Are cross-listed firms superior targets? Evidence from short- and long-run performance of US bidders*

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Abstract

We examine the impact of the cross-listing status of target firms and cross-country institutional differences on short- and long-run performance of US bidders in cross-border acquisitions. We find that lower integration of the target market to global economies and higher cultural differences result in higher bidders' announcement-period returns when acquiring firms cross-listed in the US. This result suggests that cross-listing may play a significant role in lowering the acquisition costs induced by market segmentation. Moreover, we show that acquirers realize higher long-run returns when acquiring foreign targets cross-listed on US markets, suggesting a more successful post-merger integration and greater merger synergies. We also provide further evidence for the hypothesis of corporate governance transfer through mergers and acquisitions by examining its effects on acquirers' short and long-run returns. We show that, on the long-run, the acquirer benefits from transferring its good corporate governance practices to the target.

Keywords: Cross-listing; mergers & acquisitions; corporate governance; market integration; short- and long-run performance

JEL Classification: G15, G34, K00

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1. Introduction

Cross-border mergers and acquisitions (M&As) have experienced a tremendous rise during the last decade, alimented by increasing globalization and integration in financial markets. While this trend may suggest that such transactions generate substantial gains, the evidence points out that they are not very successful and concerns are growing over the ability of firms to conduct the post-merger integration. Several studies have examined the wealth effects to target and acquiring shareholders in cross-border M&As (e.g., Moeller and Schlingemann, 2005; Martynova and Renneboog, 2008). One particular issue that aroused a great interest is whether M&As create value for the acquirer or do target shareholders capture almost the entire gain.

While there is extensive evidence of a significant positive wealth effect for target shareholders, results vary in the case of acquiring shareholders. In general, research shows that, in comparison to domestic transactions, cross-border ones are less beneficial to shareholders of the acquiring firm. For instance, Moeller and Schlingemann (2005) report a significant lower stock market reaction to acquisition announcements for US acquirers engaged in cross-border deals compared to domestic ones. They further uncover a significant lower improvement in long-run operating performance for acquirers in cross-border deals when compared to acquirers that dealt with domestic targets. These findings suggest that cross-border M&As are embedded with significant challenges, especially during the post-acquisition integration process.

In a cross-border context, M&A transactions are more challenging on several grounds. First, differences in financial disclosure and accounting standards increase uncertainty and complexity of pricing the foreign target. Second, the post-merger integration process is more problematic

because of disparities in country characteristics between the acquirer and the target. These disparities stem primarily from differences in national and corporate culture, in corporate governance practices, and in regulatory environments. For instance, Moeller and Schlingemann (2005) find that acquirer gains are higher for transactions involving target countries with a legal system offering better shareholder rights.

For US acquirers seeking cross-border targets, firms cross-listed in the US may be more convenient targets as they may reduce the impact of the aforementioned country disparities and alleviate the barriers resulting from market segmentation. In their comprehensive review of the recent research on cross-listings, Gagnon and Karolyi (2010) assert that cross-listings "*still represent an important force for the integration of global financial markets*". Indeed, cross-listing brings greater transparency and visibility that may advantage cross-border acquirers. Specifically, information asymmetries for potential acquirers are reduced as a result of enhanced disclosure and increased analyst coverage (Lang et al., 2003). This yields higher forecast accuracy and more precise valuation of the target. Furthermore, cross-listing increases foreign firms' visibility on US markets and introduces them to US corporate culture and standards, which decreases the home bias for US acquirers and reduces potential cultural problems that may arise during the merger integration. In that respect, acquisitions of foreign cross-listed firms by US acquirers may share more common attributes with domestic US acquisitions than with cross-border ones, thereby generating higher acquirer returns.

This paper contributes to the literature in several ways. First, we examine the gains to acquiring shareholders in domestic and cross-border M&As, shedding light on the wealth effect resulting from the cross-listing status of the target firm, an effect that has not yet been examined in the literature. By doing so, we provide new evidence for the role of cross-listing in promoting

market integration through the reduction in costs of international corporate investments, in terms of agency costs, transparency, information asymmetries and corporate governance. To appraise these gains, we consider two measures: (1) the stock market reaction to merger announcement and, (2) the long-term abnormal returns, a proxy for the post-merger integration success. We consider an extensive sample of 14,168 acquisitions conducted by US acquirers over the period 1990 through 2010. Our specific purpose is to compare the returns to shareholders of US firms that acquire foreign firms cross-listed in the US as opposed to non-cross-listed ones.

Second, we contribute to the recent literature that advocates international convergence of corporate governance through cross-border M&As (e.g. Bris and Cabolis, 2008; Bris et al. 2008; Martynova and Renneboog, 2008). This literature argues that target firms with poor corporate governance benefit from a transfer of good governance practices when acquired by firms with better corporate governance. Existing studies on the wealth effect of corporate governance convergence focus on target shareholders' gains and show that these gains are positively related to the differences in corporate governance between acquirer and target countries (Rossi and Volpin, 2004; Bris and Cabolis, 2008; Bris et al. 2008). We go beyond these studies by investigating whether the corporate governance transfer in cross-border M&As creates value to acquiring shareholders. Furthermore, while the extant literature focuses on announcement-period returns, we examine the effects of corporate governance transfer on both announcement-period and post-merger long-run returns. The latter measure enables us to assess the wealth effect from corporate governance transfer, assuming acquirers' long-run returns would reflect the actual synergistic gains following the acquisition. In contrast, announcement-period returns would reflect only investors' expectations about potential synergistic gains from the acquisition.

Our results show that US bidders in cross-border M&As underperform domestic ones on both short and long terms. We find evidence supporting the role of cross-listing in alleviating the acquisition costs induced by market segmentation and cross-country cultural disparities. Specifically, we find that the more segmented is the target market and the higher are cultural differences, the higher are the bidder's announcement-period returns when acquiring targets cross-listed on US markets. On the long-run, our results show a positive and significant impact of the cross-listing status of the target on acquirer's returns, especially for targets cross-listed on US exchanges, suggesting that these firms generate higher synergies and are easier and less expensive to integrate into US acquirers' business and structures. When examining the effect of corporate governance variables, we find consistent evidence supporting the corporate governance transfer hypothesis through its effect on acquirer's long-term returns. In particular, the lower is the shareholder protection in the target country, the higher is the acquirer's long-run performance in full acquisitions, suggesting the positive effect from corporate governance transfer.

The remainder of the paper is organized as follows. Section 2 presents the related literature and the main hypotheses. Section 3 describes the sample construction and the variables used in the analysis, while section 4 presents the empirical results. Section 5 concludes.

2. Related literature and hypothesis development

Before developing our hypotheses related to the cross-listing effect, we discuss the factors explaining the observed differences in acquirers' wealth gains between cross-border and domestic acquisitions. The same factors are likely to explain a potential cross-listing effect since cross-listed targets may present more similarities with domestic US targets than with their non-

cross-listed peers. These factors are related to target country institutional characteristics, information asymmetries, cultural differences and market integration.

2.1. Target country characteristics, information asymmetry and valuation of the target

In cross-border M&As, the valuation of the target is a major challenge. Indeed, imperfect information makes the valuation of foreign targets less accurate, particularly targets from countries with weak accounting and disclosure standards. As a result, the market reacts negatively to this uncertainty, generating lower returns to acquirers. Moreover, agency costs arising from information asymmetries between shareholders and managers may be greater in foreign acquisitions than in domestic ones. For instance, Moeller and Schlingemann (2005) find that announcement-period returns to US acquirers are significantly lower when target countries are characterized with a more restrictive capital market, weaker corporate governance, and a less active takeover market.

Some other studies point in the opposite direction, arguing for higher bidder returns in cross-border acquisitions of targets from countries with less developed capital markets and less protection of shareholder rights. Such countries are characterized with higher cost of capital and lower equity valuation, thus resulting in a higher extraction of wealth by the acquirer (Black et al., 2007). Rossi and Volpin (2004) show that the market for corporate control is less active and less competitive in countries with lower levels of investor protection. As a result of lower competition, acquirers are able to pay lower premiums to target shareholders and thereby capture higher gains from acquisitions.

2.2. Corporate governance convergence

Several papers advocate the international convergence of corporate governance through cross-border M&As (e.g., Rossi and Volpin, 2004; Martynova and Renneboog, 2008; Bris et al., 2008). This hypothesis posits that acquisition by better corporate governance firms result in a transfer of better corporate governance practices to the target. Therefore, one source of synergy in cross-border M&As stems from the improvement in the corporate governance of the target firm when the acquirer's corporate governance is superior to the target's. La Porta et al. (2000) argue that an important mechanism for a firm to enhance value and efficiency is its acquisition by a firm already operating in a more protective legal regime. In a study of European M&As, Martynova and Renneboog (2008) find that stronger shareholder protection in the acquirer's country relative to the target's is associated with greater post-acquisition synergistic gains. In particular, both the acquirer and the target benefit from higher announcement abnormal returns, reflecting the expected improvement of corporate governance in the target.

2.3. Cultural differences, managerial resistance and post-merger integration

Another potential problem in cross-border transactions relates to the post-acquisition integration process whose success reflects in the acquirer's long-run stock price performance. Cultural difference between the acquirer and the target countries is an important determinant of success in cross-border M&As as it can make the combination process difficult and expensive. These cultural barriers are likely to account for the poorer returns to acquirers in cross-border acquisitions, compared to domestic ones. For instance, Conn et al. (2005) find that cultural differences between the acquirer and the target countries in cross-border acquisitions have a negative impact on the acquirer's long-run performance. This factor becomes more crucial as the

size of the target and the cultural gap increase. Furthermore, domestic acquirers who have a superior knowledge of their local market may have a better ability than foreign acquirers to generate higher post-merger synergies (e.g., Martynova and Renneboog, 2008).

