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Cross-listing performance and insider ownership: The experience of U.S. investors**Omar A. Esqueda***

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Highlights

- Insider-owned firms pursue U.S. cross-listings following periods of extraordinary performance.
- The long-run post-cross-listing abnormal returns turn negative for insider-controlled firms.
- The Sarbanes–Oxley Act has mitigated the attempts to time the cross-listing market.
- The returns of capital-raising firms are more sensitive to potential agency problems.

Abstract

Insider-owned firms pursue U.S. cross-listings following periods of extraordinary performance. However, the long-run post-cross-listing abnormal returns become negative only for insider-controlled cross-listings. We find that the Sarbanes–Oxley Act (SOX) has mitigated the market-timing attempts as negative abnormal returns are limited to the pre-SOX period, supporting a cross-listing bonding benefit after U.S. securities regulation was enhanced. In addition, investors anticipate future operating performance as stock returns incorporate forthcoming operating outcomes one and two years ahead. Whereas capital-raising cross-listings show better operating performance than non-capital-raising, the returns of capital-raising firms are more sensitive to the potential agency problems created by insider-ownership.

JEL Codes: G30, G32, G34

Keywords: Cross-listings, emerging markets, market timing, insider ownership, firm performance, agency problems, Sarbanes-Oxley.

1. Introduction

During the last two decades, firms from emerging markets have experienced a substantial reduction on restrictions to capital flows and therefore have enjoyed access to more mature capital markets. Cross-listing abroad represents the most common way to enter foreign equity markets. In particular, U.S. exchanges have been popular destinations among emerging-market firms looking to cross-list shares overseas.¹ When firms pursue a U.S. dual-listing, they deposit a fraction of their shares in an investment bank located in the host country, which subsequently issues American Depositary Receipts (ADR) in exchange for these shares.² Existing literature suggests that firms cross-listing in the U.S. benefit as market integration, liquidity, investor recognition, shareholder base, information environment, and shareholder protection improve.³ However, whether shareholders have a long-term benefit following cross-listing events is still inconclusive.

There is consensus among academics that after firms cross-list in the U.S., there are short-term positive abnormal returns. This finding appears intuitive as the expected reduction in the cost of capital has a one-time short-term adjustment to market valuation, but potentially leads to lower long-run expected returns. Formerly negative net present value projects become wealth-increasing investment opportunities as the discount rate declines in the new phase of the cross-listed firm. Similarly, the perceived shift in transparency and shareholder protection impact firm valuation through the expected cash flows (numerator) component of the valuation equation. There is a strong

¹ Exchange-listed sponsored ADRs increased from 79 (three from emerging countries) by December, 1990 to 366 (215 from emerging countries) by December, 2010. The sources are the depository receipts websites: <http://www.adrbnymellon.com>, <http://www.citiadr.idmanagedsolutions.com/> and <https://www.adr.com>.

² There are four types of ADRs. Level 1 trade only over-the-counter (OTC). Level 2 and Level 3 are U.S. exchange-listed; however, the latter is allowed to raise new capital. Level 4 or Rule 144-A are ADR private offerings exclusive to qualified institutional buyers. Throughout the paper we refer to levels 2 and 3 as exchange-traded cross-listings.

³ Karolyi (2006) and King and Segal (2009), among others, identify comparable benefits as the main reasons why firms cross-list in the U.S.

intuition behind the commonly established short-term gains that follow cross-listings. Yet, to what extent investors have benefitted from long-term holding of equity of cross-listed firms remains unclear. This paper examines the long-term operating and stock performance of emerging-market firms after they cross-list in the U.S.

We contribute to the existing literature by analyzing the implications of ownership structure, a proxy for potential agency problems, on the post-cross-listing performance. Ownership structure is of particular relevance in emerging markets as it affects corporate governance and determines the degree of potential issues between principal and agents (Claessens and Yurtoglu, 2013). Specifically, when firms are insider-controlled, the potential for agency problems is higher than in non-insider-controlled firms (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Li, Morck, Yang, and Yeung, 2004). This is particularly important in the context of real or perceived deficiencies in legal protection afforded to investors in developing countries. The effect of ownership structure on firm performance has received some attention in previous literature; however, its effects on the long-term operating performance and stock returns of cross-listed firms have not been previously documented. This issue is relevant as firms that cross-list in the U.S. have considerable influence on their home countries' economy and on the world's financial markets. We provide strong arguments in support of policies aimed at increasing the accountability of foreign corporate executives with the intention of protecting U.S. stock-market participants. In addition, it is important for academics and practitioners to identify whether firms benefit from cross-listing on U.S. stock exchanges and whether firm-level shareholder protection exerts any influence on the outcome.

There is a gap in the cross-listing literature as previous research does not employ firm-level measures of corporate governance to assess the operating performance and stock returns around

cross-listing events. The increase in shareholder protection implied by the bonding hypothesis has received considerable attention in recent years. Using cross-listing events, we test the bonding hypothesis (performance improves) versus the “avoiding” or market timing hypothesis (performance deteriorates) put forward by Licht (2003), controlling for the degree of potential for agency conflicts. Lastly, we test whether the Sarbanes-Oxley Act (SOX) has affected the performance of cross-listed firms given that exchange-traded ADRs are subject to this law.⁴ Our manuscript contributes to the existing literature as, to the best of our knowledge, there is no prior empirical evidence on the effects of firm-level investor protection on the long-term operating performance and stock returns of emerging-market cross-listed firms.

Our findings lend support for the market timing hypothesis prior to the enactment of the SOX. Insider-owned firms cross-list following periods of extraordinary positive performance as they outperform a benchmark only in the pre-cross-listing years. In addition, the long-run abnormal returns in the post-cross-listing period are negative only for firms controlled by insiders. However, SOX has mitigated the attempts to time the cross-listing market as negative abnormal returns appear only during the pre-SOX period, questioning the soundness of the bonding hypothesis prior to this piece of legislation. Moreover, consistent with the equity offerings literature, the stock returns of capital-raising cross-listings are more sensitive to the risk of being expropriated by insiders.

⁴ The U.S. Congress passed the Sarbanes–Oxley Act in July 2002, following a number of high-profile corporate scandals during 2001. This Act aims to prevent managerial and accounting misconduct by imposing additional disclosure requirements and corporate governance mandates.

2. Related literature and hypotheses

2.1 Background on cross-listings

Firms cross-listing in the U.S. reduce their cost of capital as market integration and risk sharing improves (Stapleton and Subrahmanyam, 1977; Errunza and Losq, 1985; Alexander, Eun, and Janakiramanan, 1988). In addition, cross-listed firms improve their liquidity (Karolyi, 1998; Foerster and Karolyi, 2000), investor recognition and shareholder base (Foerster and Karolyi, 1999), information transparency (Lang, Lins, and Miller, 2003; Karolyi, 2006; Fernandes and Ferreira, 2008), and shareholder protection (Stulz, 1999; Coffee, 1999, 2002; Doidge, Karolyi, and Stulz, 2004).⁵ However, these cross-listing improvements have not consistently reflected positively on subsequent long-term firm performance. A bonding benefit for cross-listed firms has been the focus of recent developments in international asset pricing.⁶ Karolyi (2012) surveys the cross-listing literature and notes that whereas the bonding hypothesis has been questioned, the evidence is still far from conclusive.

