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

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Abstract

Using a sample of over 800 cross-border acquisitions during 1991-2004, 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 mainly use the Hofstede measure of cultural dimensions to measure cultural distance but also examine alternate proxies. The positive relationship of performance with cultural distance persists after controlling for several deal-specific variables and country-level fixed effects, and is robust to alternative specifications of long-term performance. Cash and friendly acquisitions tend to perform better in the long-run. There is also some evidence of synergies when acquirers are from stronger economies relative to the targets.

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

"Culture was a big issue in deciding to do the deal".
Proctor & Gamble CEO A.G. Lafly about the merger with Gillette [Fortune, 2005][1]

"In Russia, 3M is showing how companies can turn cultural variations into business advantages." Harvard Business Review [2]

1. INTRODUCTION

Cultural disparity between two merging partners is among the usual suspects blamed for ruining mergers and acquisitions (M&A). Practitioners admit that culture plays a crucial role in determining the long-term success of an M&A deal.[3] Yet there are very few rigorous studies examining the effect of cultural difference on the performance of M&A, making it difficult to ascertain whether the "culture clashes" that we read about in the business press are systematic widespread phenomena or just pertain to the handful of mega-deals that capture media attention. While stories about post-merger culture clashes are widespread, the anticipation of such challenges could prompt better due diligence and lead acquiring firms to set a higher standard for expected synergies before completing deals involving culturally distant targets. [4]

As a strategy of internationalization and mode of foreign entry, cross-border acquisitions constitute the higher–equity end of the menu. Their advantages – including economies of scale, exploiting foreign market opportunities and accessing scarce resources – have long been noted in the international business literature. As Nadolska and Barkema (2007) summarize, "Acquisitions may help companies to gain market power …redeploy assets…exploit technical knowledge… and increase shareholder value, at least in the short run." They enable acquirers to access foreign markets more quickly than in other modes of entry and sometimes are less risky than greenfield investments (Stahl and Voigt

[1] "It was a no-brainer", Fortune, Feb 21, 2005.
[2] "Making the Most of Culture Differences," Mikhail V. Gratchev, *Harvard Business Review*, Oct 2001, Vol. 79 Issue 9, 28-29.
[3] 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.
[4] For instance Chrysler-Daimler, GE-Tungsram (of Hungary) and Upjohn and Pharmacia AB of Sweden.

(forthcoming)). Nevertheless, it is common to find negative average post-acquisition performance of acquirer firms (see King et al 2004 for a meta-analysis) and cultural issues are often believed to be important in explaining this performance. Theories in the area of foreign entry mode choice have included the "evolutionary process logic, the knowledge based perspective and transaction cost economics" (Zhao et al (2004)). Culture affects at least the last two if not all three of these mechanisms (see Zhao et al (2004) for culture's role in transaction costs and Bjorkman et al (2007) for the role in capability transfer).

In spite of recurring discussions and anecdotal evidence, it is fair to say that the effects of culture on the prospects of M&A success are murky. Stahl and Voigt (forthcoming) point out that the literature suggests a negative impact of cultural differences on socio-cultural integration, particularly in light of perceptual and cognitive factors, such as social categorization and the Social Identity Theory. Some studies posit 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)). Datta and Puia (1995) find empirical evidence on the detrimental effect of acquirer-target cultural distance on shareholder wealth in acquiring firms. As with several empirical explorations of the impact of culture on M&A, Datta and Puia's (1995) methodology has some serious limitations. They 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.

On the other hand, there has been some discussion in the theoretical literature in the international business and strategy areas on operational explanations of potential gains from cultural disparity. Subscribers to the resource-based view of the firm posit that culturally distant mergers can provide competitive advantage to the acquirer by giving them access to unique and potentially valuable capabilities. It has been argued from an organizational learning perspective, that culturally distant mergers can spur innovation and learning by helping break rigidities. In addition, Very et al (1996) find that national cultural distances

