (0.44)
LOG_BILATERAL_TRADE		-0.048 (-0.41)	-0.011 (-0.20)	0.045 (0.83)	-0.01 (-0.23)	0.077 (1.40)	0.015 (0.29)
CORP_GOV_DIFF			0.017 (0.36)	0.008 (0.20)	0.016 (0.38)	-0.020 (-0.45)	-0.000 (-0.04)
HOFSTEDE_DIST				**0.013*** **(4.59)**			
RELIGION_DUMMY					-0.082 (-0.40)		
LANGUAGE_DUMMY						**-0.714*** **(-5.06)**	
LEGAL_DUMMY							**-0.384**** **(-2.28)**
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES
R2 (%)	8.36	11.20	10.97	17.73	11.10	19.19	13.89
Durbin-Watson Statistic	2.042	1.960	2.055	2.143	2.067	2.058	2.052
Number of Observations	191	184	183	183	183	183	183

t-statistics with robust standard errors are stated in parentheses
*** Significant at the 1% level
** Significant at the 5% level
*Significant at the 10% level

Table 5, Panel B: Effect of individual dimensions of Hofstede measure on long-term performance

The dependent variable in these OLS regressions are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:
OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)
PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital\ GDP\ of\ Acquirer\ Nation) - (per\ capita\ GDP\ of\ Target\ Nation)}{(per\ capital\ GDP\ of\ Acquirer\ Nation) + (per\ capita\ GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. The dependent variable is the Buy-and-Hold Abnormal Returns (BHARs) for acquirers calculated for an event window of 36 months following the effective date of the acquisition. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. Instead of using the usual Hofstede "distance" variable, we use the simple difference (Acquirer – Target) on each dimension (POWER_DIST_DIFF, INDIVIDUALISM_DIFF, MASCULINITY_DIFF and UNCERTAINTY_AVOID_DIFF for differences in power distance, individualism, masculinity and uncertainty avoidance respectively) as independent variables. The regression includes fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering of errors for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer.

Dependent variable: 36-month BHAR	
Independent Variable	Co-efficient (t-statistic)
INTERCEPT	-1.108 (-0.93)
FRIENDLY_DUMMY	**0.645 (2.45)****
TENDER_DUMMY	-0.307 (-1.47)
CASH_DUMMY	**0.320 (1.85)***
PRIOR_PRESENCE_DUMMY	0.137 (0.66)
NO_OF_BIDDERS	0.050 (0.14)
LOG_ACQUIROR_MV	0.113 (1.36)
OPENNESS_TARGET	-0.000 (-1.29)
PCI_DIFF	-0.000 (-0.04)
FOREX_STDEV	0.020 (0.89)
LOG_BILATERAL_TRADE	-0.000 (-0.01)
CORP_GOV_DIFF	-0.080 (-1.39)
POWER_DIST_DIFF	**0.017 (2.46)****
INDIVIDUALISM_DIFF	**0.009 (1.90)***
MASCULINITY_DIFF	0.005 (1.39)
UNCERTAINTY_AVOID_DIFF	**-0.009 (-1.82)***
Year Fixed-effects	YES
R^2 (%)	15.67
Durbin-Watson Statistic	2.086
Number of Observations	183

t-statistics with robust standard errors are stated in parentheses
*** Significant at the 1% level
** Significant at the 5% level
*Significant at the 10% level

Table 6: Fixed-effects Regressions for the Buy-and-Hold Returns of Acquirers for a 36 month period following the acquisition.

The dependent variable in these OLS regressions are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition. The standard errors are robust and allow for correlated observations between same target and acquirer countries. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. The regression includes fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering of errors for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer. Target and acquirer country fixed-effects are included in regressions to control for unknown country-specific variables.