Existing literature supports the idea that cross-listed firms obtain a short-term positive abnormal return (Jayaraman, Shastri, and Tandon, 1993; Miller, 1999; Foerster and Karolyi, 1999; Benos and Weisbach, 2004). However, the influence on long-term stock returns is less than clear. Foerster and Karolyi (2000) find that the three-year buy-and-hold returns of cross-listed firms underperform the benchmark; however, firms with high trading volume have positive abnormal returns. Mittoo (2003) finds that Canadian firms list in the U.S. after strong market performance.

⁵ See Karolyi (2006, 2012) for a comprehensive description of the cross-listing hypotheses.

⁶ Doidge, Karolyi, Lins, Miller, & Stulz (2009) posit that, despite the benefit for minority shareholders, some insider-controlled firms may choose not to cross-list if staying out of the reach of U.S. regulation is more beneficial to insiders, thereby supporting the bonding hypothesis.

Cross-listings underperform a benchmark by 13% to 30% during a three-year post-cross-listing period. Charitou and Louca (2009) find no abnormal returns one year after the cross-listing event. Similarly, Sarkissian and Schill (2009) find no long-term effect on the returns of firms that list abroad. The latter results are robust to the country characteristic, yet they do not include controls for firm-level variables. Lastly, Luo, Fang, and Esqueda (2012) show that Chinese firms listed on U.S. exchanges underperform a matching firm during the three post cross-listing years.

The evidence on the operating performance of cross-listings is scant. Mittoo (2003) finds that operating performance deteriorates during the three post-cross-listing years for Canadian firms. However, Charitou and Louca (2009) find that the operating performance of capital-raising and non-capital-raising firms is at least as good as their benchmark firms in the pre-cross-listing year and both groups outperform the benchmark during the three years after cross-listing. Yet, previous findings on capital-raising and post-listing events consistently provide support for the window dressing and market timing hypotheses. For instance, Jain and Kini (1994) and Loughram and Ritter (1997) find that operating performance declines after firms issue new stock. Dharan and Ikenberry (1995) also show a post-listing decline in firm performance. Additionally, Loughram and Ritter (1995) uncover negative abnormal returns following initial public offerings (IPO) in the U.S. Moreover, in international equity markets, the managerial opportunism is not expected to be less of an issue. The potential for agency problems is exacerbated in emerging-market firms as less transparent and less clear management structures worsens corporate governance practices (Claessens and Yurtoglu, 2013).

2.2 Hypotheses

One is tempted to believe that managers from foreign firms choose to time the market and cross-list before a decline in performance, which may explain why the gains of cross-listings are limited to short periods. Supporting the market timing hypothesis, Siegel (2005) provides a framework where foreign firms can act opportunistically despite being subject to regulation by the Securities and Exchange Commission (SEC) as there is still a relatively low level of securities law enforcement toward foreign firms. The author suggests that cross-listings can only provide a “reputational” bonding rather than a “legal” bonding. Specifically, the legal bonding hypothesis predicts that operating performance improves as insiders can no longer easily expropriate wealth from minority shareholders. The legal bonding hypothesis is questioned by Licht’s (2003) argument that cross-listed firms are insensitive to crucial features of U.S. securities regulation regime since corporate insiders from foreign issuers are subject to less restrictive provisions of the SEC regulation.⁷

Whether foreign firms can take advantage of a period of extraordinary performance to cross-list in the U.S is still being debated. Scholars have provided compelling arguments for the bonding hypothesis as well as for the market timing hypothesis. Given this background, we explore the following research questions: Do firms underperform the benchmark portfolio following cross-listing or do they improve their performance as expected by the bonding hypothesis? Are the pre-cross-listing abnormal returns and operating performance an indication of market timing?

⁷ For instance, the Wall Street Journal reports on March 21st 2014 (“Easier Rules Lure Foreign Firms to List in U.S.”) that less restrictive corporate governance standard make U.S. exchanges more attractive for foreign firms than competing stock exchanges in the U.K. and Hong Kong. For example, firms registered on U.S. exchanges can adopt dual-class share structures, whereas this is forbidden in the U.K and Hong Kong.

Insider ownership has been determined to exacerbate the principal–agent issue in foreign firms (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Licht, 2003; Lins, 2003; Guedhami and Mishra, 2009) and its influence is more pronounced in countries with relatively poor legal protection (La Porta, Lopez-de-Silanes, and Shleifer, 1999; La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 2000; Claessens and Yurtoglu, 2013). In addition, King and Segal (2009) and Claessens and Yurtoglu (2013) indicate that dual-class share structures facilitates the expropriation of minority shareholders through tunneling and other moral hazard activities. Improvements in firm-level corporate governance are particularly beneficial for minority shareholders, therefore, firms with weak shareholder protection must benefit the most from cross-listing, according to the bonding hypothesis. However, controlling insiders of emerging-market firms have more freedom to overstate financial prospects or manage earnings. Correspondingly, insider-owned firms are able to make timely decisions of when to cross-list; hence, similar to Esqueda (2015), we employ insider-ownership as our main proxy for agency conflicts. We test whether firms with higher propensity for agency conflicts perform differently than firms where minority shareholders are believed to be better protected. In this context, we expect insider-owned cross-listings to underperform their non-insider-controlled counterpart.

We also examine the effect of the enhanced disclosure requirements and corporate governance mandates comprised in the SOX, on the performance of cross-listed firms. In the market for newly issued U.S. stocks, Johnston and Madura (2009) find that the SOX reduced uncertainty in IPO valuation and has improved their aftermarket performance, thereby reducing the uncertainty on new equity issues. Esqueda, Luo, and Jackson (2015) find a significant effect of SOX on foreign firms trading in the U.S. as there is a structural break on the returns of Latin American ADRs before and after the SOX. Correspondingly, Berger, Li, and Wong (2005)

conclude that cross-listings from countries with weak private enforcement of investor rights have the highest short-term gains from the enhanced regulation provided by SOX, suggesting a bonding benefit of cross-listing. We investigate whether this act has influenced the bonding benefit on U.S. cross-listings by segmenting our sample into before and after the enactment of SOX.

3. Data

Karolyi (2006) indicates that the benefit from increased market integration is contingent on the pre-cross-listing capital barriers and is therefore an evolution of the market segmentation hypothesis. We use domestic stock market development to control for the maturity of their capital markets and the country-level access to capital markets, similar to Ayyagari and Doidge (2010).⁸ In addition, we employ legal origin and anti-directors rights from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) to measure investor protection in the home country.⁹ At the firm-level, corporate governance is associated with ownership structure (Claessens and Yurtoglu, 2013). When firms are insider-controlled, the potential for agency problems is higher than in non-insider-controlled firms (La Porta, Lopez-de-Silanes, and Shleifer, 1999; Li, Morck, Yang, and Yeung, 2004). Lins (2003), Doidge, Karolyi, and Stulz (2004), and Doidge, Karolyi, Lins, Miller, and Stulz (2009) establish that insider-controlling shareholders can expropriate wealth from minority shareholders. In addition, Lins (2003) finds that investors discount value from firms that are insider-controlled. Moreover, La Porta, Lopez-de-Silanes, and Shleifer (1999) note that the extent and frequency of diffused ownership varies according to the degree of economic development. For

⁸ Stock market development is defined as the aggregate market value of listed shares in the cross-listing home country deflated by the corresponding GDP (Beck, Demirgüç-Kunt, and Levine, 2000).