bring forth perceptions of attraction rather than stress. Weber, Shenkar and Raveh (1996) point out that cultural "distance" should not always be interpreted as cultural "incongruity." Goulet and Schweiger (2006) argue that M&A partners are more predisposed to working toward managing these cultural differences, since they pay attention to national cultural factors. Similarly Evans et al (2002) note that managers of cross-border M&A are more sensitive to cultural issues than those managing domestic mergers – an insight that may well carry over to the context of cross-border mergers with heterogeneous cultures. Some other studies argue that 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 (See Shane (1992); Hofstede (1980); Kogut and Singh (1988); Barney (1986); Morosini and Singh (1994)). Some practitioner studies have also reached similar conclusions[5]. Additionally, Morosini and Singh (1994) posit that if the buyer is aware of the specific ways in which the national culture interacts with the post-acquisition-strategy chosen, they can choose the most appropriate strategy for post-acquisition integration. In effect, contrary to popular perception, even integration may arguably be *easier* in culturally distant mergers than in mergers involving culturally proximate partners. However, while the empirical studies contribute to the literature, the generality of their evidence is unclear. Morosini and Singh (1994) and Morosini et al (1998) base their conclusions on a survey of 400 Italian companies that engaged in cross-border acquisition activity between 1987 and 1992 but have a usable sample of only 52 observations. Additionally, they use the percentage sales growth for the two years following the acquisition – rather than a stock return based metric – as the performance measure.

Slangen (2006) seeks to reconcile the two camps with the hypothesis that cultural distance in and of itself does not have an effect – it all depends upon how closely the acquirer

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[5] 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.

seeks to integrate the acquired company. At low integration levels, cultural distance is a boon, at high integration levels, a bane. Despite the intuitive appeal of the conclusions, Slangen (2006) uses surveys of managers' opinions to assess the success of an acquisition (as well as the level of integration) and may have considerable estimation problems associated with it.

Broadly speaking, theory posits that cultural differences may enhance potential synergies of a merger particularly through capability transfer, resource sharing and learning but only at the cost of increased integration challenges. Which of these two opposing forces prevail on average is an empirical question we seek to address in this study. We are not aware of any empirical studies that bring a large data sample to bear upon the hypothesis about cultural differences influencing M&A performance. Our broad inquiry is, therefore, based on the simple premise that cultural differences impact the future performance of M&A deals.

This notion is strongly supported by our empirical evidence. We study the performance of over 1150 cross-border acquisitions between 1991 and 2004 (though our main regressions have slightly over 800 observations owing to data constraints), involving acquirers from 43 countries and targets from 65 countries. Using an event-study methodology and the Hofstede metric of cultural distance between the countries of acquiring and target firms, 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 find that the long term stock market performance of acquirers is positively and significantly related to the cultural distance between the target and acquirer. However, the median BHARs for the acquirers' stocks are negative, suggesting that they usually under-perform their respective country market indices in the three years following the acquisition. (This under-performance is hardly surprising – it is analogous to the well known empirical result of under-performance of the *average* domestic acquirer in the USA). Hofstede cultural distance explains, in part, the *cross-sectional* variation of long-term abnormal returns following acquisitions. Our evidence suggests that culturally distant acquisitions perform better than culturally proximate acquisitions. 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 of

long-term performance. There is also some evidence that cash and friendly purchases do better than other acquisitions. We find some support for positive synergies from acquisitions involving an acquirer from an economically stronger nation compared to the targets' nation.

We summarize the possible mechanisms that lead to a positive relation between cultural distance and long-term M&A performance as (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 stricter selection criteria, where deals involving high cultural disparity materialize only when they have substantial economic potential. These alternative mechanisms are not mutually exclusive, and while they are not individually distinguishable in our empirical tests, they support the main premise of our study. The second thesis, which suggests better due diligence for M&A between culturally different partners, also finds some empirical support in Aguilera et al. (2004), who finds that M&A announcements are more likely to be withdrawn when there is more cultural disparity between acquirer and target firms.

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. Weber, Shenkar and Raveh (1996) find that for international M&A, it is the difference in national culture, rather than corporate culture, that better explain some critical success factors, namely attitudes and cooperation. However, as in the case of the AOL-Time Warner merger, it is possible to have considerable differences in corporate cultures of firms belonging to the same country. 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 is largely subsumed in our metric.

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*.