Independent Variable	**36-month Buy-and-Hold Return (BHAR_36)**						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INTERCEPT	-1.562 (-0.71)	**4.602** (**2.34**)	-1.571 (-0.72)	**2.597*** (5.24**	-1.728 (-0.78)	-0.886 (-0.41)	-0.724 (-0.32)
FRIENDLY_DUMMY	**0.441** (**2.17**)	0.322 (1.48)	**0.456*** (2.51**)	0.208 (0.32)	**0.459** (**2.20**)	**0.361*** (**1.89**)	**0.386** (**1.98**)
TENDER_DUMMY	-0.079 (-0.30)	-0.359 (-1.59)	-0.045 (-0.20)	-0.311 (-1.47)	-0.079 (-0.35)	-0.060 (-0.67)	-0.066 (-0.29)
CASH_DUMMY	0.141 (0.59)	**0.424** (**2.26**)	0.134 (0.73)	**0.417** (**2.33**)	0.140 (0.75)	0.133 (0.73)	0.180 (0.97)
PRIOR_PRESENCE_DUMMY	0.236 (1.63)	0.123 (0.59)	0.270 (0.19)	0.199 (0.98)	0.226 (0.98)	0.283 (1.26)	0.275 (1.21)
NO_OF_BIDDERS	-0.013 (-0.06)	-0.105 (-0.31)	-0.029 (-0.06)	-0.062 (-0.33)	0.044 (0.08)	-0.133 (-0.26)	-0.111 (-0.21)
LOG_ACQUIROR_MV	**0.210*** (**1.66**)	**0.198*** (**1.70**)	0.136 (1.22)	0.165 (1.48)	**0.215*** (**1.72**)	**0.140*** (**1.70**)	0.177 (1.43)
HOFSTEDE_DIST			**0.010** (**2.12**)	**0.014*** (**4.10**)			
RELIGION_DUMMY					0.207 (0.92)		
LANGUAGE_DUMMY						**-0.635*** (**-2.60**)	
LEGAL_DUMMY							**-0.420*** (**-1.77**)
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES
Target Country Fixed-effects	YES	NO	YES	NO	YES	YES	YES
Acquirer Country Fixed-effects	NO	YES	NO	YES	NO	NO	NO
R2 (%)	22.27	29.37	25.61	34.90	22.78	25.68	24.23
Durbin-Watson Statistic	2.032	1.940	2.015	2.177	2.047	2.425	2.063
Number of Observations	191	191	191	191	191	191	191

t-statistics with robust standard errors are stated in parentheses
*** Significant at the 1% level
** Significant at the 5% level
*Significant at the 10% level

Table 7: Regressions for the Buy-and-Hold Returns of Acquirers for a 30 month period following the acquisition.

The dependent variable in these OLS regressions are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:

OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)

PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital GDP\ of\ Acquirer\ Nation) - (per\ capita GDP\ of\ Target\ Nation)}{(per\ capital GDP\ of\ Acquirer\ Nation) + (per\ capita GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. All regressions include fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer.

Independent Variable	**30-month Buy-and-Hold Return (BHAR_30)**						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INTERCEPT	-1.020 (-1.46)	-1.314 (-1.10)	-1.56 (-1.29)	**-2.82**** **(-2.28)**	-1.360 (-1.10)	**-2.270*** **(-1.89)**	-1.803 (-1.49)
FRIENDLY_DUMMY	0.135 (0.32)	0.233 (0.49)	0.288 (1.12)	0.255 (0.55)	0.260 (0.55)	0.148 (0.32)	0.264 (0.51)
TENDER_DUMMY	-0.044 (-0.22)	**-0.237*** **(-1.67)**	-0.18 (-1.54)	-0.12 (-0.68)	-0.180 (-0.95)	-0.130 (-0.71)	-0.150 (-0.79)
CASH_DUMMY	0.186 (1.10)	**0.304*** **(1.81)**	**0.286*** **(1.74)**	**0.248*** **(1.68)**	**0.284*** **(1.77)**	0.233 (1.45)	**0.273*** **(1.75)**
PRIOR_PRESENCE_DUMMY	0.265 (1.32)	0.137 (0.70)	0.175 (0.88)	0.193 (0.99)	0.178 (0.89)	0.154 (0.78)	0.157 (0.79)
NO_OF_BIDDERS	0.052 (0.14)	0.187 (0.55)	0.219 (0.65)	0.286 (0.87)	0.181 (0.53)	0.190 (0.58)	0.249 (0.74)
LOG_ACQUIROR_MV	0.177 (1.35)	0.080 (1.03)	0.087 (1.12)	0.017 (0.22)	0.080 (1.02)	0.053 (0.69)	0.081 (1.05)
OPENNESS_TARGET		-0.000 (-1.14)	-0.00 (-1.18)	-0.00 (-1.06)	-0.000 (-1.35)	-0.000 (-1.35)	-0.000 (-1.17)
PCI_DIFF		0.011 (0.06)	0.058 (0.3)	0.095 (0.5)	0.041 (0.21)	0.061 (0.32)	0.079 (0.41)
FOREX_STDEV		-0.003 (-0.32)	0.000 (0.03)	-0.00 (-0.16)	-0.000 (-0.06)	-0.000 (-0.48)	-0.000 (-0.21)
LOG_BILATERAL_TRADE		0.036 (0.84)	0.029 (0.56)	**0.103**** **(2.37)**	0.025 (0.49)	**0.115**** **(2.37)**	0.053 (1.02)
CORP_GOV_DIFF			**0.075**** **(2.12)**	**0.068**** **(2.05)**	**0.076**** **(2.05)**	**0.053*** **(1.80)**	**0.065**** **(2.19)**
HOFSTEDE_DIST				**0.012***** **(4.04)**			
RELIGION_DUMMY					-0.125 (-0.81)		
LANGUAGE_DUMMY						**-0.533***** **(-3.60)**	
LEGAL_DUMMY							**-0.294**** **(-2.04)**
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES
R2 (%)	5.60	6.10	7.28	12.26	7.56	11.46	8.89
Durbin-Watson Statistic	2.042	1.856	1.880	1.993	1.901	1.928	1.923
Number of Observations	232	223	223	223	223	223	223