2.4. The degree of market integration

The degree of target country integration to global markets may be an important determinant of acquirer gains in cross-border M&As (Moeller and Schlingemann, 2005). On one hand, a high degree of market integration offers a large investment opportunity set to acquirers, thus increasing the probability of realizing higher synergistic gains. Indeed, cross-border M&As may provide acquirers with valuable opportunities that are inaccessible through domestic acquisitions, such as enhanced technology, enlarged and less competitive product markets, reduced costs and more favorable institutional environment. Furthermore, depending on the degree of target market integration, the costs generated by the post-merger integration process and agency costs inherent to monitoring foreign operations will vary. On the other hand, a high degree of market integration may have a negative effect on cross-border acquirers. Indeed, market integration may lead to a greater competition in the market for corporate control, which would reduce the gains captured by the acquirer. In addition, the reduction in costs of cross-border M&As resulting from higher market integration may result in an increase in managerial hubris (Roll, 1986).

2.5. Cross-listing and international acquisitions

Cross-listing on foreign markets may mitigate several of the constraints on international investments discussed above. This could benefit to both targets and acquirers in cross-border M&As. Cosset and Meknassi (2010) focus on target gains and show that cross-listed firms are

more likely to be acquisition targets and obtain significantly higher takeover premiums than their non-cross-listed peers. In the same vein, acquirers can benefit from the cross-listing status of their targets in several ways. First, firms that cross-list on US exchanges gain from enhanced disclosure and increased analyst coverage (Lang et al., 2003). This results in a more precise valuation of the target and a more accurate forecast of post-acquisition synergies. Second, firms that cross-list to raise capital have a higher growth potential. Acquirers inherit these growth opportunities which reflect into higher gains from the merger. Finally, cross-listed firms may be more convenient targets for US acquirers because of their prior knowledge of US market and culture. This helps alleviating potential cultural shocks and barriers that may arise during the post-acquisition integration.

Also, to the extent that cross-listing contributes to increasing market integration and overcoming segmenting investment barriers, and that higher market integration may yield higher synergy gains (e.g., Moeller and Schlingemann, 2005), the gains from cross-border acquisitions conducted by US firms would be better captured if the foreign target is cross-listed on US markets. With respect to all aforementioned factors, foreign firms cross-listed on US markets may constitute a superior investment opportunity, enabling US acquirers to overcome the constraints inherent to cross-border acquisitions and to increase their gains.

3. Data description and methodology

3.1. Sample selection

We compile our data from various sources. First, we obtain data on M&As from Thomson's Securities Data Corporation (SDC hereafter) and include all completed domestic and cross-border transactions involving US public acquirers announced between January 1st, 1990 and

December 31st, 2010. Among this M&A sample, we identify targets that were cross-listed in the US at the moment of the acquisition's announcement. For this purpose, we collect data on all foreign firms that cross-listed in the US, whether through direct listing (via common shares) or indirect listing (via ADRs), as described in the following paragraph.

We obtain our list of ADR listings by merging data from the websites of the major depositary banks (Bank of New York, Citibank, JP Morgan and Deutsche bank). We validate listing dates using various sources, including data from NYSE and Nasdaq stock exchanges, CRSP and SDC new issues databases[1]. For ADR delisting, we obtain information mainly from the Citibank which keeps track of inactive issues, and supplement it with SDC new issues database and CRSP (which provides data on delisted firms as well). Finally, we obtain the list of direct cross-listings on US exchanges (via ordinary shares) from CRSP (for listed and delisted issues), validate and complete it with data from NYSE and Nasdaq stock exchanges. Since these stock exchanges only provide data on currently listed firms, using CRSP allows us to alleviate the survivorship bias.

We obtain historical stock price data and accounting data for US acquirers from CRSP and Standard & Poor's Compustat databases respectively. Following previous studies, we exclude firms headquartered in tax-havens since many are US firms that adopt the foreign-status only for tax purposes. Finally, to allow a better comparability of financial statement data across industries, we disregard firms from the financial sector (first digit SIC code of 6). Our final sample consists of 14,168 domestic and cross-border acquisitions conducted by US acquirers over the period 1990 to 2010. However, due to data limitation regarding historical prices and to the matching procedure discussed in the following section, our sample is substantially reduced

[1] CRSP database only covers listings on major US exchanges (NYSE, AMEX and Nasdaq), thus providing only data on Level II and III ADRs and direct listings.

when considering cumulative returns over long periods. The sample size is specified in the corresponding tables for each period length.

3.2. Methodology

To estimate the gains accrued to shareholders of the acquiring firm, we consider two measures: (1) the announcement-period abnormal returns and (2) the long-run abnormal returns following the acquisition.

3.2.1. Announcement-period returns

We estimate the announcement-period returns using an event-study approach. We compute the market model cumulative abnormal returns (CARs) for a 3-day period (-1,+1) around the announcement date. We use a 3-day window as it is commonly used in the M&A literature. Following Moeller et al. (2004), we estimate the market model parameters over the (-205,-6) trading days preceding the announcement date, using CRSP equally-weighted index as the market index. Alternatively, we use CRSP value-weighted index to check the robustness of our results. Also, to assess the sensitivity of the results to the period's length, we use different windows to estimate acquirer CARs: [-3,3]; [-20,-1]. Finally, we use longer windows ([-20,20] and [-60,60]) in order to incorporate potential effects of competition, management resistance and bid revisions that may occur after the announcement.

3.2.2. Long-term abnormal returns

We estimate long-run wealth effect to the acquirer using two approaches. First, we compute standard buy-and-hold abnormal returns (BHAR) for each firm over the period beginning in the month following the deal completion and lasting three to five years. The BHAR is defined as the firm's cumulative return in excess of the benchmark return:

$$BHAR_i = \prod_{t=1}^{T}(1 + R_{it}) - \prod_{t=1}^{T}(1 + R_{benchmark,t})$$

Our benchmark consists of a portfolio of non-acquiring firms matched with firm size and market-to-book ratio. The matching universe is composed of all US firms with publicly listed common shares and available return data on CRSP. We exclude firms that conducted acquisitions within the three years preceding or following the matching month. We construct reference portfolios following the methodology proposed by Lyon et al. (1999). This approach is based on stratification by size and market-to-book ratio, as follows:

- We partition all NYSE firms into size deciles based on their market value of equity at the month-end. We then place AMEX and NASDAQ firms in the corresponding NYSE size decile. Since most NASDAQ firms fall in the smallest size decile as they are significantly smaller on average, we further divide this decile into quintiles based on firm size. This procedure yields 14 size reference portfolios.
- We divide each of the 14 size portfolios into quintiles based on the market-to-book ratio measured at the month end. This results in 70 size/market-to-book reference portfolios.

We match each sample firm with one of the 70 portfolios that has the closest size and book-to-market ratio (between 70 and 130% of the size and market-to-book ratio of the sample firm). Each month from 1990 to 2010, the reference portfolios are rebalanced and the matching procedure is repeated. Lyon et al. (1999) show that this approach yields well specified test statistics because it alleviates the three main sources of misspecifications inherent to reference portfolios, namely the new listing, rebalancing and skewness biases[2] (Barber and Lyon, 1997;

[2] Returns from a standard reference portfolio (e.g., a market index) do not accurately reflect the returns from a passive buy-and-hold strategy in the securities forming this portfolio for two reasons. First, these reference portfolios assume periodic rebalancing in order to maintain equal weights, thus creating a *rebalancing bias.* Second, they include newly listed firms, which generally create a positive bias in t-

Kothari and Warner, 1997). However, it does not control for another common cause of misspecification encountered in long-horizon event studies, namely the cross-sectional correlation in returns which can lead to understatement of standard errors (Fama, 1998; Mitchell and Stafford, 2000). This problem arises from the fact that some acquirers may conduct several acquisitions within the holding period, thus resulting in overlapping returns. To overcome this problem, we exclude acquisitions that occur within three years of the completion of another acquisition by the same acquirer.

3.3. Variables definition

Beside the cross-listing dummy variables, our main variables relates to institutional characteristics at the country-level. As control variables, we use the following firm- and transaction-level attributes based on the existing literature (e.g., Loughran and Vijh, 1997; Moeller et al., 2004; 2005; André et al., 2004; Dong et al., 2006): Size, Tobin's Q, market-to-book ratio, leverage, free cash-flows, contested bids, hostile and tender offers, stock payment, industry diversification and percentage acquired. We also control for the strength of the US dollar as it may affect the wealth accrued to US acquirers from foreign acquisitions (Froot and Stein, 1991). The definitions of variables and data sources are presented in the appendix.

We construct our measure of market integration following the methodology of Pukthuanthong and Roll (2009). This measure is the adjusted R-squared from the regressions of each country's market index returns over global factors. The latter ones are derived from a principal component analysis on the returns of 17 countries for which daily returns are available

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statistics, as newly listed firms tend to under-perform the market index (Ritter, 1991); that is *the new-listing bias*. Third, the *skewness bias* arises from the positive skewness that characterizes long-run abnormal returns.

since 1973[3]. We estimate global factors each year from 1989 until 2009 and use them in out-of-sample yearly regressions of country index returns from 1990 until 2010. This produces a series of 21 yearly adjusted R-squared for each country. Then, to each M&A transaction in our sample, we assign the adjusted R-squared of the target country prevailing at the beginning of the year preceding the acquisition's announcement.

We use several proxies for corporate governance and shareholder protection that have been considered in the literature:

1. The anti-self-dealing index of Djankov et al. (2008) which measures the legal protection of minority shareholders against "managerial self-dealing" and private benefit extraction;

2. A common law dummy to identify the legal system (common versus civil law), since common law countries are characterized with stronger legal protection.

3. The accounting standards index, which measures the quality of accounting and disclosure standards.

Finally, to investigate the impact of corporate governance transfer on acquirer returns, it is important to distinguish between full and partial acquisitions. In a cross-border acquisition of 100% of the target shares (full acquisition), the target firm obtains the nationality of the acquirer and therefore becomes subject to the corporate governance system prevailing in its country (Bris and Cabolis, 2008; Martynova and Reneboog, 2008). In this case, the corporate governance convergence from the acquirer to the target should produce its full effect. In partial takeovers, however, the acquirer may impose its corporate governance standards on the target on a voluntary basis. Therefore, if the corporate governance convergence hypothesis holds, its effect

[3] These 17 countries are considered as the most globally integrated: Australia, Austria, Belgium, Canada, Denmark, France, Germany, Hong Kong, Ireland, Italy, Japan, Netherlands, Singapore, South Africa, Switzerland, United Kingdom, and United States.

should be the most perceptible in full takeovers. We include an additional dummy variable in the regressions to identify full acquisitions.