Our study contributes to the evidence on the impact of culture on business activity, an issue that has been discussed often in the international business literature, and to some extent in the finance literature where it is a relatively new entrant[6]. Given the difficulties involved in defining and measuring culture, a few alternative measures have emerged in recent years. We use the measure that is, by far, the most established in the international business literature – national scores along all the different dimensions of culture developed by Geert Hofstede in his seminal 1980 work, *Culture's Consequences: International Differences in Work Related Values*. Hofstede assigned survey-based scores to several countries on four orthogonal dimensions he defined – individualism, power distance, uncertainty avoidance and masculinity – to arrive at his measure.[7] Fernandez et al (1997, pp. 43-44) call the Hofstede framework "a watershed conceptual foundation for many subsequent cross-national research endeavors." Kirkman et al (2006) provide an exhaustive survey of the literature spanning several sub-disciplines of management that has emerged since the publication of Hofstede's book. They point out that 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,

[6] 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. Guiso, Sapienza, and Zingales (GSZ) (2004) show that the trust that people of a country have in a citizen of another country plays a significant role in economic exchange between the two nations. Other recent papers in the finance area that have used the Hofstede metric include Chui, Titman and Wei (2005) who show that stock markets in individualistic countries have more active trading and momentum in stock returns and Licht, Goldschmidt and Schwartz (2003) who use Hofstede distances to show the heterogeneity within the broad groups used by LLSV (1998) to characterize corporate governance systems.

[7] A fifth dimension, long term orientation, was later added, for a small subset of countries. The four original dimensions are traditionally used to calculate the cultural distance (see Kirkman *et al* (2006)).

and Smits, 1995) and have been replicated several times (Punnett & Withane, 1990; Shackleton & Ali, 1990; Merritt, 2000; and Spector et al., 2001 for instance).

The Hofstede measures are, of course, neither free from criticism nor without alternatives. Broad criticisms aimed at the Hofstede's measure have included the following[8]: reliance on a single company's data; time dependent results, which are an artifact of the time of data collection and analysis; business culture, not values culture, captured; non-exhaustive in cultural dimensions; partial geographic coverage; Western bias; attitudinal rather than behavioral measures; ecological fallacy, and national level data generalized into individual behavior. Alternative measures of culture range from proxies like language (see Stulz and Williamson (2003) and Shenkar and Luo (2003)), religion (which often correlates with categorizations of more sophisticated constructs) and legal origin, to more sophisticated multi-dimensional constructs like Schwartz's classification of societies in terms of embeddedness versus autonomy, hierarchy versus egalitarianism and mastery versus harmony; Trompenaars and Hampden-Turner's categorization based on seven dimensions; national cultural clustering (the grouping of cultures based on their relative similarity); the World Values Survey spearheaded by Ronald Inglehart (Inglehart (1997) and Inglehart and Baker (2000)) and finally the GLOBE (Global Leadership and Organizational Behavior Effectiveness) project (House et al (2004)).

Given the subjective nature of culture, all of these measures are imperfect and have their shortcomings. Of these the multi-author multi-year GLOBE project (which admits to being inspired by Hofstede's work) has drawn a critique by Hofstede himself. The highly illuminating debate that resulted has highlighted some of the various ways in which measures of culture differ from one another – issues of aggregation of individual perceptions to define collective characteristics, choices regarding the optimal number of dimensions of culture, and the definition and isolation of national culture from organizational culture.[9] More than anything else, the exchange perhaps brings to focus the various conceptual and

[8] Shenkar and Luo (2003)

[9] Covered in detail in the November 2006 issue of JIBS.

implementation challenges that remain in our way of finding a consensus measure of culture. Among the existing measures, in terms of use and acceptability across the different disciplines of management, however, Hofstede still remains the undisputed leader (Sivakumar and Nakata (2001) and Kirkman et al (2006)).

The other strand of literature our study relates to is that on transnational M&A. There exists very limited empirical evidence on long-term performance of acquirers who acquire firms from a foreign country though the role of law and the degree of shareholder and creditor protection in the acquiring firm's country have been studied (see Kupiers, Miller, and Patel (2003)).[10] There have been a few studies of short-run returns of acquirers in cross-border acquisitions[11]. Bruner (2004) summarizes the results of 14 studies that focus their attention on returns to buyers of foreign targets.[12] Revealingly, two of them detect significantly negative returns, two significantly positive while the remainders do not find any significant effects. Moeller and Schlingemann (2005) 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.

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

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[10] In contrast a large literature focuses on U.S. domestic M&A activities (see Bruner (2002) for a survey). 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 though results are sensitive to choice of techniques (Mitchell and Stafford (2000).

[11] See Cakiki, Hessel and Tandon (1996) and Eun, Kolodny, and Scheraga (1996), for instance.

[12] Table 5.8 pp.111-112.