t-statistics with robust standard errors are stated in parentheses
*** Significant at the 1% level
** Significant at the 5% level
*Significant at the 10% level

Table 8: Regressions for the Buy-and-Hold Returns of U.S. Acquirers for 36- month period following the acquisition.

The dependent variable in these OLS regressions are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition, for the sub-sample of U.S. acquirers. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:

OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)

PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital\ GDP\ of\ United\ States) - (per\ capita\ GDP\ of\ Target\ Nation)}{(per\ capital\ GDP\ of\ United\ States) + (per\ capita\ GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. All regressions include fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer. Target country fixed-effects are included in regressions to control for unknown country-specific variables.

Independent Variable	36-month Buy-and-Hold Return of U.S. Acquirers (BHAR_36)							
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
INTERCEPT	-1.563 (-1.05)	-1.158 (-0.78)	-0.895 (-0.28)	**-6.580* (-1.87)**	**-1.580* (-1.87)**	0.161 (0.05)	-4.589 (-1.39)	-3.108 (-0.94)
FRIENDLY_DUMMY	0.244 (0.29)	0.067 (0.08)	0.012 (0.02)	-0.101 (-0.13)	-0.101 (-0.13)	0.212 (0.27)	0.094 (0.12)	-0.026 (-0.03)
TENDER_DUMMY	**-0.558* (-1.82)**	-0.693 (-1.56)	-0.490 (-1.17)	-0.699 (-1.72)	-0.699 (-1.72)	-0.567 (-1.41)	-0.615 (-1.52)	-0.477 (-1.15)
CASH_DUMMY	**0.744** (2.24)**	**0.631** (2.19)**	**0.554* (1.86)**	**0.514* (2.02)**	0.569 (1.51)	**0.506** (2.24)**	**0.506** (2.24)**	**0.497* (1.78)**
PRIOR_PRESENCE_DUMMY	0.215 (0.53)	0.269 (0.52)	0.275 (0.66)	0.136 (0.34)	0.136 (0.34)	0.383 (0.95)	0.119 (0.3)	0.195 (0.47)
NO_OF_BIDDERS	-0.210 (-0.28)	-0.006 (-0.00)	0.061 (0.08)	0.325 (0.45)	0.325 (0.45)	0.221 (0.31)	0.284 (0.39)	0.138 (0.19)
LOG_ACQUIROR_MV	0.079 (0.24)	0.215 (1.13)	0.282 (1.44)	0.248 (1.32)	0.248 (1.32)	0.163 (0.85)	0.274 (1.45)	0.271 (1.40)
OPENNESS_TARGET		-0.000 (-1.07)	-0.000 (-1.11)	-0.000 (-1.00)		-0.000 (-2.55)	-0.000 (-1.17)	-0.000 (-0.99)
PCI_DIFF		0.627 (-1.21)	0.554 (0.96)	0.321 (0.58)		-0.078 (-0.13)	0.229 (0.4)	0.804 (1.36)
FOREX_STDEV		1.078 (0.26)	2.852 (0.67)	9.202 (0.98)		11.818 (0.26)	7.946 (1.76)	6.010 (1.30)
LOG_BILATERAL_TRADE		-0.086 (-0.50)	0.025 (0.17)	0.225 (1.38)		-0.072 (-0.48)	0.223 (1.35)	0.116 (0.72)
CORP_GOV_DIFF			**0.161* (1.81)**	0.107 (1.24)		**0.132* (1.94)**	-0.150 (-0.94)	0.008 (0.05)
HOFSTEDE_DIST				**0.023*** (3.34)**	**0.014*** (3.65)**			
RELIGION_DUMMY						**-1.390** (-2.26)**		
LANGUAGE_DUMMY							**-1.521*** (-4.09)**	
LEGAL_DUMMY								-0.783 (-1.31)
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES	YES
Target Country Fixed-effects	NO	NO	NO	NO	YES	NO	NO	NO
R2 (%)	20.02	30.30	33.27	40.11	48.03	40.84	39.36	35.55
Durbin-Watson Statistic	1.887	1.956	1.998	1.913	1.913	1.901	1.994	1.879
Number of Observations	80	80	80	80	80	80	80	80