4. Empirical evidence

4.1. Determinants of acquirer returns: Univariate analysis

Table 1 presents means and medians of explanatory variables for both domestic and cross-border M&As. We provide test results of differences in means (t-statistics) and medians (Wilcoxon-z) between these two subsamples.

As expected and consistent with previous research (e.g., Moeller and Schlingemann, 2005), cross-border acquisitions exhibit significant disparities with domestic ones, in terms of both acquirer firm-level and deal-level characteristics. First, US firms acquiring abroad are larger in size, more overvalued, have higher levels of leverage and of free cash-flows. Also, the proportion of 100% stock-financed deals is greater among domestic M&As, suggesting that cross-border acquirers are more likely to pay with cash. This is consistent with the existence of a home bias that increases the reluctance of shareholders to hold foreign stocks and therefore prefer a cash payment. Also, the higher levels of free cash-flows available to cross-border acquirers before the acquisition enable them to finance their acquisitions with cash. In addition, our results show that cross-border targets are subject to a higher competition among acquirers, to more hostile offers and to more tender offers. Industry diversification purposes do not seem to be a significant characteristic in cross-border acquisitions compared to domestic ones. Finally, cross-border M&As coincide with significantly higher levels for the Broad Dollar Index, a result consistent with the importance of a strong currency in promoting cross-border acquisitions.

In the last three columns of Table 1, we contrast the subsamples of cross-border acquisitions involving exchange- and non-exchange cross-listed targets. The type of listing has different implications on the liquidity, visibility, growth opportunities and regulatory requirements of the cross-listed firms (e.g. Lang et al., 2003; Bailey et al., 2006; King and Segal, 2009). Indeed, foreign firms that list on an organized exchange (via level II and III ADRs or direct listings) adopt the same disclosure and regulatory requirements as US listed firms, while non-exchange-listings (Rule 144a private placement and OTC listings) involve minimal reporting. Our results show a significant and higher proportion of stock payments to exchange-listed targets (35.6%) compared to non-exchange-listed ones (13.6%). This observation suggests that US acquirers have more flexibility in their choice of a mean of payment when target shareholders are composed of US investors (i.e., direct listings or ADR shareholders). The latter are more willing to accept US acquirers' stocks than non-US investors. Finally, there is a higher competition over exchange-listed targets among US bidders (12.8%), compared to non-exchange-listed targets (10.8%), suggesting that exchange-listed foreign firms are more attractive targets.

When we compare shareholder protection levels prevailing in target countries, we note that both the anti-self-dealing index of Djankov et al. (2008) and the shareholder protection measure of La Porta et al. (1998) are significantly lower for exchange-listed targets than for non-exchange-listed ones, in terms of both mean and median. In other words, foreign firms listed on US exchanges, on average, come from countries with weaker investor protection.

*** *Insert Table 1 about here* ***

In the following sections, we examine the impact of these three categories of variables (firm, deal- and country-level characteristics) on acquirers' announcement and long-run returns.

4.2. Bidder's announcement returns

4.2.1. Univariate analysis

To assess the short-term wealth effects to the bidder, we measure cumulative abnormal returns (CARs) over different event windows around the merger announcement: [-60,60]; [-20,20]; [-3,3]; [-1,1]; in addition, we consider the price run-up preceding the announcement: [-20,-1]. We report the results using both equally- and value-weighted CRSP indices as benchmark returns. We test the significance of the cumulative average abnormal returns (CAARs), using the non-parametric rank test of Corrado (1989).

Table 2 presents the cumulative average abnormal returns (CAARs) for the sample of domestic and cross-border acquisitions as well as for the subsample of acquisitions involving cross-listed targets. Panel A shows that, over the three-day window around the announcement date, domestic acquirers generate value-weighted CAARs of 0.98% compared to 0.57% for cross-border ones. Whereas both figures are statistically significant, the abnormal returns earned by domestic bidders are significantly higher than those of cross-border ones. This difference is significant for (-1,+1), (-3,+3) and (-60+60) around the announcement using both value- and equally-weighted index returns. This result is in line with the findings of previous studies documenting an underperformance of cross-border acquirers relative to their domestic peers (e.g., Denis et al., 2002; Moeller and Schlingemann, 2005).

*** *Insert Table 2 about here* ***

Panel B compares acquirer returns in cross-border transactions involving cross-listed and non-cross-listed targets. Our results show that CAARs in acquisitions of cross-listed targets exceed those of non-cross-listed targets for the (-1,+1), (-3,+3) and (-60+60) windows for both the value- and the equally weighted index. However, this difference is statistically significant

only at the 10% level for some event windows. Panel C reports CAARs for the subsample of cross-border M&As that involves targets cross-listed on US markets. We distinguish targets cross-listed on US exchanges (exchange-listed) from those cross-listed via unlisted ADR programs (non-exchange-listed). For most event windows, the difference between the two types of cross-listing is not significant, or borderline significant with acquirers earning generally higher returns when purchasing exchange-listed firms. In general, these preliminary findings do not confirm our hypothesis regarding the role of cross-listing in reducing the uncertainty surrounding international acquisitions and alleviating the cross-border discount effect.

In the following sections, we shall examine whether the cross-listing effect is significant in a multivariate setting. Since the CAARs from acquiring exchange-listed and non-exchange-listed targets do not exhibit significant differences, we will not distinguish between these two categories in the multivariate analysis of announcement-period returns.

4.2.2. Multivariate analysis

We start our multivariate analysis with regressions on acquirer CARs for the cross-border subsample. The dependent variable in all regressions is the cumulative abnormal returns over a 3-day window around the announcement, i.e. CAR(-1,+1). Year and industry dummies are included in all regressions but are not reported. The estimation results are presented in Table 3. Our results show a positive but insignificant impact of the cross-listing status of the target on US acquirer returns.

Some of our results related to transaction- and firm-level control variables are consistent with the existing literature. More specifically, we find a negative relation between the size of the acquirer and its stock market returns, suggesting that larger acquirers are more inclined to make poor acquisition decisions, which is consistent with the managerial hubris hypothesis (Roll,

1986). Both leverage and free cash-flow variables show the expected sign (positive and negative, respectively), consistent with the hypothesis that a high debt capacity and availability of free cash-flows stimulate value-decreasing decisions (Jensen, 1986). For deal-related control variables, our results show a negative effect of equity payments on acquirer returns, consistent with the overvaluation signalling hypothesis (Myers and Majluf, 1984). Also, we find that acquirer returns are significantly lower for hostile acquisitions, which is in line with the results reported by previous studies (e.g., Moeller et al., 2005).

In specifications 3 to 6, we introduce target country characteristics. First, we find that the broad dollar index, our measure of the strength of the US dollar, have a positive and significant effect on acquirer returns in all model specifications. The positive sign is consistent with the idea that US acquirers earn higher returns when financing their cross-border investments with a strong currency. Our measure of target country integration to global markets shows an insignificant effect on acquirer returns. To investigate the impact of corporate governance transfer on acquirer returns, we need to assess the marginal impact of full acquisitions. For this purpose, we introduce the interaction between shareholder protection measures and a dummy variable that identifies full acquisitions. Specifications 5 and 6 show that the interaction effect is insignificant for both our proxies of shareholder protection even though it has the expected positive sign.

Overall, we fail to find support for a significant impact of corporate governance convergence on the announcement-period abnormal returns accrued to the acquirer. This may be due to the existence of two opposite effects that offset each other. On one hand, target countries with weaker corporate governance are characterized with higher information asymmetries, greater uncertainty and more agency costs which reflect into lower announcement-period returns to US

acquirers (Moeller and Schlingemann, 2005). On the other hand, the corporate governance transfer hypothesis suggests that the improvement in target's corporate governance by the acquirer is a source of synergy and therefore should yield higher announcement abnormal returns to both the acquirer and the target (Martynova and Renneboog, 2008; Bris et al., 2008). It remains very challenging to disentangle the effects of these two opposed factors on acquirer returns.

In the last three columns of Table 3, we examine whether previous results with respect to the impact of institutional variables differ for the subsample of cross-listed targets. Our results show that the degree of target country's integration to global markets has a significant negative effect on US acquirer returns. In other words, the more segmented is the target market, the higher is the bidder's gain when acquiring targets cross-listed on US markets. This result suggests that cross-listing may play a significant role in lowering the costs induced by market segmentation, in terms of agency and monitoring costs and information asymmetries, thus resulting in higher returns to the acquirer. Finally, the other institutional variables measuring the level of shareholder protection in the target country have no significant effect on acquirer returns.

**** Insert Table 3 about here ****

4.2.3. Additional robustness tests on announcement returns

To check the robustness of our results, we conduct additional tests on the announcement-period abnormal returns[4].

Alternative event window: To test the robustness of our results to the announcement-period, we re-estimate previous regressions using acquirer CARs over the [-3,+3] and [-5,+5] windows as the dependent variable. Unreported results show that the impact of the cross-listing status of

[4] The unreported results discussed in this section are available from the authors upon request.

the target on acquirer returns is still positive but insignificant. When considering institutional variables, our proxy for the strength of the US dollar shows a more significant positive effect on acquirer returns for the [-3,+3] window, confirming our previous finding that US acquirers earn higher returns when financing their cross-border acquisitions with a strong currency. Finally, both our measures of shareholder protection still exhibit a positive but insignificant effect for full acquisitions. The positive sign is consistent with the corporate governance transfer hypothesis.