⁹ La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000) define country legal origin classification as follows: “Common law countries have the strongest protection of outside investors – both shareholders and creditors – whereas French civil law countries have the weakest protection. German civil law and Scandinavian countries fall in between.”

instance, outside the U.S. and other mature markets, publicly-traded firms tend to be controlled by large shareholders. In general, firms from emerging markets share comparable ownership structures. We follow Lins (2003), King and Segal (2009), and Esqueda (2015) and control for ownership structure using dummy variables to identify the existence of controlling shareholders and whether they are insiders.

When firms operate under a dual-class share structure, cash flow rights differ from voting rights, placing holders of low-voting shares at a disadvantage (Claessens and Yurtoglu, 2013). Hence, similar to King and Segal (2009), we include a dummy variable for dual-class share structure. To proxy for visibility, we control for the median number of analysts following a firm during the months of July and November as did Lang, Lins, and Miller (2003). Analyst coverage is obtained from the Institutional Brokers Estimate System (I/B/E/S). Additionally, the turnover of the cross-listed shares traded on U.S. exchanges is employed as a measure of liquidity.¹⁰

We form a comprehensive list of ADRs from emerging markets from the Bank of New York, Chase Bank, and Citigroup depository receipts websites. In order to be included in the sample, cross-listed firms must be sponsored DR programs and have data available in Datastream Thomson Reuters (Datastream hereafter).¹¹ Financial and utilities firms are excluded from the sample as these industries are highly regulated in most countries. Our data corresponds to the five years before the cross-listing event, or the earliest the data is available, and up to 10 years after the firm is cross-listed using information for the years 1990 to 2010.¹² If a firm delists during the

¹⁰ Turnover equals volume divided by shares outstanding. Mittoo (2003) finds similar results using turnover and the bid-ask spread as proxies for liquidity.

¹¹ The sample includes only exchange-traded ADRs (level 2 and level 3) since OTC and Rule 144-A firms are not required to report annually to the SEC and data for these firms is unavailable in I/B/E/S and Datastream. Charitou and Louca (2009) and King and Segal (2009) follow a similar approach.

¹² Datastream has limited financial data from emerging countries before 1990 (Li, Morck, Yang, and Yeung, 2004)

sample period, the data is truncated subsequent to the delisting year. Liquidity variables, volume and shares outstanding, are from Datastream. Ownership structure data for cross-listed firms is made available to us by La Porta, Lopez-de-Silanes, and Shleifer (1999), Claessens, Djankov, and Lang (2000), Faccio and Lang (2002), and Lins (2003). When a firm is not available in their database, the information is collected from the annual report (20-F) closest to the cross-listing year or from the firms' corporate websites.¹³ La Porta, Lopez-de-Silanes, and Shleifer (1999) recommend a 10 percent ownership cut off point to determine control within a firm as this level provides a significant level of voting power and also since countries often mandate the disclosure of at least a 10 percent ownership stakes.

Cross-listing studies have a potential endogeneity bias since firms self-select to participate in the cross-listing "treatment". To control for this issue we find benchmark firms one year prior to the cross-listing year based on industry, growth opportunities (sales growth), firm size (book value of assets), and country legal origin.¹⁴ We employ the coarsened exact matching (CEM) procedure put forward by Blackwell, Iacus, King, and Porro (2009). Coarsened exact matching requires fewer assumptions, is more easily automated, and possesses more attractive statistical properties for many applications than do other existing matching methods. This methodology matches each *treated* (cross-listed) firm with the firm that has the most similar properties in the universe of *non-treated* firms or with a group of firms that share similar characteristics. When CEM provides more than one matching firm, we proceed with a one-to-many matching procedure by creating value-weighted and equal-weighted portfolios as the cross-listing benchmarks.

¹³ The SEC requires foreign issuers to disclose in Form 20-F the names of person(s) known to own more than 10 percent of the issuer's voting shares. Yet, officers and directors can report share ownership as a group (Licht, 2003). Insiders' related parties are to be considered part of the insider ownership. In addition, firms are required to disclose whether the ownership structure makes use of shares with different voting rights (www.sec.gov).

¹⁴ Charitou and Louca (2009) match firms based on total assets and industry. Doidge, Karolyi, and Stulz (2004) controls for country level variables, global industry q , size, and sales growth.

Table 1 shows the list of emerging markets from which the sample of cross-listed and non-cross-listed firms is drawn. Our list of countries is primarily based on Fernandez and Ferreira (2008). The sample of matching firms employed to create benchmark portfolios includes 23.13% of non-cross-listed firms from China, 19.98% from South Korea and 19.41% from Taiwan. Similarly, Exchange-traded cross-listings are dominated by Chinese firms with 29% of the total cross-listings from emerging countries. However, as a region, Latin American countries (Argentina, Brazil, Chile, Mexico, Peru, and Venezuela) originate 47.7% of the total number of cross-listings suggesting a strong linkage between firms from these countries and U.S. stock markets. All of the 3334 non-cross-listed firms were used to create portfolios that match the characteristics of each of the 217 cross-listed firms, as suggested by the CEM. Using portfolios as benchmarks reduces the volatility of single firms and therefore provides more reliable measures of adjusted performance. Table 2 offers a detailed description of the set of variables used in our econometric models and define their source. Our variables of interest *Insider-Owner*, *OwnerConcentration*, *Dual-Class*, and their corresponding interactions are described at the beginning of Table 2. In addition, we are interested on the effects of the variables *Cross-Listed*, *Capital-Raising*, and *SOX*, which are described next to the ownership structure variables in Table 2. The remaining regressors are control variables. To remove outliers the data is winsorized at the 99 and one percentile.

[Table 1 and Table 2 about here]

Table 3, Panel A shows the descriptive statistics of the cross-listed firms. An average of 2.216 analysts follow (*Coverage*) each firm in our sample in any given year. However, the number increases if we measure only the three-year period after cross-listing as the variable *Coverage-POST* indicate that there are 3.286 analysts per firm. In addition, the mean turnover for the total

sample of cross-listed firms indicates that firms have an annual dollar volume equal to 1.1 times their market capitalization. As it has been described in earlier literature (Foerster and Karolyi, 2000), liquidity increases after firms cross-list in the United States. The average turnover in the three years after firms cross-list (*Turnover-POST*) is higher (3.286) than the pre-cross-listing turnover (*Turnover-PRE*) of 2.216. Moreover, whereas the mean annual abnormal return (*AR*) is 0.045%, the three-year pre-cross-listing abnormal returns (*BHAR-PRE*) and post-cross-listing abnormal returns (*BHAR-POST*) are in sharp contrast, with 46.67% and -3.897% returns respectively. Operating performance is proxied by operating income before depreciation (*OIBD*), similar to Loughran and Ritter (1997) and Charitou and Louca (2009). The *OIBD* for the group of cross-listed firms has an average value of 14.771% and the matching-firm adjusted operating performance (*ExcessOIBD*) has an average value of 2.599%.