t-statistics with robust standard errors are stated in parentheses
*** Significant at the 1% level
** Significant at the 5% level
*Significant at the 10% level

Table 9: **Regressions for the Cumulative Abnormal Returns (CAR) of acquirers for a 36- month period following the acquisition.**

The dependent variable in these OLS regressions are the Cumulative Abnormal Returns (CARs) calculated for an event window of 36 months following the effective date of the acquisition. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:
OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)
PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital GDP\ of\ Acquirer\ Nation) - (per\ capita GDP\ of\ Target\ Nation)}{(per\ capital GDP\ of\ Acquirer\ Nation) + (per\ capita GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. All regressions include fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer.

Independent Variable	**36-month Cumulative Abnormal Return (CAR_36)**						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INTERCEPT	-0.861	-0.761	-0.92	-1.523	-0.336	-1.182	-0.892
	(-1.64)	(-0.77)	(-0.92)	(-1.46)	(-1.06)	(-1.16)	(-0.88)
FRIENDLY_DUMMY	0.030	0.097	0.119	0.102	0.116	0.076	0.123
	(0.09)	(0.25)	(0.30)	(0.27)	(0.30)	(0.20)	(0.32)
TENDER_DUMMY	-0.113	-0.177	-0.128	-0.080	-0.118	-0.106	-0.133
	(-0.75)	(-1.13)	(-0.81)	(-0.51)	(-0.75)	(-0.67)	(-0.84)
CASH_DUMMY	**0.314***	**0.325***	**0.316***	**0.292***	**0.318***	**0.296***	**0.317***
	(1.80)	**(1.85)**	**(1.83)**	**(1.81)**	**(1.88)**	**(1.81)**	**(1.87)**
PRIOR_PRESENCE_DUMMY	0.065	-0.000	0.054	0.069	0.060	0.049	0.057
	(0.43)	(-0.00)	(0.33)	(0.43)	(0.36)	(0.30)	(0.34)
NO_OF_BIDDERS	0.130	0.178	0.189	0.219	0.147	0.176	0.187
	(0.49)	(0.66)	(0.70)	(0.82)	(0.54)	(0.65)	(0.69)
LOG_ACQUIROR_MV	**0.097***	0.072	0.079	0.032	0.071	0.068	0.080
	(1.79)	(1.13)	(1.23)	(0.50)	(1.10)	(1.05)	(1.24)
OPENNESS_TARGET		-0.000	-0.000	-0.000	-0.000	-0.000	-0.000
		(-1.43)	(-1.53)	(-1.40)	(-1.81)	(-1.57)	(-1.53)
PCI_DIFF		0.020	-0.012	0.021	-0.025	-0.000	-0.010
		(0.13)	(-0.08)	(0.14)	(-0.16)	(-0.02)	(-0.09)
FOREX_STDEV		0.001	0.003	0.002	0.002	0.002	0.004
		(0.08)	(0.47)	(0.31)	(0.32)	(0.26)	(0.51)
LOG_BILATERAL_TRADE		0.000	0.003	0.046	-0.001	0.029	0.000
		(0.00)	(0.08)	(1.03)	(-0.01)	(0.61)	(0.00)
CORP_GOV_DIFF			**0.076****	**0.069****	**0.077****	**0.067***	**0.077****
			(2.15)	**(1.98)**	**(2.08)**	**(1.87)**	**(2.16)**
HOFSTEDE_DIST				**0.008*****			
				(2.96)			
RELIGION_DUMMY					-0.158		
					(-1.27)		
LANGUAGE_DUMMY						-0.211	
						(-1.33)	
LEGAL_DUMMY							0.039
							(0.21)
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES
R2 (%)	6.66	7.18	9.31	12.93	9.96	10.25	9.34
Durbin-Watson Statistic	1.882	1.899	1.996	1.897	2.001	1.948	1.912
Number of Observations	233	224	224	224	224	224	224