Selection bias correction: Since our sample regressions only include cross-border acquisitions, it is important to control for the selection bias arising from the acquirer's decision to conduct a cross-border acquisition rather than a domestic one. Ignoring this potential problem may yield biased estimates. Many factors influence this decision and are mainly related to the higher uncertainty and combination costs inherent to cross-border M&As, which will in turn influence acquirer returns. To correct for this bias, we use Heckman's (1979) two-step procedure. In the first-step, we estimate a probit model for the decision to undertake a cross-border rather than a domestic acquisition (*the selection equation*) using the sample of all domestic and cross-border acquisitions. The estimated parameters are then used to compute the inverse Mill's ratio (lambda) which is included in the second stage regressions on bidder returns (*the outcome equation*). We model the decision to make a cross-border rather than a domestic acquisition as a function of both acquirer's firm-level characteristics and target country's level of shareholder protection, accounting standards and disclosure (Martynova and Renneboog, 2008). We also include our proxy for the level of target market integration to global economies as it may influence the bidder's decision to acquire abroad rather than domestically.

The results of the first and second-step regressions are presented in Table 4. The estimates of the selection equation show that US bidders are more likely to acquire abroad rather than

domestically when the target country is more integrated to global markets, which is consistent with the belief that market integration contribute to promoting cross-border M&As. In addition, US bidders are more inclined to acquire foreign firms from countries where a low regulatory environment prevails. The second-stage regressions show that the correction for the self-selection bias may be relevant since the coefficient associated with lambda is significant in both specifications 2 and 4. The coefficient of the cross-listing dummy increases in magnitude in all specifications but is still statistically insignificant. Finally, our results show a positive and significant effect of the difference in anti-self-dealing levels between the US and the target country only for full acquisitions, which supports the corporate governance transfer hypothesis.

*** *Insert Table 4 about here* ***

The impact of cultural and geographic proximity: We re-estimate previous regressions on acquirer's announcement returns, while controlling for the degree of cultural similarities and geographic proximity between the acquirer and the target countries. These two factors may provide a higher information advantage for the acquirer, resulting in higher returns. Martynova and Renneboog (2008) find results supporting this argument for European acquirers. We obtain data on geographical and cultural proximity from Sarkissian and Schill (2004): *Geographic proximity* is the distance between the capital cities of the acquirer and the target countries, taken with a negative sign. *Cultural proximity* is a dummy variable that equals one if either both the acquirer and the target countries share the same language or if the target was historically part of the same colonial empire as the acquirer.

In unreported regressions on returns over both (-1,+1) and (-3,+3) windows, we find that cultural proximity has a positive and significant effect on acquirer returns, suggesting that the acquisition of a firm sharing a similar culture enhances value creation. Geographic proximity,

however, does not exhibit a significant effect on acquirer returns. Additional regressions (unreported) on the subsample of cross-listed targets reveal interesting results: The effect of cultural proximity on acquirer returns is negative and significant for both event windows, meaning that the higher are cultural disparities between the acquirer and the target, the higher are acquirer returns. In other words, cross-listing helps alleviating the negative effect of cultural differences in cross-border M&As, thus resulting in higher announcement-period returns for acquiring shareholders. This result provides further evidence for the role of cross-listing in reducing the constraints from cross-country differences and promoting cross-border M&As.

To sum up, our results do not support our hypothesis of a significant effect of the cross-listing status of foreign targets on US acquirers' announcement-period returns. However, we find evidence supporting the belief that cross-listing helps alleviating the constraints resulting from market segmentation and cultural disparities, thus resulting in higher returns for cross-border acquirers. Also, we provide some evidence for a positive impact of potential corporate governance transfer on acquirer's announcement-period returns. In the following section, we examine the effect of these factors on acquirer's long-run returns.

4.3. Bidder's long-run stock price performance

4.3.1. Univariate analysis

We compute buy-and-hold abnormal returns (BHARs) for acquiring firms over the period beginning in the month following the deal completion and lasting one to five years. As described previously, the benchmark consists of a portfolio of non-acquiring firms matched with size and market-to-book ratio following the methodology of Lyon et al. (1999).

Panel A of Table 5 provides a comparison of BHARs realized by US acquirers in domestic and cross-border transactions. While acquirers in domestic transactions earn positive mean BHARs of 1.7% to 13.2% over one to five years, cross-border acquisitions generate negative mean returns to acquirers of -6.3% to -28.8% over two to five years following the deal completion. The difference is statistically significant for both mean and median BHARs over all holding periods, providing consistent evidence that cross-border acquisitions underperform domestic ones in the long-run. This result supports the existing literature on the long-run performance of cross-border M&As (e.g., André et al., 2004; Black et al, 2007).

Panel B presents acquirer long-run returns in cross-border transactions and distinguishes between cross-listed and non-cross-listed targets. Interestingly, BHARs in acquisitions of cross-listed targets significantly exceed those realized when acquiring their non-cross-listed peers over the period of two to four years following merger's completion. This result indicates a significant gain for US cross-border acquirers to purchase targets already cross-listed on US markets. Considering acquirers' long-run returns following the acquisition as a proxy for the post-acquisition integration success, cross-listed firms may be more convenient targets as they require lower combination costs in terms of agency costs, information asymmetries, and post-acquisition restructuring, compared to their non-cross-listed counterparts.

Panel C depicts BHARs for the subsample of cross-border M&As involving targets cross-listed on US markets. We distinguish targets cross-listed on US exchanges (exchange-listed) from those cross-listed via unlisted ADR programs (non-exchange-listed). Our results show that over the two to four-years holding periods, acquirers targeting non-exchange-listed firms incur significantly lower returns compared to exchange-listed targets. Over one to two-years holding period, non-exchange-listed targets yield even negative returns to acquirers. This evidence is in

line with our hypothesis that firms cross-listed on US exchanges may be more suitable targets for US acquirers.

To sum up, our results provide consistent evidence for a positive effect on US acquirers' long-run returns when their targets are cross-listed on US exchanges. We examine in the following section whether this evidence still holds when controlling for other factors in a multivariate setting.

*** *Insert Table 5 about here* ***

4.3.2. Multivariate analysis

To test our hypothesis in a multivariate context, we conduct a set of OLS regressions on the abnormal buy-and-hold returns over a three-year period. The unavailability of data on long-run returns for non-US targets reduces our sample to 906 cross-border acquisitions conducted by US acquirers. We correct for clustering at the target country level in all regressions and use robust standard errors. Year and industry dummy variables are included in all regressions but are not reported.

The estimation results are reported in Table 6. The impact of the exchange-listing status of the target on long-run returns to US acquirers is positive and significant across all specifications. This is consistent with our hypothesis that foreign firms cross-listed on US exchanges are more convenient targets for US acquirers since the post-acquisition integration process should be easier and less expensive when acquiring firms that are already subject to US regulation (exchange-listed firms). Most of our results related to control variables at the firm- and deal-levels are consistent with the existing literature. In specifications 2 to 4, we examine whether country differences in the legal environment and shareholder protection affect acquirers' long-term performance. First, while our proxy of target market integration to global economies has no

significant impact on acquirer's returns at the announcement (as shown in the previous section), it shows now a positive and significant effect on acquirer's long-run returns. This is consistent with the belief that higher market integration increases acquirer gains by lowering the post-merger integration costs (agency, monitoring, etc.).

Second, the difference between the US and the target country's characteristics for both our measures of shareholder protection exhibit a positive but insignificant effect on acquirer returns. However, to investigate the impact of potential corporate governance transfer, we introduce the interaction between this difference in shareholder protection measures and a dummy variable that identifies full acquisitions. As discussed previously, the corporate governance transfer produces its full effect in acquisitions of 100% of the target. Specifications 3 and 4 show that the interaction effect is positive and significant for both our proxies of shareholder protection, indicating that the lower is shareholder protection in the target country, the higher are acquirers' long-run returns for full acquisitions. This result provides support to the corporate governance convergence hypothesis: the improvement in target's corporate governance by the acquirer is considered as a source of post-acquisition synergy and results into higher long-run returns to the acquirer.

*** *Insert Table 6 about here* ***

4.3.3. Additional robustness tests on long-run performance

We carry out a set of robustness tests to provide further support to our findings regarding the long-run stock price performance of US acquirers.

Alternative event window: We re-estimate previous regressions using BHARs over a five-year period following the merger completion. Since the estimation period is longer, our sample is

reduced to 606 cross-border acquisitions conducted by US acquirers. The impact of the cross-listing status of the target (in particular the exchange-listing) on long-run returns to US acquirers is still positive and significant. Furthermore, our previous results regarding the effect of shareholder protection levels still hold. Specifically, the interaction with the dummy variable identifying full acquisitions is positive and significant for both our proxies of shareholder protection, suggesting that the lower is the shareholder protection level in the target country, the higher are acquirer long-run returns for full acquisitions. This result provides further support to the corporate governance transfer hypothesis.

Selection bias correction: As for short-term regressions, we correct for the selection bias arising from the acquirer's decision to conduct a cross-border acquisition rather than a domestic one using a similar procedure. Unreported regression results on both three- and five-year period BHARs show that the introduction of the inverse Mill's ratio (Lambda) did not affect our main results regarding the positive effect of the cross-listing status of the target on acquirers' long-run returns. In addition, both our measures of corporate governance in the target country exhibit slightly changed coefficient estimates. The coefficient associated with lambda is significant only for the five-year period length, suggesting that the correction for self-selection bias may be relevant.

The impact of cultural and geographic proximity: We re-run previous regressions on acquirers' long-run returns, while controlling for cultural and geographic proximity between the acquirer and the target countries. We use data from Sarkissian and Schill (2004) as described previously. Table 7 presents the estimation results for both three- and five-year period BHAR. Our results for the entire sample of cross-border M&As show a positive and significant effect of cultural proximity on acquirer's returns for both period lengths. Geographic proximity shows a

positive effect only for the five-year period. This result is in line with the belief that cultural similarities between the acquirer and the target increase merger synergies and play a significant role in the post-merger integration success.

Regressions on the subsample of cross-listed targets show that the effect of cultural proximity on acquirer long-run returns becomes negative and significant at the 10% level for the three-year period. This result suggests that higher cultural differences between the acquirer and the target countries do not impact negatively the post-merger integration success of cross-listed targets. In other words, the target's presence in the acquirer's country through a prior cross-listing attenuates the negative impact of cultural shocks that may arise during merger-integration. Again, this result provides additional evidence for the role of cross-listing in alleviating the constraints from cultural disparities in cross-border M&As and facilitating the post-merger integration process.