[Table 3 about here]

Table 3 Panel B presents the frequency of the categorical variables. From the total sample, there are 44% firm/year observations with insider-ownership. As expected in our sample of emerging-market firms, the majority (95%) of the firm/year observations are recorded as having ownership concentration (*OwnerConcentration*), yet, only 18% use dual-class share structure (*Dual-Class*). When we interact the *OwnerConcentration* and *Dual-Class* variables we observe that the percentage of observations does not differ from the frequency of *Dual-Class* alone, suggesting that only firms with ownership concentration tend to use a dual-class share structure. Most of the cross-listing observations (86%) come from firms whose home countries are defined as Civil Law (*Civil*). Similarly, most cross-listings (78%) tend to choose the NYSE as their host stock exchange. Lastly, the sample is almost equally balanced between capital-raising and non-capital-raising firms; with 47% and 53% of the total firm/year observations respectively.

4. Research design

4.1 Firm performance

Stock returns are calculated using the approach of Loughran and Ritter (1995), Foerster and Karolyi (2000), and Charitou and Louca (2009) as these studies also analyze returns over long time periods. $R_{i,y}$ and $R_{i,m}$ are the yearly and monthly returns of firm i , respectively. $R_{i,y}$ is calculated by geometrically compounding the monthly returns for the corresponding year.

$$R_{i,y} = \prod_{m=1}^{12} (1 + R_{i,m}) - 1 \quad (1)$$

We calculate abnormal returns (AR) using the matching-firm adjusted returns of cross-listed firms. The geometrically compounded returns of the corresponding benchmark is subtracted from those of the cross-listed firm i .¹⁵

$$AR_{i,y} = R_{i,y} - R_y^i \quad (2)$$

Where R_y^i is the annual geometrically compounded return of the matching firms. $AR_{i,y}$ serves as the dependent variables in the panel regressions of stock returns. We additionally calculate the three-year buy-and-hold abnormal returns (BHAR). We estimate the geometric three-year stock returns for firm i as:

$$BHAR_{i,t,T} = \prod_{t=1}^T (1 + AR_{i,y}) - 1 \quad (3)$$

Where t and T are the beginning and ending years. We calculate BHAR for the three years before cross-listing (BHAR-PRE) and the three years after cross-listing (BHAR-POST). T can take the value of three and minus three years (with reference to the cross-listing year). BHAR are

¹⁵ When a portfolio of matching firms is used, we estimate both equal-weighted and value-weighted matching-firm stock returns.

employed as dependent variables in the cross-sectional estimations. Lastly, to evaluate the performance of the portfolio of cross-listed firms we calculate the average annual abnormal returns (AR_y) and show the trend in Figure 1 and Figure 2. The portfolio's average annual abnormal returns are estimated in the form:

$$AR_y = \frac{1}{N_y} \sum_{i=1}^{N_y} AR_{i,y} \quad y = -5, \dots, -1, 1, \dots, 10 \quad (4)$$

To measure operating performance, we employ operating income before depreciation (OIBD) similar to Loughran and Ritter (1997) and Charitou and Louca (2009). OIBD equals to earnings before interest, taxes, depreciation, and amortization (EBITDA) deflated by the book value of total assets. Abnormal operating performance (ExcessOIBD) is estimated as follows:

$$ExcessOIBD_{i,y} = OIBD_{i,y} - OIBD_y^i \quad (5)$$

Where $OIBD_y^i$ is the matching-firm operating performance. $OIBD_{i,y}$ serves as the dependent variables in the panel regressions of operating performance.

4.2 Multivariate regressions

The multivariate regression model shown in (6) is employed to analyze the dependent variables operating performance and abnormal returns.

$$Performance_{it} = \mu + \sum_{j=1}^k \beta_j x_{it}^j + \alpha_i + v_{it} \quad (6)$$

Where the dependent variable $Performance_{i,t}$ takes the form of excess operating performance ($ExcessOIBD_{i,y}$) or abnormal returns ($AR_{i,y}$) for firm i during year t . μ is a constant and v_{it} is an idiosyncratic error term. α_i represents firm fixed effects and, alternatively, country

fixed effects.¹⁶ x_{it} is the group of j control variables described in Table 2. These regressors are similar to those used in Charitou and Louca (2009), however, our models include a set of variables of interest (ownership structure) and controls for investor recognition.

We use pooled OLS regressions with robust standard errors given the latent presence of autocorrelation in panel data. In addition, firm clusters are included in our model as F-tests determine that the intercepts differ across units. Moreover, we use Hausman-Taylor random effects as a robustness check. Random effects require that $\text{Cov}(x_{it} v_i)=0$. Yet, Hausman (1978) tests indicate that there is endogeneity of the regressors with the firm random effects; hence the random effects approach is not feasible. The alternative fixed effects model is not suitable as the sample contains time-invariant regressors, such as the ownership structure dummy variables. However, the Hausman-Taylor estimator can accommodate random effects panel models when there is endogeneity of the regressors with the firm random effects and assumes that some (but not all) of the regressors in x and z are correlated with u_i but none correlated with e_i .

When the panel model specifications are tested on subsamples, seemingly unrelated regressions (SUR) serve to statistically compare variables' coefficients across groups. Moreover, to check the robustness of our results, we run separate cross-sectional regressions on the three-year BHAR before firm i cross-lists (BHAR-PRE) and the three-year BHAR after cross-listing (BHAR-POST) to compare the effect of ownership structure on the pre- and post-cross-listing performance. Lastly, we continue the robustness tests using cross-sectional regressions on the subsamples, before and after the SOX, employing SUR models.

¹⁶ We note that the set of dependent variables (*ExcessOIBD* and *AR*) account for the time effect as these variables are contemporaneously matching-firm adjusted.

5. Empirical results

5.1 Univariate tests

Figures 1 and 2 illustrate the trend of average annual abnormal returns (AR_y). Figure 1 suggests that the abnormal stock returns decline following the cross-listing event. However, when the cross-listed firm has insider-ownership, there is a clearer downward trend in stock returns as revealed in Figure 2.¹⁷ We present the results of non-parametric univariate tests in Table 4.¹⁸ Panel A shows that, on average, firms do not earn long-term positive abnormal returns after cross-listing. Worse yet, firms significantly underperform their pre-cross-listing returns in four out of the ten post-cross-listing years. Further, Table 4 Panel A segments the sample by insider-ownership category. Our results indicate that the stock returns of insider-owned cross-listings have declined substantially after the cross-listing event. Abnormal returns are significantly lower than during the pre-cross-listing period. However, the group of firms without significant insider ownership does not appear to underperform in the post-cross-listing period. In sum, univariate tests in Panel A provide some evidence in support of the market-timing hypothesis for insider-owned firms. Moreover, Table 4 Panel B indicate that the arithmetic mean return corresponding to the first cross-listed year and the three pre-cross-listing years is significantly higher than the mean return for the subsequent two years when the firm is insider-controlled as, on average, the decline in stock returns equals -18.61%. The average decline for all the firms is -10.46%, which is significant in parametric and non-parametric tests of mean differences. However, the decline for non-insider-controlled firms equals to only -4.40% and is not significant. Lastly, the difference-in-difference (D-i-D) test show that the mean change in returns (from the pre- to the post-cross-listing period) is significantly

¹⁷ The figures show values of performance adjusted using value-weighted portfolios.