2. DATA AND VARIABLES

Our empirical tests are based on a sample of cross-border acquisitions that occurred in the ten-year period 1991 to 2004. 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 1157 unique acquisitions with 43 different acquirer countries and 65 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, 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, India, China and Singapore being the only emerging markets involved in a substantial way. 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 over three-quarters of the cases, while a tender offer is made in only about 11% of cases. Over two-thirds of the acquisitions are unrelated at least at the 4-digit SIC level.

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 changes between the two countries (*Forex_Volatility*), 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:

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

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:

$$\text{Openness\_target} = \frac{(\text{Target Nation Import} + \text{Target Nation Export})}{(\text{Target Nation GDP})}$$

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_Volatility*, is the standard deviation of proportional changes in 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 I** describes the variables we use in this paper and indicates their sources.

Our primary measure of cultural distance, the Hofstede measure, is obtained from Hofstede (1980) and Hofstede (2001). 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:

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

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 simple proxies for culture– 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[13]. 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.

[13] The correlation of Hofstede distance with our language, religion and legal origin dummies are -0.84, -0.31, and -0.62 respectively.

3. 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 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 1100 acquisitions with 43 different acquirer countries and 65 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[14]. Table 3 presents the summary statistics for the BHARs of the acquiring company over different windows. Since data is not available for all 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 median acquirer vis-à-vis its country index, though the average BHARs are positive owing to large gains by the "winners".

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 Sweden and Japan have the most dissimilar cultures.

In Table 5 Panel A, 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 I. We use effective year fixed-effects to control for all time-related factors (e.g. macroeconomic conditions, merger waves etc.) 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. In order to minimize this problem, we use clustered multivariate regressions with robust standard errors and target country and year fixed effects. Our specifications account for

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

clustering within each acquirer country. 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, Panel A. 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 cash dummy are positive and statistically significant, both at the 1% levels. These variables retain their sign and significance in all model specifications considered indicating that, on average, acquiring firms that pay cash and conduct friendly deals perform better in the long-run[15]. Then, 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, essentially nothing changes. None of the economic variables are significant in explaining long-term performance. In unreported specifications we use relatedness of acquirer and target, prior presence of acquirer firm in target country, 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:

$$Corp\_Gov\_Diff = (Acquirer\_Antidirector\_Index - Tgt\_Antidirector\_Index)$$

[15] This evidence is very similar to the evidence for U.S. acquirers acquiring domestic targets (see for example Loughran and Vijh (1997)).

The antidirector indices are obtained from La Porta et al. (1998) for the acquirer and target nations. The coefficient is positive, and marginally statistically significant at 10%. The variable *PCI_diff*, measuring difference in income level between the two countries that was insignificant in Model 2 is now marginally significant at 10% level.

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 natural logarithm of the Hofstede measure of cultural distance between the acquirer and the target nation. The natural logarithm achieves the purpose of capturing non-linearities in the relationship. The Hofstede variable is positive and significant at the 1% level (t-stat of 2.83). The positive sign of the coefficient indicates that as cultural distance increases, so does the BHAR of the acquiring firm, *ceteris paribus*. Controlling for cultural difference, *PCI_diff*, measuring difference in income level between the two countries, now becomes significant at 5% level while contested acquisitions have marginally significant (at 10%) negative effects.

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 (1997, 1998, 1999, 2002) 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. 84), religion (-0. 31) and legal origin (-0. 62) 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 and legal origin dummy are not significant in our analysis.

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. Interestingly enough at the individual factor level, only the masculinity factor is mildly negatively significant (differences in masculinity index can understandably cause integration problems). So it seems the positive impact of overall Hofstede distance is not derived from difference in one or more individual dimension but rather arises in a non-linear way from the combined difference along the four dimensions.

Overall, the evidence shows that M&A deals involving culturally *distant* firms perform better in the long run. Our results suggest that in the context of cross-border M&A, the value-enhancement effect in the debate on the impact of cultural disparity on success of acquisitions might outweigh the obstacles. The exact mechanism leading to this outcome is difficult to determine. It is unlikely that firms consciously seek out culturally distant targets expecting better performance. Thus, either cultural distance unleashes value enhancing effects (unexpectedly for the acquirer) or culturally distant acquisitions are typically associated with other features (more stringent screening, for instance) that lead to this result. In spirit, the first mechanism reiterates the definitions used in Hofstede (1980) which expect the strengths and capabilities of firms to develop based on the different socio-cultural environment in which they operate. This may lead to benefits for the acquirer when they acquire a culturally dissimilar target having a new set of strengths. In support of the second mechanism, 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. Guiso et al (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. Consider 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.