*** *Insert Table 7 about here* ***

5. Conclusion

Using an extensive sample of domestic and cross-border acquisitions conducted by US acquirers, we assess short- and long-run returns to acquiring firms and investigate their determinants. We focus on the impact of the cross-listing status of the target and cross-country institutional differences on acquirer returns. First, consistent with previous research, our results show that US bidders in cross-border M&As underperform domestic ones in both short and long-terms. Second, while we do not find a significant effect of the cross-listing status of the target on acquirer's announcement-period returns, our results for long-run returns show a positive effect,

especially for exchange-listed targets, suggesting that these firms are easier and less costly to integrate into US acquirers' structures.

We also contribute to the growing literature on corporate governance transfer through cross-border M&As by investigating its impact on market reaction at merger's announcement and long-run performance. Our results regarding the long-run effects of corporate governance differences are new and provide further evidence on the corporate governance transfer hypothesis. Specifically, we find that lower shareholder protection in the target country is associated with higher acquirer's long-run performance, suggesting that in the long run, the acquirer benefits from transferring its good corporate governance practices to the target. Our results show no significant impact of corporate governance differences on acquirer's announcement-period returns.

Furthermore, when examining the impact of target market integration to global economies, we find that acquirers' announcement-period returns are higher when acquiring cross-listed targets originated from weakly integrated markets. This result suggests that cross-listing may play a significant role in alleviating the constraints induced by market segmentation. These constraints involve lower investment opportunities available to acquirers, more costly post-acquisition integration process, and higher agency and monitoring costs resulting from higher information asymmetries.

Appendix. Variable Definitions and Sources

Variables	Definition	Source
Acquirer firm-level variables		
Size	Log market capitalization at the beginning of the year	Compustat
Tobin's Q	(Book value of assets + market capitalization - book value of equity)/book value of assets	Compustat
M/B	Ratio of market capitalization to book value of equity	Compustat
Leverage	Ratio of total debt to total assets	Compustat
Free cash-flows	Ratio of free cash-flows to total assets Free cash-flow = Operating income before depreciation – (interest expense, taxes, preferred and common dividends)	Compustat
Target country-level variables		
Shareholder protection	An index that measures the degree of investor protection calculated as : (rule of law × anti-director rights)/10	La Porta et al. (1998)
Anti-self-dealing	An index that measures the degree of investor protection against "managerial self-dealing"	Djankov et al. (2008)
Concentration	The average % of common shares owned by the top three shareholders in the ten largest non-financial, privately-owned domestic firms in a given country	La Porta et al. (2006)
Market Integration	The adjusted R^2 from regressing the market index return of each country on global factors resulting from principal component analysis	Datastream Authors' calculations
Broad Dollar Index	The weighted average of the exchange values of the US dollar against the currencies of major US trading partners	The Federal Reserve Web site
Geographic proximity	The distance between the capitals of the acquirer and target countries, taken with a negative sign	Sarkissian and Schill (2004)
Cultural proximity	Dummy = 1 if either both the acquirer and the target countries share the same language, or if the target was historically part of the same colonial empire as the acquirer	Sarkissian and Schill (2004)
Transaction variables		
All equity	Dummy = 1 if the acquisition is fully paid with stocks, and 0 otherwise.	SDC
Contested bid	Dummy = 1 if there are multiple bidders and 0 otherwise	SDC
Hostile	Dummy = 1 if the transaction is classified as unsolicited or hostile and 0 otherwise	SDC
Tender offer	Dummy = 1 if the takeover involves a tender offer and 0 otherwise	SDC
Full acquisition	Dummy = 1 if the acquirer owns 100% of the target shares after the acquisition	SDC
Same industry	Dummy = 1 if the acquirer and the target operate in the same sector (same 2-digit SIC codes), and 0 otherwise.	SDC
Cross-listing variables		
Exchange-listed	Dummy = 1 if the firm is cross-listed via exchange-listed ADRs (levels II and III) or direct listing (common shares) and 0 otherwise	Depositary banks, CRSP, Exchanges Web sites
Non-exchange-listed	Dummy = 1 if the firm is cross-listed via non-exchange-listed ADRs (level I or Rule 144a) and 0 otherwise	Depositary banks, CRSP, Exchanges Web sites

References

Agrawal, A., J. Jaffee and G. Mandelker, 1992, "The post-merger performance of acquiring firms: A re-examination of an anomaly", *Journal of Finance* 47, 1605-1621.

André, P., M. Kooli and J-F L'Her, 2004, "The long-run performance of mergers and acquisitions: Evidence from the Canadian stock market", *Financial Management* 33, 27-43.

Bailey, W., A. Karolyi, and C. Salva, 2006, "The economic consequences of increased disclosure: Evidence from international cross-listings", *Journal of Financial Economics* 81, 175-213.

Barber, B.M. and J.D. Lyon, 1997, "Detecting long-run abnormal stock returns: The empirical power and specification of test statistics", *Journal of Financial Economics* 43, 341-72.

Black, E., T. Carnes, T. Jandik, and B. Henderson, 2007, "The relevance of target accounting quality to the long-term success of cross-border mergers", *Journal of Business, Finance & Accounting* 34, 139-168.

Bris, A. and C. Cabolis, 2008, "The value of investor protection: Firm evidence from cross-border mergers", *Review of Financial Studies* 21, 605-648.

Bris, A., N. Brisley and C. Cabolis, 2008, "Adopting better corporate governance: evidence from cross-border mergers", *Journal of Corporate Finance* 14, 224-240.

Conn, R.L., A. Cosh, P.M. Guest and A. Hughes, 2005, "The impact on U.K. acquirers of domestic, cross-border, public and private acquisitions", *Journal of Business, Finance & Accounting* 32, 815-70.

Corrado, C.J., 1989, "A nonparametric test for abnormal security-price performance in event studies", *Journal of Financial Economics* 23, 385-395.

Cosset, J-C. and S. Meknassi, 2010, "Does Cross-Listing in the US Foster Mergers and Acquisitions and Increase Target Shareholder Wealth?" HEC Montréal, working paper.

Denis, D.J., D.K. Denis, and K. Yost, 2002, "Global diversification, industrial diversification, and firm value", *Journal of Finance* 57, 1951-1979.

Djankov, S., R. La Porta, F. Lopez-de-Silanes and A. Shleifer, 2008, "The law and economics of self-dealing", *Journal of Financial Economics* 88, 430-465.

Dong, M., D. Hirshleifer, S. Richardson and S.H. Teoh, 2006, "Does investor misvaluation drive the takeover market?", *Journal of Finance* 61, 725-762.

Fama, E.F, 1998, "Market efficiency, long-term returns, and behavioral finance", *Journal of Financial Economics* 49, 283-306.

Froot, K.A. and J.C Stein, 1991, "Exchange rates and foreign direct investment: An imperfect capital markets approach," *The Quarterly Journal of Economics* 106, 1191-217.

Gagnon, L. and G.A. Karolyi, 2010, "Do international cross-listings still matter?" forthcoming in Evidence on Financial Globalization and Crises, Thorsten Beck, Sergio Schmukler, and Stijn Claessens (Editors), Elsevier North-Holland Publishers.

Jensen, M.C., 1986, "Agency costs of free cash flow, corporate finance, and takeover", *American Economic Review* 76, 323-329.

King, M.R. and D. Segal, 2009, "The long-term effects of cross-listing, investor recognition, and ownership structure on valuation", *Review of Financial Studies* 22, 2393-2421.

Kothari, S.P. and J.B. Warner, 1997, "Measuring long-horizon security price performance", *Journal of Financial Economics* 43, 301–340.

Lang, M., K. Lins and D. Miller, 2003, "ADRs, analysts and accuracy: Does cross-listing in the US improve a firm's information environment and increase market value?", *Journal of Accounting Research* 41, 317-346.

La Porta, R., F. Lopez-de-Silanes and A. Shleifer, 2006, "What works in securities laws?" *Journal of Finance* 61, 1-32.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer, and R. Vishny, 1998, "Law and finance", *Journal of Political Economy* 106, 1113-1155.

La Porta, R., F. Lopez-de-Silanes, A. Shleifer and R. Vishny, 2000, "Investor protection and corporate governance", *Journal of Financial Economics* 58, 3-27.

Loughran, T., and A.M. Vijh, 1997, "Do long-term shareholders benefit from corporate acquisitions?", *Journal of Finance* 52, 1765-1790.

Lyon, J.D., B.M. Barber and C. Tsai, 1999, "Improved methods for tests of long-run abnormal stock returns", *Journal of Finance* 54, 165-201.

Martynova, M. and L. Renneboog, 2008, "Spillover of corporate governance standards in cross-border mergers and acquisitions", *Journal of Corporate Finance* 14, 200-223.

Mitchell, M., and E. Stafford, 2000, "Managerial decisions and long-term stock-price performance", *Journal of Business* 73, 287-329.

Moeller, S. and F.P. Schlingemann, 2005, "Global diversification and bidder gains: A comparison between cross-border and domestic acquisitions", *Journal of Banking and Finance* 29, 533-564.

Moeller, S., F.P. Schlingemann, and R.M. Stulz, 2004, "Firm size and the gains from acquisitions", *Journal of Financial Economics* 73, 201-228.

Moeller, S., F.P. Schlingemann and R.M. Stulz, 2005, "Wealth destruction on a massive scale? A study of acquiring-firm returns in the recent merger wave", *Journal of Finance* 60, 757-782.

Myers, S.C. and N.S. Majluf, 1984, "Corporate financing and investment decisions when firms have information that investors do not have", *Journal of Financial Economics* 13, 187-221.

Pukthuanthong, K. and R. Roll, 2009, "Global market integration: an alternative measure and its application", *Journal of Financial Economics* 94, 214-232.

Ritter, J.R. 1991, "The long-run performance of initial public offerings", *Journal of Finance* 46, 3-27.

Roll, R., 1986, "The hubris hypothesis of corporate takeovers", *Journal of Business* 59, 197-216.