¹⁸ Parametric and non-parametric tests in offer similar results, supporting differences across insider-ownership categories.

lower (-14.21%) for the insider-owned firms than for the non-insider-owned firms. Overall, the univariate tests shown in Table 4 suggests that the decline in stock returns following a cross listing event is statistically significant for insider-controlled firms and the decline in returns is stronger than for non-insider-controlled firms.

[Figure 1 - 2 about here]

[Table 4 about here]

5.2 Operating performance

Table 5 shows the results of pooled OLS regressions with firm fixed effects using operating performance as the dependent variable. The negative sign of dummy variable *Cross-Listed* suggests that firms experience a decline in operating performance following a U.S. cross-listing event. The drop in operating performance is even stronger for insider-owned firms since they have about a three percent larger negative reaction compared to non-insider-owned as indicated by the *InsiderCrossListed* variable. However, having a dual-class share structure does not influence the post-cross-listing performance as the variable *Owner*Dual-Class* is not significant in any of the models. Additionally, we note that capital-raising cross-listings have better operating performance than their non-capital-raising counterpart, consistent with previous findings (Charitou and Louca, 2009). When the sample is split into capital-raising and non-capital-raising cross-listings in Table 6, our SUR results provide evidence that the coefficients are significantly different across both subsamples. We note that whereas capital-raising cross-listings do not appear to have a significant change in operating performance following a U.S. cross-listing event, non-capital-raising cross-listings have an average post-cross-listing deterioration of operating performance of more than three percent when they are insider-controlled. *StockMarket* indicates that firms with more

developed stock markets in their home country benefit the least from cross-listing (Table 5); however, this negative effect seems to be more severe for capital-raising cross-listings. Conversely, the number of analysts following a firm seems to have a positive outcome only on the operating performance of capital-raising cross-listings.

[Tables 5 - 6 about here]

5.3 Abnormal returns

Table 7 illustrates the effect of cross-listing and ownership structure on stock returns. We find that abnormal returns decline after cross-listing events. In addition, there is a stronger decline for firms with insider owners. Whereas all firms suffer from a reduction in excess returns following their cross-listing event, firms with insider ownership suffer a larger decline. Similarly, *InsiderOwner* supports the market timing hypothesis as insider-owned firms appear to have extraordinary stock returns only during the pre-cross-listing years.¹⁹ Table 8 presents results of SUR with subsamples. Panel A compares results before and after the SOX. The coefficients are significantly different across subsamples. The *InsiderCrossListed* coefficient is negative and significant before SOX. However, its effect decays once SOX is enacted, suggesting that this act has waned the underperformance following U.S. cross-listings. This implies that the managerial opportunistic behavior of cross-listed firms has been mitigated after SOX implementation. Panel B segments the sample based on whether the cross-listing is allowed to raise capital in the U.S. The coefficients are significantly different across the subsample of capital- and non-capital-raising groups. Ownership structure variables *InsiderCrossListed* and *OwnerConcentration*Dual-Class* are negative and significant only for capital-raising cross-listings, implying a higher sensitiveness

¹⁹ The negative coefficient of the variables *Cross-Listed* and *InsiderCrossListed* remain robust to the inclusion of the SOX and Rule 12h-6 dummy variables. These results are available upon request. On March 21, 2007, the SEC adopted the Exchange Act Rule 12h-6 that facilitates foreign private issuers deregistration process (www.sec.gov).

to potential agency problems. Investors appear more concerned about agency issues due to potential wealth expropriation by insiders when cross-listings have access to new equity capital, in spite of their previously described better operating performance. However, holding other things constant, *Cross-Listed* indicates that non-capital-raising firms experience a more substantial decline in stock returns following cross-listing events.

[Tables 7 - 8 about here]

Table 9 provides robustness checks employing Hausman-Taylor panel estimates with country fixed effects. Results confirm a decline in the long-term stock returns for insider-controlled firms following cross-listing events. Further, we validate investors' forward-looking attitude as they are able to anticipate the forthcoming change in operating performance one and two years ahead given the positive and significant coefficients of the leads of operating performance ($ExcessOIBD_{t+1}$, and $ExcessOIBD_{t+2}$). The negative effect of *InsiderCrossListed* remains robust after controlling for future operating performance, supporting that insider-owners time the cross-listing market. In Table 10, we provide results of our test of whether ownership structure explains the three-year cumulative abnormal returns before cross-listing (BHAR-PRE) and after cross-listing (BHAR-POST). Cross-sectional regressions confirm that insider-controlled firms significantly outperform their non-insider-controlled counterparts during the pre-cross-listing years. However, subsequent to cross-listing the results reverse and insider-controlled cross-listings earn lower abnormal returns than firms that are non-insider-controlled. The *InsiderOwner* coefficient shifts from positive, when the dependent variable is BHAR-PRE, to negative when the dependent variable is BHAR-POST. Moreover, the *StockMarket* coefficient confirms that cross-

listings from countries with more developed stock markets earn lower returns in both pre- and post-cross-listing periods.²⁰

Table 11 provides cross-sectional regression results of subsamples segmented by year, before and after the enactment of SOX. The coefficients are significantly different across subsamples only 50% of the time. However, we observe a strong pattern where *InsiderOwner* has a negative impact only in the pre-SOX period, consistent with our previous results from Table 8, Panel A where SOX is shown to reduce the attempts to time the cross-listing market. The sample of firms with insider-ownership has a major decline in abnormal returns after cross-listing only in the years preceding the enactment of SOX.

[Tables 9 - 11 about here]

6. Concluding remarks

We investigate the long-term performance of emerging-market firms cross-listed in the U.S. evaluating the implications of ownership structure on operating performance and stock returns. Managers of insider-controlled firms choose to cross-list following extraordinary performance, consistent with the market timing hypothesis. Insiders commonly take advantage of this window of opportunity by diluting their ownership or transferring control of the cross-listed firm as indicated by Ayyagari and Doidge (2010). Insider-owned cross-listings from emerging markets have substantial abnormal returns before cross-listing whereas abnormal returns turn to negative in the years subsequent to cross-listing. It appears that the SOX has largely reduced the stock losses following U.S. cross-listings. The managerial opportunism behavior of insider-owners

²⁰ When we employ the five-year post-cross-listing abnormal returns on similar cross-sectional regressions, our results remain robust and our main conclusion is supported. These additional results are available upon request.

has been mitigated following the enactment of the SOX. Moreover, consistent with literature on capital-raising events, investors appear more concerned about potential agency conflicts when capital-raising firms are insider-controlled as the stock returns reflect a significant sensitiveness to insider ownership.