t-statistics with robust standard errors are stated in parentheses

*** Significant at the 1% level

** Significant at the 5% level

*Significant at the 10% level

Table 10: Announcement Period Abnormal Returns associated with acquirer announcing cross-border acquisition, 1991-2000.

The average Abnormal Return (AR) is calculated for several windows around the date of announcement. This takes into account leakage of news before the announcement. We use daily stock market returns for the acquirer, obtained from DataStream. The windows we consider are [-40, +5], [-40, +1], [-1, +5] and [-1, +1]. We use the market model to calculate the Abnormal Return according to the following relationship:

$$AR_{it} = R_{it} - [\hat{a}_i + \hat{b}_i R_{Mt}]$$

Here, AR_{it} is the Abnormal Return for acquirer i, at time t. R_{it}, R_{Mt} are the daily returns for acquirer i and the acquirer's country stock market index, at time t. The parameters $\hat{a}_i, \hat{b}_i$ are estimated in the period [-160, -41] from the announcement date 0, using a market model regression. The z-statistic ($Z_{T1,T2}$) follows a unit-normal distribution and is used to test the hypothesis that the average cumulative standardized abnormal returns ($ASCAR_{T1,T2}$) equals zero. It is computed as:

$$Z_{T1,T2} = \sqrt{N} \times ASCAR_{T1,T2} \quad . \quad \text{(where N is the number of observations)}$$

Event Window	Abnormal Return % (z-statistic)		Number of Observations (N)
[-40, +5]	-0.038	(-0.746)	385
[-40, +1]	-0.025	(-0.491)	385
[-1, +5]	0.082	(1.609)	385
[-1, +1]	**0.714*** **	**(14.01)**	385

***Significant at the 1% level

Table 11: Regression for Announcement Period Abnormal Returns associated with Acquirer announcing cross-border acquisition, 1991-2000.

The dependent variable in the regression is the average Abnormal Return (AR), calculated for the window [-1, +1] around the date of announcement. We use daily stock market returns for the acquirer, obtained from DataStream. We use the market model to calculate the Abnormal Return according to the following relationship:

$$AR_{it} = R_{it} - [\hat{a}_i + \hat{b}_i R_{Mt}]$$

Here, AR_{it} is the Abnormal Return for acquirer i, at time t. R_{it}, R_{Mt} are the daily returns for acquirer i and the acquirer's country stock market index, at time t. The parameters $\hat{a}_i, \hat{b}_i$ are estimated in the period [-160, -41] from the announcement date 0, using a market model regression. CASH_DUMMY is a dummy variable with value 1 when the acquirer paid 100% cash for acquiring the target and 0 otherwise. FRIENDLY_DUMMY is a dummy variable that assumes a value of 1 when the acquisition is friendly, as described in the SDC Platinum database, and value of 0 otherwise. TENDER_DUMMY is a dummy variable with value 1 when acquisition was made by extending a tender offer, and value of 0 otherwise. PRIOR_PRESENCE_DUMMY is a dummy variable assuming a value of 1 if the acquirer had prior presence in the target's nation, as measured by previous joint ventures/alliances in the target nation. PRIOR_PRESENCE_DUMMY has value of 0 if the acquirer did not have any joint ventures/alliances in the target nation prior to the acquisition. NO_OF_BIDDERS is the number of firms that bid for the target firm. LOG_ACQUIROR_MV is a measure of the acquirer size, computed as log of acquirer's market value of equity prior to the effective month for acquisition. HOFSTEDE_DIST is the cultural distance between the acquirer and the target nation, as measured by the Cartesian distance between the different cultural dimensions for the two nations. OPENNESS_TARGET is a measure of the degree of "openness" of the target nation's economy to international trade, computed as:

OPENNESS_TARGET = (Target Nation Import + Target Nation Export)/ (Target Nation GDP)