Rossi, S. and P. Volpin, 2004, "Cross-country determinants of mergers and acquisitions", *Journal of Financial Economics* 74, 277-304.

Sarkissian, S. and M.J. Schill, 2004, "The overseas listing decision: new evidence of proximity preference", *Review of Financial Studies* 17, 769-809.

Table 1. Univariate statistics for domestic and cross-border transactions

The sample consists of 11,615 domestic and 2,553 cross-border transactions conducted by US acquirers over the 1990-2010 period. *Exchange-listed* are firms cross-listed on organized exchanges via ADRs or direct listings; *Non-exchange-listed* are firms cross-listed OTC or via Rule 144a ADRs. The significance of the differences in means and medians is assessed using t-test and Wilcoxon-test respectively. **Acquirer firm-level variables,** measured at the beginning of the year, are: *size*, the logarithm of market capitalization; *Tobin's Q*, (book value of assets + market capitalization - book value of equity)/book value of assets; *leverage*, the ratio of total debt to total assets; *FCF*, the ratio of free cash-flows to total assets. **Transaction-level variables** are: *all equity,* equals 1 if the transaction is a 100% stock financed and 0 otherwise*; contested bid*, equals 1 if the number of bidders is greater than 1 and 0 otherwise; *hostile*, equals 1 if the transaction is classified as hostile or unsolicited and 0 otherwise; *tender offer*, equals 1 if the deal involves a tender offer and 0 otherwise; *same industry*, equals 1 if the acquirer and the target operate in the same sector and 0 otherwise; **Target country-level variables** are: *concentration,* a measure for ownership concentration at the country-level from La Porta et al. (2006); *market integration*, a proxy for the degree of integration of the target country to global markets; *anti-self-dealing,* an index from Djankov et al. (2008) measuring the degree of legal protection of minority shareholders; s*hareholder protection*, a measure for shareholder protection from La Porta et al. (1998). The *Broad Index* is a proxy for the strength of the US dollar. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

						Foreign target status			
	All firms	**Domestic**	**Cross-Border**	**Domestic vs. Cross-border**		**Exchange-listed**	**Non-exchange-listed**	**Exchange- vs. Non-exchange-listed**	
Variables	Mean (Median)	Mean (Median)	Mean (Median)	t-statistic (Wilcoxon z)		Mean (Median)	Mean (Median)	t-statistic (Wilcoxon z)	
Acquirer Characteristics									
Size	6.645	6.432	7.396	-17.63	***	8.605	8.560	0.11	
	(6.565)	(6.341)	(7.470)	(-18.01)	***	(8.512)	(8.654)	(-0.08)	
Tobin's Q	2.453	2.435	2.496	-0.77		2.597	1.880	2.68	***
	(1.546)	(1.498)	(1.741)	(-11.48)	***	(1.702)	(1.560)	(1.53)	
Leverage	0.209	0.201	0.219	-3.83	***	0.203	0.225	-0.79	
	(0.161)	(0.151)	(0.205)	(-5.40)	***	(0.187)	(0.212)	(-0.85)	
FCF	0.049	0.042	0.075	-8.57	***	0.096	0.074	1.19	
	(0.072)	(0.067)	(0.095)	(-14.20)	***	(0.108)	(0.080)	(1.67)	*
Transaction Characteristics									
All equity	0,438	0,478	0,271	13.89	***	0.355	0.135	2.52	**
	(0.000)	(0.000)	(0.000)	(12.62)	***	(0.000)	(0.000)	(2.01)	**
Contested bid	0.016	0.014	0.021	-2.38	***	0.127	0.109	1.70	*
	(0.000)	(0.000)	(0.000)	(-2.73)	***	(0.000)	(0.000)	(1.75)	*
Hostile	0.010	0.008	0.014	-2.48	***	0.110	0.083	0.47	
	(0.000)	(0.000)	(0.000)	(-2.99)	***	(0.000)	(0.000)	(0.47)	
Tender offer	0.059	0.044	0.101	-8.76	***	0.384	0.462	-0.88	
	(0.000)	(0.000)	(0.000)	(-11.08)	***	(0.000)	(0.000)	(0.87)	
Same industry	0,327	0,325	0,331	-0.16		0.436	0.570	-1.45	
	(0.000)	(0.000)	(0.000)	(-0.16)		(0.000)	(1.000)	(-1.42)	
Institutional Characteristics									
Broad Index	104.90	104.40	107.17	-8.98	***	108.57	105.98	1.66	*
	(108.03)	(107.50)	(110.25)	(-7.37)	***	(109.59)	(107.85)	(1.54)	
Concentration	-	-	0.385	-		0.348	0.364	-0.91	
			(0.400)			(0.280)	(0.400)	(-1.40)	
Market integration	-	-	0.666	-		0.648	0.664	-0.40	
			(0.815)			(0.786)	(0.804)	(-1.33)	
Anti-self-dealing	-	-	0.559	-		0.584	0.655	-2.37	**
			(0.579)			(0.600)	(0.640)	(-1.62)	*
Shareholder protection	-	-	3.184	-		3.215	3.602	-2.14	**
			(3.321)			(3.700)	(4.000)	(-1.65)	*
N		11,615	2,553			211	118		

Table 2. Acquirer's cumulative announcement abnormal returns in domestic and cross-border transactions

This table reports cumulative average abnormal announcement returns to US acquirers in domestic and cross-border transactions over the 1990-2010 period. Panel A compares domestic and cross-border acquisitions. Panel B compares acquisitions involving cross-listed and non-cross-listed targets for the sample of cross-border deals. Panel C compares acquisitions of exchange-listed and non-exchange-listed targets for the subsample of acquisitions involving cross-listed targets. Abnormal returns are calculated as market model residuals, with parameters estimated over the (-205,-6) window relative to the announcement day. The market index is CRSP equally or value weighted index. The non-parametric rank test of Corrado (1989) and the two-tailed t-statistics are reported in parenthesis to test the significance of CAARs and average differences between the subgroups respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Panel A. Domestic vs. Cross-border transactions			**Panel B. Cross-border transactions: Non-cross-listed vs. Cross-listed targets**			**Panel C. Cross-listed targets : Exchange-listed vs. Non-exchange-listed targets**		
Announcement period	**Domestic M&As**	**Cross-border M&As**	**Domestic vs. Cross-border**	**Non-cross-listed**	**Cross-listed**	**Non-cross-listed vs. Cross-listed**	**Exchange-listed**	**Non-exchange-listed**	**Exchange- vs. Non-exchange-listed**
	Mean (Rank Z)	Mean (Rank Z)	Mean (t-stat)	Mean (Rank Z)	Mean (Rank Z)	Mean (t-stat)	Mean (Rank Z)	Mean (Rank Z)	Mean (t-stat)
Value weighted									
(-20,-1)	0.59%	-0.05%	0.64% *	0.11%	-1.10% *	1.21% **	-0.49%	-2.22% ***	1.73% *
	(0.45)	(-0.55)	(1.88)	(0.67)	(-1.86)	(1.97)	(-0.48)	(-2.50)	(1.81)
(-1,+1)	0.98% ***	0.56% **	0.42% **	0.52% ***	0.85% ***	-0.31% *	0.89% **	0.79% **	0.10%
	(3.61)	(2.50)	(2.32)	(3.97)	(2.97)	(1.67)	(2.36)	(2.13)	(1.41)
(-3,+3)	1.10% ***	0.37% ***	0.73% ***	0.38% **	0.40% **	-0.02%	0.43% **	0.30% *	0.13%
	(4.96)	(2.97)	(2.93)	(2.51)	(2.01)	(-0.16)	(2.22)	(1.90)	(1.39)
(-20,+20)	-0.10%	-0.41%	0.31%	-0.25%	-1.71% *	1.50% **	-1.68% ***	-1.79% ***	0.11%
	(-1.34)	(-1.26)	(1.06)	(-0.66)	(-1.91)	(1.99)	(-2.39)	(-3.09)	(1.22)
(-60,+60)	-3.32% ***	-4.99% ***	1.67% **	-5.02% ***	-4.52% **	-0.50% **	-4.49% ***	-4.30% ***	-0.19%
	(-5.32)	(-4.26)	(1.98)	(-3.72)	(-3.15)	(-1.97)	(-3.63)	(-3.21)	(-0.72)
Equally weighted									
(-20,-1)	0.74% *	0.44%	0.30%	0.53%	-0.23%	0.76% *	0.24%	-1.10% **	1.34% *
	(1.71)	(0.93)	(1.11)	(1.18)	(-0.82)	(1.66)	(0.45)	(-2.02)	(1.70)
(-1,+1)	1.25% ***	0.90% ***	0.35% **	0.85% ***	1.02% **	-0.15%	1.29% ***	0.52% *	0.77%
	(4.75)	(4.25)	(1.95)	(4.02)	(2.18)	(-0.62)	(2.53)	(1.86)	(1.40)
(-3,+3)	1.33% ***	0.81% ***	0.52% **	0.75% ***	1.10% ***	-0.35% *	1.46% ***	0.46% *	1.00%
	(5.17)	(4.11)	(2.39)	(3.96)	(3.62)	(-1.82)	(3.22)	(1.72)	(1.57)
(-20,+20)	0.63%	0.49% **	0.14%	0.65% **	-0.27%	0.92% *	-0.05%	-0.67%	0.62%
	(1.05)	(2.10)	(0.24)	(2.01)	(-0.17)	(1.79)	(-0.02)	(-1.57)	(1.31)
(-60,+60)	-1.70% ***	-2.04% ***	0.34% **	-2.17% ***	-1.32% *	-0.85% *	-0.98% *	-2.03% ***	1.05% *
	(-4.05)	(-3.47)	(1.98)	(-3.01)	(-1.84)	(-1.73)	(-1.86)	(-2.75)	(1.67)
N	11,615	2,553		2,224	329		211	118	