This manuscript has relevant implications for academics, practitioners, and policy makers since the cross-listing literature has not tested the role played by ownership structure on the long-term performance of emerging-markets cross-listed firms. In addition, U.S. investors can evaluate the expected performance of cross-listed firms considering ownership structure and capital-raising intentions in constructing internationally diversified portfolios involving emerging-market corporations. We also convey solid arguments in support of policies aiming at increasing the accountability of foreign corporate executives with the intention of protecting U.S. stock market participants.

As regulatory bodies imposed more stringent requirements to U.S. exchange-traded firms due to the SOX, several firms became reluctant to remain cross-listed on U.S. stock exchanges, which may grant insiders greater discretion to consume private benefits without the scrutiny of U.S. regulators (Doidge, Karolyi, and Stulz, 2010). According to Doidge, Karolyi, and Stulz (2010), foreign firms with more agency problems have more negative stock-price reactions following their delisting from U.S. markets. The mechanisms of how ownership structure affects the delisting decision and to what extent insider owners influence the post-delisting performance remain unknown. We leave these questions open for future research.

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Figure 1 **Abnormal Returns of Cross-listed firms**

Figure 1 shows the average abnormal returns earned by firms during each cross-listing year. Abnormal returns are matching-firm adjusted and their average is equally weighted. Cross-listed firms are exchange-traded (ADR level 2 and level 3).

Figure 2 **Abnormal Returns of Cross-listed firms by Insider-ownership category**

Figure 2 illustrates the average abnormal returns categorized by ownership structure and cross-listing year. Abnormal returns are matching-firm adjusted and their average is equally weighted. Cross-listed firms are exchange-traded (ADR level 2 and level 3).

Table 1
Frequency of sample firms by home country

Panel A. Matching firms				Panel B. Cross-listed firms		
No.	Country	Frequency	Percent	Country	Frequency	Percent
1	Argentina	25	0.75	Argentina	14	6.45
2	Brazil	39	1.17	Brazil	35	16.13
3	Chile	76	2.28	Chile	13	5.99
4	China	771	23.13	China	63	29.03
5	Colombia	12	0.36	Colombia	0	0.00
6	Czech Republic	7	0.21	Czech Republic	0	0.00
7	Hong Kong	134	4.02	Hong Kong	9	4.15
8	Hungary	14	0.42	Hungary	1	0.46
9	India	111	3.33	India	13	5.99
10	Indonesia	128	3.84	Indonesia	2	0.92
11	Malaysia	107	3.21	Malaysia	0	0.00
12	Mexico	42	1.26	Mexico	31	14.29
13	Pakistan	13	0.39	Pakistan	0	0.00
14	Peru	34	1.02	Peru	1	0.46
15	Philippines	66	1.98	Philippines	3	1.38
16	Poland	77	2.31	Poland	0	0.00
17	Russia	61	1.83	Russia	5	2.30
18	Singapore	62	1.86	Singapore	1	0.46
19	South Africa	47	1.41	South Africa	6	2.76
20	South Korea	666	19.98	South Korea	8	3.69
21	Sri Lanka	4	0.12	Sri Lanka	0	0.00
22	Taiwan	647	19.41	Taiwan	8	3.69
23	Thailand	74	2.22	Thailand	0	2.22
24	Turkey	111	3.33	Turkey	1	0.00
25	Venezuela	6	0.18	Venezuela	3	1.38
Total		3,334	100.00	Total	217	100.00

Table 2
Variables description

Variable	Description	Source
Insider Owner	Insider Owner indicates that the firm has an insider owner or group of insider with at least 10% claim in the company.	Form 20-F; La Porta, Lopez-de-Silanes, and Shleifer (1999); Claessens, Djankov, and Lang (2000); Lins (2003).
OwnerConcentration	Indicates that there is at least one investor that owns at least 10% of the firm.	
InsiderCrossListed.	Shows whether the firm cross-listed has insider ownership.	
Dual-Class	Indicates whether the firm uses more than one class of stock with different voting rights.	
Owner*Dual-Class	Represents the interaction of OwnerConcentration * Dual-Class.	
Cross-Listed	Cross-Listing dummy equals one during the listing year and thereafter.	Bank of New York, Citibank, and Chase Bank depository receipts websites.
Capital-Raising	Capital-Raising indicates that the cross-listing firm is an ADR level 3.	
SOX	Equals one during 2002 and thereafter.	
Global	Equals one if the firm cross-listed after 1997, the globalization period	
Civil	Indicates the legal origin, civil or common law.	La Porta, Lopez-de-Silanes, Shleifer, and Vishny (2000)
Antidirectors	Is the Antidirectors rights index from the firm's home country.	
Coverage	The number of estimations from different analysts reported by I/B/E/S.	I/B/E/S
Coverage-POST	Coverage-POST is the post-cross-listing three-year median value of Coverage.	
Total Assets	Book value of total assets is in Millions of USD.	Datastream Thomson Reuters
MarketCap	MarketCap is the market capitalization in billions of USD.	
SizeDifferential	Difference in Size (log of total assets in U.S.) with matching firms.	
Returns	Equals the annual stock returns, estimated as the product of the 12-month stock returns.	
AR	Abnormal returns equal the matching-firm adjusted stock returns.	
BHAR-PRE	BHAR_PRE is the pre-cross-listing 3-year buy-and-hold abnormal return.	
BHAR-POST	BHAR_POST is the post-cross-listing 3-year buy-and-hold abnormal return.	
OIBD	Equals the adjusted operating income before depreciation deflated by total	
ExcessOIBD	Represents the matching-firm adjusted OIBD.	
Turnover	Turnover equals annual volume divided by total number of shares outstanding.	
Turnover-PRE	Turnover-PRE is the three-year pre-cross-listing turnover.	
Turnover-POST	Turnover-POST is the three-year post-cross-listing turnover.	
StockMarket	Equals the ratio of the aggregate market value of listed shares in the cross-listing home country deflated by the corresponding GDP	Beck, Demirgüç-Kunt, and Levine (2000)

Table 3

Descriptive statistics**Panel A. Continuous variables**

Antidirectors represent the Antidirectors rights index from the firms' home country. StockMarket measures the domestic stock market development. It equals the aggregate market value of listed shares in the cross-listing home divided by GDP. Total Assets are in Billions of USD. MarketCap is the Market Capitalization in Billions of USD. Coverage is the number of analyst following the firm or the number of estimations from different analysts reported by I/B/E/S database. Coverage-POST is the post cross-listing three-year median value of Coverage. Turnover equals the annual trading volume divided by the total number of shares outstanding. Turnover-PRE (Turnover-POST) is the pre (post) cross-listing three-year turnover. Returns are the annual stock returns. Returns are calculated as the product of the 12-month stock returns. Abnormal returns (AR) represent the matching-firm adjusted stock returns. BHAR-POST (BHAR-PRE) is the post (pre) cross-listing three-year buy and hold abnormal return. OIBD is the operating income before depreciation adjusted by book value of total assets. ExcessOIBD equals the matching-firm adjusted OIBD.