PCI_DIFF is a measure of the economic disparity between the target firm's nation and the acquiring firm's nation, computed as:

$$PCI\_DIFF = \frac{(per\ capital\ GDP\ of\ Acquirer\ Nation) - (per\ capita\ GDP\ of\ Target\ Nation)}{(per\ capital\ GDP\ of\ Acquirer\ Nation) + (per\ capita\ GDP\ of\ Target\ Nation)}$$

FOREX_STDEV is a measure of the foreign exchange rate volatility between the target nation's currency and acquiring nation's currency, as measured by the -36 to -1 month standard deviation, where month of acquisition is 0. LOG_BILATERAL_TRADE is the natural logarithm of the summation of target nation's exports to and imports from the acquirer nation, in the year prior to the effective year of acquisition. CORP_GOV_DIFF is a measure of the difference in investor protection between the acquirer and target nations. It is computed as:

$$CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. All regressions include fixed-effects for effective year for the acquisition. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors assuming within-group clustering for target and acquirer country pairs. The groups are constructed as directional pairs of countries; for example, a US acquirer-UK target is considered in a separate group from a US target-UK acquirer.

Independent Variable	Announcement Period Abnormal Return for window [-1,+1]						
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7
INTERCEPT	0.016	0.013	0.001	0.009	-0.003	0.008	0.002
	(0.87)	(0.68)	(0.05)	(0.25)	(-0.09)	(0.23)	(0.06)
FRIENDLY_DUMMY	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	(0.29)	(0.44)	(0.35)	(0.32)	(0.41)	(0.13)	(0.31)
TENDER_DUMMY	-0.008	-0.006	-0.007	-0.007	-0.006	-0.008	-0.008
	(-1.09)	(-0.75)	(-0.91)	(-0.90)	(-0.81)	(-1.03)	(-1.06)
CASH_DUMMY	-0.002	-0.002	0.000	0.000	-0.001	0.000	-0.000
	(-0.25)	(-0.28)	(0.03)	(0.03)	(-0.11)	(0.08)	(-0.01)
PRIOR_PRESENCE_DUMMY	**0.016***	0.012	0.010	0.011	0.012	0.011	0.012
	(1.80)	(1.32)	(1.13)	(1.17)	(1.25)	(1.22)	(1.28)
NO_OF_BIDDERS	0.009	0.009	0.010	0.010	0.008	0.010	0.011
	(0.55)	(0.55)	(0.65)	(0.64)	(0.56)	(0.68)	(0.75)
LOG_ACQUIROR_MV	**-0.005***	-0.005	-0.004	-0.003	-0.003	-0.002	-0.003
	(-1.71)	(-1.33)	(-1.04)	(-0.74)	(-0.85)	(-0.67)	(-0.78)
OPENNESS_TARGET		0.000	0.000	0.000	0.000	0.000	0.000
		(0.41)	(0.51)	(0.51)	(0.8)	(0.61)	(0.45)
PCI_DIFF		-0.011	-0.008	-0.008	-0.009	-0.007	-0.008
		(1.44)	(-1.26)	(-1.26)	(-1.33)	(-1.07)	(-1.27)
FOREX_STDEV		0.000	0.000	0.000	0.000	0.000	0.000
		(0.35)	(0.10)	(0.07)	(0.14)	(0.18)	(0.13)
LOG_BILATERAL_TRADE		-0.000	0.000	-0.000	0.000	-0.000	-0.000
		(-0.06)	(0.16)	(-0.07)	(0.21)	(-0.33)	(-0.13)
CORP_GOV_DIFF			-0.002	-0.002	-0.002	-0.002	-0.002
			(-0.97)	(-0.92)	(-0.94)	(-1.06)	(-1.06)
HOFSTEDE_DIST				-0.000			
				(-0.48)			
RELIGION_DUMMY					0.006		
					(1.12)		
LANGUAGE_DUMMY						0.008	
						(1.34)	
LEGAL_DUMMY							0.007
							(1.26)
Year Fixed-effects	YES	YES	YES	YES	YES	YES	YES
R2 (%)	12.21	16.59	14.74	14.96	16.18	16.00	16.55
Durbin-Watson Statistic	1.776	1.803	1.885	1.956	1.997	1.991	1.875
Number of Observations	385	385	385	385	385	385	385

t-statistics with robust standard errors are stated in parentheses

*** Significant at the 1% level

** Significant at the 5% level

*Significant at the 10% level