Table 3. Determinants of acquirer's announcement abnormal returns

This table reports OLS regressions for a sample of 2,553 cross-border acquisitions involving US acquirers and non-US targets over the 1990-2010 period. The dependent variable is the 3-day cumulative abnormal return around the announcement day (CAR(-1,+1)) measured using the market model, with CRSP value weighted index as the market index. *Cross-listed* is a dummy variable to identify target firms cross-listed on US markets at the moment of the acquisition whether through exchange or non-exchange listings. **Acquirer firm-level variables,** measured at the beginning of the year, are: *size*, the logarithm of market capitalization; *Tobin's Q*, (book value of assets + market capitalization - book value of equity)/book value of assets; *leverage*, the ratio of total debt to total assets; *FCF*, the ratio of free cash-flows to total assets. **Transaction-level variables** are: *all equity,* a dummy variable that equals 1 if the transaction is a 100% stock financed and 0 otherwise*; contested bid*, a dummy variable that equals 1 if the number of bidders is greater than 1 and 0 otherwise; *hostile*, a dummy variable that equals 1 if the transaction is classified as hostile or unsolicited and 0 otherwise; *tender offer*, a dummy variable that equals 1 if the deal involves a tender offer and 0 otherwise; *same industry*, a dummy variable that equals 1 if the acquirer and the target operate in the same sector and 0 otherwise; *full acquisition*, a dummy variable that equals 1 if the acquirer owns 100% of the target shares after the acquisition. **Target country-level variables** are: *concentration,* a measure for ownership concentration at the country-level from La Porta et al. (2006); *market integration*, a proxy for the degree of integration of the target country to global markets; *diff anti-self-dealing* $_{(US\text{-}Target)}$, the difference in anti-self-dealing levels (from Djankov et al., 2008) between the US and the target country; *diff shareholder protection*$_{(US\text{-}Target)}$, the difference in shareholder protection levels (from La Porta et al., 1998) between the US and the target country. The *Broad Dollar Index* is a proxy for the strength of the US dollar. Year, region and industry dummies (at one-digit SIC code level) are included in all regressions. Standard errors are robust and corrected for clustering at the firm-level. t-statistics are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	All cross-border M&As						Cross-listed targets		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Cross-listed	0.114	0.273	0.336	0.268	0.296	0.280			
	(0.21)	(0.52)	(0.59)	(0.51)	(0.54)	(0.50)			
Acquirer characteristics									
Size	-0.168 ***	-0.204 ***	-0.205 ***	-0.213 ***	-0.225 ***	-0.236 ***	-0.174 ***	-0.211 ***	-0.218 ***
	(-2.69)	(-3.02)	(-3.00)	(-3.29)	(-3.45)	(-3.77)	(-2.60)	(-2.75)	(-2.71)
Tobin's Q	-0.055	-0.021	-0.014	-0.024	-0.023	-0.018	0.022	0.121	0.105
	(-0.50)	(-0.18)	(-0.12)	(-0.17)	(-0.17)	(-0.15)	(0.77)	(0.19)	(0.83)
Leverage	2.030 *	1.896 *	1.292	1.860 *	1.901 *	1.777 *	2.422 **	2.018 **	2.338 **
	(1.75)	(1.68)	(1.07)	(1.66)	(1.69)	(1.65)	(2.51)	(2.39)	(2.45)
FCF	-1.907	-1.641	-2.635	-1.703	-1.715	-1.745	-1.096	-0.083	-2.355
	(-0.89)	(-0.74)	(-1.13)	(-0.77)	(-0.78)	(-0.79)	(-0.10)	(-0.01)	(-0.21)
Transaction characteristics									
All equity		-1.130 **	-1.559 **	-1.099 **	-1.123 **	-1.063 **	-0.995 **	-1.059 **	-1.457 **
		(-1.99)	(-2.18)	(-2.10)	(-2.16)	(-2.06)	(-2.37)	(-2.46)	(-2.57)
Contested bid		0.268	0.520	0.287	0.259	0.278	0.483	0.181	0.180
		(0.69)	(0.79)	(0.67)	(0.69)	(0.69)	(0.10)	(0.04)	(0.04)

Hostile		-0.348 **	-0.451 **	-0.310 **	-0.408 **	-0.350 **	-0.380 **	-0.656 **	-0.589 **
		(-1.98)	(-2.09)	(-1.95)	(-2.04)	(-1.97)	(-1.97)	(-2.25)	(-2.23)
Tender offer		0.002	0.074	0.046	0.008	0.132	3.003 ***	2.866 ***	2.950 ***
		(0.01)	(0.19)	(0.13)	(0.02)	(0.37)	(3.66)	(3.20)	(3.75)
Same industry		-0.434 *	-0.573 **	-0.439 *	-0.420 *	-0.410 *	-1.390	-1.379	-1.300
		(-1.75)	(-2.21)	(-1.74)	(-1.67)	(-1.62)	(-1.20)	(-1.21)	(-1.15)
Full acquisition					-0.206	-0.810		-0.454	-0.642
					(-0.23)	(-0.69)		(-0.32)	(-0.40)
Institutional variables									
Broad Dollar Index			0.143 *	0.126 *	0.127 *	0.126 *	0.198 *	0.264 **	0.219 *
			(1.89)	(1.69)	(1.68)	(1.66)	(1.69)	(2.19)	(1.96)
Concentration			0.045						
			(0.04)						
Market integration				-0.379			-3.090 **		
				(-0.70)			(-2.69)		
Diff anti-self-dealing (US-Target)					-0.531			-2.217	
					(-0.83)			(-0.80)	
Diff anti-self-dealing (US-Target)					0.114			0.142	
× Full acquisition					(0.65)			(0.08)	
Diff Shareholder protect.(US-Target)						0.150			0.729
						(0.51)			(1.56)
Diff Shareholder protect.(US-Target)						0.031			0.050
× Full acquisition						(0.35)			(0.19)
Adjusted R^2	4.44%	4.83%	5.10%	4.77%	4.89%	4.89%	41.62%	40.35%	41.40%
N observations	2,105	2,105	1,889	2,037	2,062	2,062	260	266	262

Table 4. Correction for the sample selection bias in announcement returns regressions

This table reports Heckman's two step regressions. The dependent variable in the first step probit regression is a dummy variable that equals 1 for cross-border acquisitions and 0 for domestic ones. The dependant variable in the second stage OLS regression is the CAR(-1,+1) measured using the market model, with CRSP value weighted index as the market index. *Cross-listed* is a dummy variable identifying target firms cross-listed on US markets at the acquisition whether through exchange or non-exchange listings. Same firm-, transaction- and target-country-level variables described in previous regressions are used. *Accounting* is an index from Laporta et al. (1998) measuring the quality of accounting standards. *Lambda* is the inverse Mill's ratio in Heckman's model. Year, region and industry dummies are included in all regressions. Standard errors are robust and corrected for clustering at the firm-level. t-statistics are reported in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	First stage	Second stage OLS			
	Probit	(1)	(2)	(3)	(4)
Cross-listed		0.489	0.488	0.511	0.478
		(1.27)	(1.27)	(1.29)	(1.25)
Acquirer characteristics					
Size	0.079 ***	-0.194 ***	-0.194 ***	-0.203 ***	-0.201 ***
	(4.36)	(-2.73)	(-2.73)	(-2.70)	(-3.14)
Tobin's Q	0.001 **	-0.049	-0.051	-0.045	-0.050
	(2.73)	(-0.39)	(-0.40)	(-0.35)	(-0.39)
Leverage	-0.035 **	1.231 *	1.222 *	1.288 *	1.156
	(-2.36)	(1.73)	(1.71)	(1.76)	(1.64)
FCF	0.001 **	-1.982 ***	-1.983 ***	-1.888 ***	-1.992 ***
	(2.16)	(-2.08)	(-2.09)	(-2.01)	(-2.08)
Transaction characteristics					
All equity		-1.224 **	-1.234 **	-1.148 *	-1.176 **
		(-1.74)	(-1.76)	(-1.67)	(-1.68)
Contested bid		1.644	1.596	1.604	1.646
		(0.80)	(0.79)	(0.78)	(0.80)
Hostile		-0.473 **	-0.463 **	-0.292 *	-0.501 **
		(-2.01)	(-1.99)	(-1.80)	(-2.03)
Tender offer		0.055	0.060	0.022	0.146
		(0.14)	(0.16)	(0.06)	(0.39)
Same industry		-0.234 *	-0.242 *	-0.162	-0.249 *
		(-1.74)	(-1.75)	(-0.82)	(-1.80)
Full acquisition				-0.607	0.337
				(-0.61)	(0.33)
Institutional variables					
Broad Dollar Index			0.146 *	0.149 *	0.147 *
			(1.66)	(1.73)	(1.66)
Market integration	6.950 ***		-0.017		
	(4.36)		(-0.03)		
Accounting	-0.172 ***				
	(-2.96)				
Diff anti-self-dealing $_{(US-Target)}$				-0.462	
				(-0.60)	
Diff anti-self-dealing $_{(US-Target)}$				0.901 *	
×Full acquisition				(0.77)	
Diff shareholder protect.$_{(US-Target)}$					0.054
					(0.31)
Diff shareholder protect.$_{(US-Target)}$					0.118
×Full acquisition					(0.37)
Lambda		-0.142	-0.148 *	-0.142	-0.149 *
		(-1.62)	(-1.67)	(-1.61)	(-1.66)
Adjusted R^2	46.59%	4.88%	4.89%	5.32%	4.95%
N observations		1,850	1,850	1,850	1,850

Table 5. Acquirer's long-run returns in domestic and cross-border transactions

This table reports mean and median buy-and-hold abnormal returns (BHAR) to US acquirers in domestic and cross-border transactions over the 1990-2010 period. Panel A compares domestic and cross-border acquisitions. Panel B compares acquisitions involving cross-listed and non-cross-listed targets for the sample of cross-border deals. Panel C compares acquisitions of exchange-listed and non-exchange-listed targets for the subsample of acquisitions involving cross-listed targets. BHARs are computed as the firm's cumulative return in excess of the benchmark return over the period beginning in the month following the deal completion and lasting one to five years. The benchmark consists of a portfolio of non-acquiring firms matched with size and market-to-book ratio following the methodology of Lyon et al. (1999). The significance of the differences in means and medians is assessed using t-test and Wilcoxon-test respectively. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