Variable	N	Mean	S.D.	Min	Max
Coverage	2,709	2.216	3.73	0.00	29.00
Coverage-POST	651	3.286	3.60	0.00	20.00
Turnover	1,530	1.101	2.99	0.00	24.67
Turnover-PRE	330	0.803	2.71	0.00	24.67
Turnover-POST	594	1.348	3.36	0.00	24.67
Returns (%)	1,703	19.459	55.89	-56.27	150.56
AR (%)	1,698	0.045	51.59	-113.40	140.82
BHAR-POST (%)	156	-3.897	86.59	-115.68	377.46
BHAR-PRE (%)	69	46.675	159.37	-104.49	833.56
OIBD (%)	2,062	14.771	11.73	-29.28	43.24
ExcessOIBD (%)	2,051	2.499	11.96	-54.05	51.77
TotalAssets	2,140	6.304	16.60	0.00	309.00
MarketCap	1,900	6.519	19.70	0.00	326.00
Antidirectors	2,709	3.198	1.62	1.00	5.00
StockMarket	2,614	1.513	1.77	0.00	7.43

Table 3 (*continued*)**Descriptive statistics****Panel B. Frequency of categorical variables**

InsiderOwner indicates that the firm has an insider owner or group of insider owners with at least 10% claim in the company. OwnerConcentration indicates that there is at least one investor, insider or outsider that owns at least 10% of the firm. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. CapitalRaising indicates that the cross-listing is level 3. SOX equals one during and after the approval of SOX (2002). NYSE is a dummy variable that equals one if the firm's host stock exchange is the NYSE. Civil indicates the legal origin civil or common law. Cross-Listed equals to one during the cross-listing year and thereafter. There are 115 (53%) non-insider-controlled cross-listings and 102 (47%) insider-controlled.

Variable	Total	Yes/No	N	%
InsiderOwner	2,664	Yes	1,179	44%
		No	1,485	56%
OwnerConcentration	2,709	Yes	2,571	95%
		No	138	5%
Dual-Class	2,651	Yes	480	18%
		No	2,171	82%
CapitalRaising	2,709	Yes	1,281	47%
		No	1,428	53%
SOX	2,709	Yes	981	36%
		No	1,728	64%
NYSE	2,709	Yes	2,123	78%
		No	586	22%
Civil	2,709	Yes	2,322	86%
		No	387	14%
InsiderOwner * Cross-Listed	2,664	Yes	700	26%
		No	1,964	74%
OwnerConcentration * Dual-Class	2,651	Yes	465	18%
		No	2,186	82%
InsiderOwner * Dual-Class	2,651	Yes	306	12%
		No	2,345	88%
InsiderOwner * CapitalRaising	2,664	Yes	735	28%
		No	1,929	72%

Table 4

Univariate Tests

Panel A. Univariate tests of abnormal stock returns before and after cross-listing relative to the cross-listing year.

Panel A1: Non-parametric Wilcoxon paired signed rank tests show whether abnormal returns (AR) after cross-listing are significantly different than abnormal returns two years before cross-listing. Panel A2: Non-parametric Wilcoxon paired signed rank tests show whether insider-controlled (non-insider-controlled) firms' post-cross-listing abnormal returns are significantly different than their abnormal stock returns two years before cross-listing. Equal-weighted portfolios of matching firms are used in univariate tests.

Years relative to cross-listing event	0	1	2	3	4	5	6	7	8	9	10
Panel A1											
<i>All Firms</i>											
N	138	138	138	138	136	118	112	110	104	90	80
AR After	0.18	0.09	-0.01	0.05	0.03	-0.08	0.08	0.01	-0.06	-0.15	-0.12
AR Before	0.12	0.12	0.12	0.12	0.13	0.16	0.16	0.14	0.15	0.16	0.16
Difference	0.06	-0.03	-0.13	-0.07	-0.10	-0.24**	-0.07	-0.13	-0.21*	-0.31**	-0.28***
Panel A2											
<i>Insider-Owned Firms</i>											
N	56	56	56	56	56	46	42	40	38	34	32
AR After	0.16	0.05	0.00	-0.04	0.01	-0.11	0.19	0.01	-0.08	-0.20	-0.15
AR Before	0.34	0.34	0.34	0.34	0.34	0.37	0.43	0.39	0.40	0.40	0.35
Difference	-0.18	-0.28*	-0.33*	-0.38**	-0.33*	-0.48**	-0.23	-0.38**	-0.48**	-0.60***	-0.50**
<i>Non-Insider-Owned Firms</i>											
N	82	82	82	82	80	72	70	70	66	56	48
AR After	0.17	0.13	0.00	0.12	0.07	-0.05	0.02	0.01	-0.05	-0.13	-0.11
AR Before	-0.03	-0.03	-0.03	-0.03	-0.02	0.03	-0.01	-0.01	0.00	0.01	0.03
Difference	0.20	0.16	0.03	0.16	0.09	-0.08	0.02	0.01	-0.05	-0.13	-0.14

* z<.10, ** z<.05, *** z<.01.

Table 4 (*continued*)**Univariate Tests**

Panel B. Univariate tests of stock returns before and after cross-listing by Insider-Ownership Category.

Non-parametric Wilcoxon paired signed rank tests show whether the arithmetic mean returns during the cross-listing year and up to three years before cross-listing (Pre-Cross-Listing) is significantly higher than the mean return during the two years subsequent to the cross-listing event (Post-Cross-Listing). The column *Differences-in-Differences* shows the tests of whether the change in returns (Δ Returns) from the pre-cross-listing to the post-cross-listing period differ significantly by Insider ownership category (*Insider-Owner* versus *Non-Insider-Owner*). We additionally show the parametric one-tailed t-tests of mean differences with unequal variances in the last row.

	<i>All Firms</i>	<i>Insider-Owner</i>	<i>Non-Insider-Owner</i>	<i>Difference-in-Differences</i>
Firms	155	66	89	
Post-Cross-Listing	12.63%	5.77%	17.73%	
Pre-Cross-Listing	23.09%	24.38%	22.13%	
Difference (Δ Returns)	-10.46% *	-18.61% **	-4.40%	-14.21% *
t-test	**	***	-	*

Wilcoxon: * $z < .10$, ** $z < .05$, *** $z < .01$; t-test: * $p < .10$, ** $p < .05$, *** $p < .01$.

Table 5

Pooled ordinary least squares.

Dependent variable: ExcessOIBD. Civil indicates the legal origin Civil or common law. Antidirectors represent the Antidirectors rights index. StockMarket is the domestic stock market development. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. CapitalRaising indicates that the cross-listing is level 3. Size Differential is the difference in log Assets with matching firm. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. Ownership Concentration indicates that there is at least one investor, insider or outsider, that owns at least 10% of the firm. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. Owner*Dual-Class is the interaction OwnerConcentration*Dual-class. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database.