Given the data and empirical methodologies available, the exact mechanisms that drive the positive relationship between M&A success and cultural are indistinguishable in our empirical analyses. However, our findings provide strong support to the conjecture that cultural disparity plays a significant role in determining outcomes of these business transactions. 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.

4. ROBUSTNESS TESTS

We conduct several additional tests to check the robustness of our results to alternative specifications. In subsection 4.1, we discuss the issue of using 30- versus 36-month BHARs as alternative windows for the long-term returns. In subsection 4.2, we focus on the performance of U.S. firms making cross-border acquisitions. In subsection 4.3, 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). In subsection 4.4, we reexamine our results after controlling for "undistributed cash flows" and relatedness of the acquisitions.

4.1 Results using 30-month BHAR

In untabulated findings, we also run regressions using 24-month and 30-month BHARs 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. 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.

4.2 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 6 shows the regression results for this sub-sample. The cash dummy is significant in all specifications. Interestingly openness of the target country has a slight but statistically significant negative impact in almost every specification, suggesting that gains in cross-border M&A are higher with low trade levels (probably due to trade restrictions). This is intuitive as competition from more open trade can dilute the advantage of cross-border takeovers. The Hofstede measure is again significantly positive.

4.3 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 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. Qualitatively, these results remain similar to those in Table 5.[16] 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.[17]

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.

[16] The results are available on request.

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

4.4 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[18].

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.

5. 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 associated with the announcements of acquisitions. relative to the acquisition announcement date for each firm.[19],[20]

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[18] 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 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).

[19] 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 coefficients 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.

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

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 [(-40, 5), (-40 to +1), (-1 to +5)]) 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 7 as in the previous tables for the long-run returns. We replicate Table 5, including year and target country fixed-effects, but use the short-term cumulative abnormal returns as the dependent variable instead of BHAR. Interestingly enough, the measures of cultural difference seem to have the opposite impact on the short-term announcement returns than in the long-term return., The significance of both Hofstede distance as well as language dummy suggest that markets actually value "culturally closer" cross-border M&As *higher*, only to be proven wrong in time.

6. 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 is, in fact, opposite to the market reaction in the "announcement effect".

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 impact of culture 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. We also find some evidence of synergies that can be derived when acquiring firms from strong economic systems acquire targets in systems with

weaker economies. It is the overall cultural distance rather than dimension-wise differences that seem to drive our results, though difference in masculinity appear to hurt performance slightly, presumably through integration problems.

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. 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 international business and corporate finance. Finally, while we use the most frequently used measure of culture, Hofstede measures, and proxies like language and religion to measure cultural difference, there are several other measures of culture available. We do extensive robustness checks for the measurement of stock performance. Whether our results hold up to alternative measures of culture and if any of these measures give conflicting results for cross-border M&A performance is an interesting research question in itself. 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: 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
Related Dummy	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 Volatility	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 proportional change in 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: $CORP\_GOV\_DIFF = (Acquirer\_Antidirector\_Index - Tgt\_Antidirecto$ 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 1991-2004

Panel A: Major acquiring and target countries

Acquiring Nations	*No. of Acquisitions*	*Target Nations*	*No. of acquisitions*
United States	402	United States	287
United Kingdom	155	United Kingdom	157
Canada	99	Canada	100
Japan	48	Germany	89
France	47	France	59
Germany	40	Netherlands	47
Australia	34	Australia	44
Netherlands	31	Sweden	32
Sweden	26	Switzerland	27
Singapore	22	Italy	20
Switzerland	22	Denmark	18
Finland	21	Finland	17
Hong Kong	17	Spain	17
India	17	China	16
South Africa	17	Norway	15
Italy	14	Hong Kong	14
Spain	14	New Zealand	14
Others	131	Others	184
TOTAL	1157	TOTAL	1157

Panel B: A few common pairs

		Target Country					
		USA	UK	Canada	Germany	France	Japan
Acquirer Country	USA		88	88	52	24	9
	UK	69		6	10	17	1
	Canada	64	10		1	1	0
	Germany	10	5	0		4	0
	France	19	5	0	2		0
	Japan	21	3	0	0	4	