	Panel A. Domestic vs. Cross-border transactions					**Panel B. Cross-border transactions: Non-cross-listed vs. Cross-listed targets**					**Panel C. Cross-listed targets : Exchange-listed vs. Non-exchange-listed targets**				
Holding period	**Domestic M&As**		**Cross-border M&As**		**Domestic vs. Cross-border**	**Non-cross-listed**		**Cross-listed**		**Non-cross-listed vs. Cross-listed**	**Exchange-listed**		**Non-exchange-listed**		**Exchange- vs. Non-exchange-listed**
	N	Mean (Median)	N	Mean (Median)	t-statistic (Wilcoxon z)	N	Mean (Median)	N	Mean (Median)	t-statistic (Wilcoxon z)	N	Mean (Median)	N	Mean (Median)	t-statistic (Wilcoxon z)
1-year	4044	0.017	1250	0.002	2.62 **	1124	0.002	126	0.005	-1.32	92	0.009	34	-0.005	0.55
		(-0.035)		(-0.080)	(2.24) **		(-0.099)		(-0.095)	(-1.51)		(-0.085)		(-0.123)	(0.00)
2-years	3337	0.040	1143	-0.063	2.53 **	1022	-0.082	121	0.100	-3.31 ***	88	0.161	33	-0.062	3.40 ***
		(-0.063)		(-0.232)	(5.18) ***		(-0.252)		(0.049)	(-4.62) ***		(0.050)		(-0.065)	(2.19) **
3-years	2810	0.126	1049	-0.094	3.89 ***	933	-0.115	116	0.075	-3.10 ***	85	0.094	31	0.022	2.31 **
		(-0.093)		(-0.336)	(6.01) ***		(-0.369)		(0.048)	(-5.35) ***		(0.033)		(0.028)	(1.66) *
4-years	2271	0.093	888	-0.042	2.02 **	774	-0.049	114	0.010	-2.09 **	84	0.012	30	0.001	2.34 **
		(-0.164)		(-0.390)	(4.12) ***		(-0.418)		(-0.169)	(-3.91) ***		(-0.151)		(-0.175)	(1.98) **
5-years	1880	0.132	722	-0.288	3.65 ***	630	-0.296	92	-0.218	-1.61	64	-0.214	28	-0.234	1.65 *
		(-0.135)		(-0.570)	(6.52) ***		(-0.562)		(-0.240)	(-2.23) **		(-0.235)		(-0.241)	(0.06)

Table 6. Determinants of acquirer's long-run returns over a three-year period

This table reports OLS regressions for a sample of 917 cross-border acquisitions made by US acquirers over the 1990-2010 period. The dependent variable is the BHAR over 3 years after the deal completion. *Exchange-listed* is a dummy variable identifying ADRs listed on organized exchanges and via direct listings; *non-exchange-listed is* a dummy variable identifying ADRs listed OTC or via Rule 144a. **Acquirer firm-level variables** are: *size*, the logarithm of market capitalization; *M/B*, the ratio of market capitalization to book value of equity; *CAR(-1,1)*, the cumulative average abnormal returns to the acquirer around the acquisition announcement computed using the market model. **Transaction-level variables** are: *all equity,* equals 1 if the transaction is a 100% stock financed and 0 otherwise*; tender offer*, equals 1 if the deal involves a tender offer and 0 otherwise; *same industry*, equals 1 if the acquirer and the target operate in the same sector and 0 otherwise; *full acquisition*, equals 1 if the acquirer owns 100% of the target shares after the acquisition. **Target country-level variables** are: *market integration*, a proxy for the degree of integration of the target country to global markets; *diff anti-self-dealing* $_{(US\text{-}Target)}$ and *diff shareholder protection*$_{(US\text{-}Target)}$, the differences in anti-self-dealing and shareholder protection levels respectively between the US and the target country. Year, region and industry dummies are included in all regressions. Standard errors are robust and corrected for clustering at the firm-level. t-statistics are reported in parentheses. ***, **, * indicate significance at the 1%, 5%, and 10% levels, respectively.

Dependent variable :	All cross-border M&As				Cross-listed Targets
BHAR 3years	(1)	(2)	(3)	(4)	(5)
Exchange-listed	1.819 **	1.781 **	1.703 **	1.628 **	1.379 **
	(2.58)	(2.50)	(2.58)	(2.55)	(2.57)
Non-exchange-listed	0.048	0.121	0.216	0.168	
	(0.20)	(0.48)	(1.14)	(0.59)	
Acquirer characteristics					
Size	0.199 **	0.201 **	0.197 **	0.216 **	0.052
	(1.99)	(2.01)	(1.99)	(2.04)	(0.94)
M/B	-0.051 *	-0.052 *	-0.034 *	-0.042 *	-0.144 ***
	(-1.70)	(-1.76)	(-1.80)	(-1.79)	(-3.83)
CAR (-1,1)	0.020	0.020	0.019	0.022	0.036
	(1.28)	(1.27)	(1.18)	(1.32)	(1.48)
Transaction characteristics					
All equity	-0.568 **	-0.556 **	-0.453 **	-0.467 **	-2.032 ***
	(-2.42)	(-2.40)	(-2.12)	(-2.05)	(-5.11)
Tender offer	1.285 ***	1.324 ***	1.281 ***	1.237 ***	2.309 ***
	(3.94)	(3.90)	(3.67)	(3.74)	(4.54)
Same industry	-0.138	-0.152	-0.136	-0.121	-0.114
	(-0.65)	(-0.69)	(-0.58)	(-0.55)	(-0.60)
Full acquisition	-0.345	-0.252	0.605 *	1.187 **	-0.306
	(-0.43)	(-0.11)	(1.91)	(2.27)	(-0.14)
Institutional variables					
Market integration		0.663 **			1.572
		(2.19)			(1.14)
Diff anti-self-dealing $_{(US\text{-}Target)}$			-0.028		
			(-0.04)		
Diff anti-self-dealing $_{(US\text{-}Target)}$			1.593 **		
×Full acquisition			(2.61)		
Diff shareholder protect.$_{(US\text{-}Target)}$				-0.054	
				(-0.48)	
Diff shareholder protect.$_{(US\text{-}Target)}$				0.438 ***	
×Full acquisition				(2.85)	
Adjusted R^2	15.12%	16.95%	18.64%	17.15%	59.24%
N observations	917	911	911	908	123

Table 7. The impact of cultural and geographic proximity on acquirer's long-run returns

This table reports OLS regressions for a sample of 917 cross-border acquisitions involving US acquirers and non-US targets over the 1990-2010 period. The dependant variable is the buy-and-hold abnormal returns (BHAR) over the period beginning in the month following the deal completion and lasting three or five years. Variables related to the **cross-listing of the target are**: *exchange-listed*, a dummy variable to identify ADRs listed on an organized exchange and direct listings; *non-exchange-listed,* a dummy variable to identify ADRs listed OTC or via Rule 144a. **Acquirer firm-level variables,** measured at the beginning of the year, are: *size*, the logarithm of market capitalization; *M/B*, the ratio of market capitalization to book value of equity; *CAR(-1,1)*, the cumulative average abnormal returns to the acquirer over a three-day period around the acquisition announcement computed using the market model with CRSP value weighted index being the market index. **Transaction-level variables** are: *all equity,* equals 1 if the transaction is a 100% stock financed and 0 otherwise*; tender offer*, equals 1 if the deal involves a tender offer and 0 otherwise; *same industry*, equals 1 if the acquirer and the target operate in the same sector and 0 otherwise; *full acquisition*, equals 1 if the acquirer owns 100% of the target shares after the acquisition. **Target country-level variables** are: *market integration*, a proxy for the degree of integration of the target country to global markets computed as the adjusted R^2 from regressions of the market index return on global factors; *Geographic proximity* is the distance between the capitals of the acquirer and target countries, taken with a negative sign; *Cultural proximity* is a dummy variable that equals one if either both the acquirer and the target countries share the same language or if the target was historically part of the same colonial empire as the acquirer. Year, region and industry dummies (at one-digit SIC code level) are included in all regressions. Standard errors are robust and corrected for clustering at the firm-level. t-statistics are reported in parentheses. **, **, * indicate significance at the 1%, 5%, and 10% levels, respectively

	All cross-border M&As		Cross-listed Targets	
	BHAR 3y	BHAR 5y	BHAR 3y	BHAR 5y
Exchange-listed	1.672 **	2.577 *	1.544 **	2.143 **
	(2.38)	(1.89)	(2.97)	(2.24)
Non-exchange-listed	0.115	0.521		
	(0.35)	(1.13)		
Acquirer characteristics				
Size	0.189 **	0.351 **	0.045	0.161
	(1.98)	(2.38)	(0.92)	(1.83)
M/B	-0.046 *	-0.072 *	-0.146 ***	-0.060 ***
	(-1.69)	(-1.70)	(-3.84)	(-2.13)
CAR (-1,1)	0.019	0.022	0.027	0.045
	(1.26)	(1.19)	(1.20)	(1.56)
Transaction characteristics				
All equity	-0.491 **	-0.643 *	-2.184 ***	-1.881 ***
	(-2.36)	(-1.82)	(-5.16)	(-2.98)
Tender offer	1.374 ***	0.865 ***	2.077 ***	2.411 ***
	(4.01)	(2.25)	(3.62)	(3.60)
Same industry	-0.088	0.644	0.218	0.203
	(-0.38)	(1.50)	(0.32)	(0.69)
Full acquisition	-0.256	-0.281	-0.714	-0.323
	(-1.16)	(-0.60)	(-1.14)	(-0.55)
Institutional variables				
Market integration	0.602 *	0.451	1.114	1.128
	(1.72)	(1.02)	(1.12)	(1.26)
Geographic proximity	0.217	0.593 **	0.234	0.317
	(1.41)	(2.68)	(0.63)	(0.74)
Cultural proximity	0.508 **	0.978 ***	-1.519 *	-1.281
	(2.92)	(3.38)	(-1.68)	(-1.31)
Adjusted R^2	18.68%	27.25%	59.11%	62.59%
N observations	911	609	123	95