Table 2: Summary description of sample of cross-border acquisitions in 1991-2004

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	1157	100
Cash	873	76
Non-cash	274	24
Friendly	1110	97
Hostile/Neutral	36	3
Tender offer	131	11
No tender offer	1017	89
Unrelated	760	66
Related at 4-digit SIC level	389	34

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*
No. of Observations	1138	1037	984	825
Mean (in %)	0.014	0.010	0.079	0.090
p-value (p>|t|)	0.42	0.72	0.18	0.05
Median (in %)	-0.009	-0.090	-0.138	-0.119
Maximum (in %)	12.000	12.593	48.350	15.660
Minimum (in %)	-1.107	-3.482	-2.501	-2.920
Std. Dev.	0.603	0.918	1.848	1.351
Skewness	7.76	4.40	18.58	4.37
Kurtosis	142.47	46.62	475.98	37.72

Table 4: Summary description of Hofstede measure of cultural distance

Panel A: Summary Statistics

	Hofstede Distance
No. of Observations	1130
Mean	39.252
Median	31.417
Std. Dev.	24.539
Maximum	114.991
Minimum	6.557
Skewness	0.504
Kurtosis	2.072

Panel B: Country pairs with maximum and minimum cultural distance

Five country pairs with most similar cultures		*Hofstede Distance*
Australia	United States	6.56
Australia	United Kingdom	6.56
Germany	Switzerland	8.19
Romania	Russia	12.29
United Kingdom	United States	12.88

Five country pairs with most dissimilar cultures		*Hofstede Distance*
Sweden	Japan	114.99
Russia	United Kingdom	101.80
Japan	Singapore	101.69
New Zealand	Malaysia	98.82
Netherlands	Japan	97.44

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

The dependent variable in these clustered multivariate regressions with fixed effects are the Buy-and-Hold Abnormal Returns (BHARs) calculated for an event window of 36 months following the effective date of the acquisition. The clustering accounts for correlated observations for deals from the same acquirer domicile nation. *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. *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:

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

Forex_Volatility 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. *Log (Hofstede Dist)* is the natural logarithm of 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. *Religion_dummy* is a dummy variable with value 1 when the two nations share a common primary religion and 0 otherwise. *Language_dummy* is a dummy variable with value 1 when the two nations share a common language and 0 otherwise. *Legal_dummy* is a dummy variable with value 1 when the two nations share a common legal origin and 0 otherwise, based on La Porta et al. (1998).

All regressions include fixed-effects for effective year for the acquisition and the target firm's domicile nation. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors. 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.

	36-month Buy-and-Hold Return (BHAR_36)													
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Independent Variable	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat
Intercept	-0.382	-1.49	-0.612	-1.59	-0.348	-1.04	-1.113 ***	-2.87	-0.603	-1.35	-0.111	-0.32	-0.609	-1.34
Friendly_Dummy	0.599 ***	4.24	0.545 ***	4.33	0.523 ***	4.35	0.518 ***	4.21	0.513 ***	4.23	0.492 ***	3.93	0.518 ***	4.20
Tender_Dummy	0.041	0.26	0.042	0.26	0.026	0.17	0.031	0.20	0.030	0.19	0.029	0.19	0.031	0.20
Cash_Dummy	0.300 ***	3.55	0.289 ***	3.44	0.272 ***	3.2	0.259 ***	3.19	0.273 ***	3.26	0.246 ***	2.97	0.274 ***	3.20
No_of_Bidders	-0.255	-1.24	-0.339	-1.56	-0.363	-1.63	-0.387 *	-1.75	-0.338	-1.62	-0.408 *	-1.81	-0.363	-1.60
Log (Acquiror MV)	0.101	0.99	0.112	1.01	0.201	0.45	0.131	0.56	0.919	1.01	1.001	1.14	1.120	1.43
Openness_Target			0.000	-1.16	0.000	-0.71	0.000	-0.56	0.000	-0.71	0.000	-0.74	0.000	-0.72
PCI_diff			0.096	1.1	0.153 *	1.65	0.201 **	2.16	0.156 *	1.65	0.189 ***	2.19	0.165 *	1.77
Forex_Volatility			-0.008	-0.32	0.002	0.09	-0.020	-0.83	0.000	0	-0.033	-1.32	0.012	0.44
Log (Bilateral Trade)			-0.001	-1.02	0.000	-1.01	-0.010	-0.99	-0.003	-0.89	-0.002	-1.00	0.000	-0.90
Corp_Gov_Diff					-0.081 *	-1.83	-0.063	-1.46	-0.080 *	-1.87	-0.032	-0.69	-0.082 *	-1.84
Log (Hofstede Dist)							0.190 ***	2.83						
Religion_Dummy									0.102	0.71				
Language_Dummy											-0.433 ***	-3.01		
Legal_Dummy													0.047	0.48
Target Country Fixed Effects	YES		YES		YES		YES		YES		YES		YES	
Year Fixed Effects	YES		YES		YES		YES		YES		YES		YES	
R2 (%)	12.3		9.2		9.8		10.1		10.0		11.2		9.9	
Durbin-Watson Statistic	1.96		2.01		2.01		1.92		1.99		2.00		2.01	
Number of Observations	814		768		765		753		755		755		752	

*** 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. *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:

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

Forex_Volatility 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. 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. All regressions include fixed-effects for effective year for the acquisition and the target firm's domicile nation. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors. 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.

	36-month BHAR		
Independent Variable	coeff		t-stat
Intercept	-0.570		-1.57
Friendly_Dummy	0.519	***	3.99
Tender_Dummy	0.017		0.12
Cash_Dummy	0.281	***	3.30
No_of_Bidders	-0.391	*	-1.63
Log (Acquiror MV)	0.121		0.78
Openness_Target	0.000		-0.18
PCI_diff	0.273	**	2.04
Forex_Volatility	0.008		0.31
Log (Bilateral Trade)	0.000		-1.00
Corp_Gov_Diff	-0.048		-1.00
Power_Dist_Diff	-0.008		-1.62
Individualism_Diff	-0.005		-1.37
Masculinity_Diff	-0.006	*	-1.83
Uncertainty_Avoid_Diff	0.001		0.36
Target Country Fixed Effects	YES		
Year Fixed Effects	YES		
R2 (%)	10.2		
Durbin-Watson Statistic	2.01		
Number of Observations	753		

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: 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. *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:

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

Forex_Volatility 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. *Log (Hofstede Dist)* is the natural logarithm of 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. *Religion_dummy* is a dummy variable with value 1 when the two nations share a common primary religion and 0 otherwise. *Language_dummy* is a dummy variable with value 1 when the two nations share a common language and 0 otherwise. *Legal_dummy* is a dummy variable with value 1 when the two nations share a common legal origin and 0 otherwise, based on La Porta et al. (1998). All regressions include fixed-effects for effective year for the acquisition and the target firm's domicile nation. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors. 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.

	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	
Independent Variable	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat
Intercept	-0.232	-0.39	-0.643	-1.00	0.834	1.04	0.091	0.10	0.930	1.11	1.275	1.29	0.671	0.77
Friendly_Dummy	0.049	0.13	-0.185	-0.49	0.067	0.19	0.106	0.29	0.063	0.18	0.102	0.29	0.054	0.16
Tender_Dummy	-0.094	-0.26	-0.210	-0.54	-0.130	-0.40	-0.107	-0.33	-0.131	-0.40	-0.101	-0.31	-0.138	-0.43
Cash_Dummy	0.400 **	2.12	0.363 **	2.01	0.334 **	2.09	0.335 **	2.08	0.336 **	2.10	0.312 **	2.05	0.349 **	2.17
No_of_Bidders	-0.272	-0.82	-0.225	-0.67	-0.302	-0.98	-0.252	-0.84	-0.323	-1.04	-0.210	-0.67	-0.325	-1.05
Log (Acquiror MV)	0.332	1.01	0.300	1.00	0.267	0.00	0.312	0.56	0.289	0.99	0.317	1.01	0.301	1.23
Openness_Target			0.000	-0.19	-0.001 **	-2.10	-0.001 **	-2.17	-0.001 **	-2.04	-0.001 **	-2.20	-0.001 **	-2.11
PCI_diff			1.381	1.05	0.366	0.65	0.164	0.28	0.283	0.49	0.224	0.38	0.337	0.60
Forex_Volatility			0.235 *	1.70	-0.061	-0.78	-0.078	-0.95	-0.055	-0.66	-0.080	-0.92	-0.051	-0.63
Log (Bilateral Trade)			-0.001	-0.02	0.000	-0.03	0.000	-0.21	0.000	-0.43	-0.002	-1.00	0.000	-0.82
Corp_Gov_Diff					0.010	0.22	-0.053	-0.75	0.013	0.27	-0.111	-0.85	0.047	0.46
Log (Hofstede Dist)							0.272 **	1.92						
Religion_Dummy									-0.104	-0.60				
Language_Dummy											-0.502	-1.10		
Legal_Dummy													0.158	0.50
Target Country Fixed Effects	YES		YES		NO		NO		NO		NO		NO	
Year Fixed Effects	YES		YES		YES		YES		YES		YES		YES	
R2 (%)	20.8		20.0		9.7		11.3		9.8		10.9		9.8	
Durbin-Watson Statistic	1.99		2.00		2.01		1.92		2.00		2.00		1.99	
Number of Observations	282		269		268		267		267		267		267	

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: Regression for Announcement Period Abnormal Returns associated with Acquirer announcing cross-border acquisition, 1991-2004.

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:

$$AR_{it} = R_{it} - [\hat{\alpha}_i + \hat{\beta}_i R_{Mt}]$$

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 $\hat{\alpha}_i, \hat{\beta}_i$ 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. *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:

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

Forex_Volatility 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. *Log (Hofstede Dist)* is the natural logarithm of 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. *Religion_dummy* is a dummy variable with value 1 when the two nations share a common primary religion and 0 otherwise. *Language_dummy* is a dummy variable with value 1 when the two nations share a common language and 0 otherwise. *Legal_dummy* is a dummy variable with value 1 when the two nations share a common legal origin and 0 otherwise, based on La Porta et al. (1998). All regressions include fixed-effects for effective year for the acquisition and the target firm's domicile nation. The regression coefficient estimates and their associated t-statistics (in parentheses) are reported with robust standard errors. 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.

	Annoucement Period Abnormal Return in event window [-1,+1] (AR_0101)													
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6		Model 7	
Independent Variable	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat	coeff	t-stat
Intercept	0.026	0.71	0.001	0.03	0.001	0.03	0.075 ***	2.51	0.000	0.00	-0.007	-0.19	0.029	1.12
Friendly_Dummy	-0.002	-0.06	0.003	0.11	0.002	0.09	0.002	0.08	0.001	0.05	0.001	0.05	0.001	0.04
Tender_Dummy	-0.002	-0.36	-0.001	-0.22	-0.001	-0.18	0.000	0.06	0.000	0.07	0.000	0.08	0.000	0.08
Cash_Dummy	-0.002	-0.32	-0.002	-0.31	-0.001	-0.13	-0.001	-0.10	-0.001	-0.23	0.000	-0.08	0.000	-0.06
No_of_Bidders	0.007	0.65	0.003	0.22	0.003	0.25	0.007	0.52	0.004	0.34	0.005	0.42	0.005	0.42
Log (Acquiror MV)	0.121	1.19	0.161	0.17	0.170	0.22	0.120	0.34	0.127	0.49	0.122	0.20	0.133	0.78
Openness_Target			0.000	0.14	0.000	-0.12	0.000	0.04	0.000	0.42	0.000	0.20	0.000	-0.02
PCI_diff			-0.002	-0.36	-0.003	-0.52	-0.001	-0.28	0.001	0.14	0.000	-0.05	0.001	0.17
Forex_Volatility			0.001	0.54	0.001	0.32	0.002	0.74	0.001	0.38	0.002	0.85	0.003	1.27
Log (Bilateral Trade)			0.002	1.12	0.001	1.34	0.003	1.45	0.002	1.51	0.001	0.88	0.001	1.01
Corp_Gov_Diff					0.002	0.99	0.000	0.21	0.002	0.79	0.000	0.23	0.001	0.27
Log (Hofstede Dist)							-0.010 **	-2.40						
Religion_Dummy									0.000	0.03				
Language_Dummy											0.012 **	2.21		
Legal_Dummy													0.011 **	2.06
Target Country Fixed Effects	YES		YES		YES		YES		YES		YES		YES	
Year Fixed Effects	YES		YES		YES		YES		YES		YES		YES	
R2 (%)	5.9		5.8		5.9		6.2		6.1		6.3		6.3	
Durbin-Watson Statistic	1.96		2.01		2.01		1.92		1.99		1.96		2.01	
Number of Observations	828		778		776		761		763		763		760	

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