	EW		MW			
	(1)	(2)	(3)	(4)	(5)	(6)
Cross-Listed	-0.020 (0.013)	-0.024* (0.013)	-0.024* (0.012)	-0.028** (0.013)	-0.032** (0.013)	-0.032** (0.012)
InsiderCrossListed	-0.028 (0.018)	-0.030* (0.018)	-0.030* (0.018)	-0.035* (0.018)	-0.037** (0.018)	-0.037** (0.018)
Civil	0.012 (0.013)	0.009 (0.013)	0.009 (0.013)	0.009 (0.014)	0.005 (0.014)	0.005 (0.014)
Antidirectors	-0.002 (0.003)	-0.002 (0.003)	-0.002 (0.003)	-0.005 (0.003)	-0.005 (0.003)	-0.005 (0.003)
StockMarket	-0.008** (0.003)	-0.008** (0.003)	-0.008** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)	-0.010*** (0.003)
NYSE	0.039** (0.015)	0.038** (0.015)	0.038** (0.015)	0.045*** (0.015)	0.043*** (0.015)	0.043*** (0.015)
CapitalRaising	0.040*** (0.012)	0.036*** (0.012)	0.036*** (0.012)	0.039*** (0.013)	0.035*** (0.013)	0.036*** (0.013)
SizeDifferential	0.007 (0.005)	0.005 (0.005)	0.005 (0.005)	0.007 (0.004)	0.004 (0.005)	0.004 (0.004)
Owner*Dual-Class	0.005 (0.012)	0.003 (0.012)		-0.001 (0.013)	-0.003 (0.012)	
InsiderOwner	0.027 (0.019)	0.025 (0.019)	0.026 (0.018)	0.016 (0.018)	0.014 (0.018)	0.013 (0.017)
Coverage		0.003** (0.001)	0.003*** (0.001)		0.003*** (0.001)	0.003*** (0.001)
<i>N</i>	1936	1936	1946	1939	1939	1949
<i>Firm Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>R</i> ²	0.104	0.113	0.113	0.075	0.083	0.083
<i>F</i>	8.75	8.91	8.76	5.27	5.80	6.36

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 6

Seemingly unrelated regressions by capital-raising category.

Dependent variable: ExcessOIBD. Civil indicates the legal origin Civil or common law. Antidirectors represent the Antidirectors rights index. StockMarket is the domestic stock market development. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. Dual-class equals to one if the firm uses a dual-class share structure. Owner*Dual-Class is the interaction OwnerConcentration*Dual-class. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. SizeDifferential is the difference in log Assets with matching firm. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. InsideOwnerDual is the interaction Dual-Class * Insider Owner. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database. CapitalRaising indicates that the cross-listing is level 3.

	EW				MW			
	CR	NCR	CR	NCR	CR	NCR	CR	NCR
Cross-Listed	-0.018 (0.016)	-0.015 (0.013)	-0.029 (0.018)	-0.012 (0.013)	-0.019 (0.016)	-0.019 (0.013)	-0.032* (0.018)	-0.016 (0.013)
InsiderCrossListed	0.025 (0.017)	-0.022* (0.013)	0.013 (0.018)	-0.030** (0.015)	0.006 (0.017)	-0.039** (0.015)	-0.005 (0.018)	-0.047*** (0.018)
Civil	0.049*** (0.019)	-0.005 (0.016)	0.037** (0.018)	-0.007 (0.016)	0.054*** (0.017)	-0.021 (0.019)	0.042** (0.017)	-0.023 (0.019)
Antidirectors	-0.001 (0.006)	-0.001 (0.004)	0 (0.006)	-0.002 (0.004)	-0.007 (0.006)	-0.004 (0.004)	-0.005 (0.005)	-0.004 (0.004)
StockMarket	-0.010*** (0.004)	-0.007 (0.005)	-0.009*** (0.004)	-0.008 (0.005)	-0.014*** (0.004)	-0.011** (0.005)	-0.013*** (0.004)	-0.011** (0.005)
NYSE	0.035 (0.022)	0.051*** (0.019)	0.032 (0.022)	0.054*** (0.018)	0.036* (0.020)	0.065*** (0.020)	0.033 (0.020)	0.067*** (0.019)
SizeDifferential	0.013** (0.006)	0.002 (0.007)	0.007 (0.006)	0.002 (0.007)	0.014** (0.006)	0.001 (0.007)	0.008 (0.006)	0.001 (0.007)
Owner*Dual-Class	-0.024 (0.022)	0.026** (0.012)			-0.036 (0.023)	0.020 (0.012)		
InsideOwnerDual			-0.011 (0.023)	0.035** (0.018)			-0.023 (0.026)	0.033* (0.019)
Coverage			0.006*** (0.002)	0.000 (0.001)			0.005*** (0.002)	0.000 (0.001)
Const	-4.133*** (0.100)	-4.468*** (0.094)	-4.156*** (0.093)	-4.468*** (0.094)	-4.112*** (0.094)	-4.448*** (0.096)	-4.130*** (0.087)	-4.451*** (0.096)
<i>N</i>	1936		1936		1939		1939	
<i>Firm Effects</i>	Yes		Yes		Yes		Yes	
<i>Chi 2</i>	25.07		25.67		27.98		28.25	
<i>Significantly Different?</i>	***		***		***		***	
<i>Clusters</i>	212		212		212		212	

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 7

Pooled ordinary least squares.

Dependent variable: Abnormal Returns (AR). Civil indicates the legal origin Civil or common law. Antidirectors equal the Antidirectors rights index. StockMarket is the Domestic Stock market development. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. Size Differential is the difference in log Assets with matching firm. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. OwnerConcentration indicates that there is at least one investor, insider or outsider, that owns at least 10% of the firm. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database.

	EW			MW		
	(1)	(2)	(3)	(1)	(2)	(3)
Cross-listed	-0.054 (0.039)	-0.052 (0.039)	-0.043 (0.037)	-0.075* (0.039)	-0.071* (0.039)	-0.06 (0.038)
InsiderCrossListed	-0.166** (0.082)	-0.168** (0.082)	-0.172** (0.079)	-0.135* (0.079)	-0.138* (0.079)	-0.143* (0.078)
Civil	-0.007 (0.031)	-0.005 (0.031)	0.008 (0.038)	-0.035 (0.032)	-0.033 (0.032)	-0.017 (0.037)
Antidirectors	0.009 (0.008)	0.008 (0.008)	0.012 (0.010)	0.005 (0.008)	0.004 (0.008)	0.009 (0.011)
StockMarket	-0.018** (0.008)	-0.019** (0.008)	-0.016* (0.009)	-0.024*** (0.008)	-0.026*** (0.009)	-0.022** (0.010)
NYSE	0.054 (0.036)	0.058 (0.036)	0.066 (0.043)	0.071* (0.038)	0.074* (0.039)	0.086** (0.043)
SizeDifferential	-0.005 (0.012)	-0.005 (0.012)	-0.001 (0.012)	-0.009 (0.012)	-0.009 (0.012)	-0.005 (0.012)
InsiderOwner	0.137* (0.078)	0.144* (0.079)	0.156** (0.075)	0.068 (0.075)	0.074 (0.075)	0.091 (0.073)
Dual-Class		-0.025 (0.030)			-0.022 (0.035)	
OwnerConcentration			-0.038 (0.066)			-0.049 (0.069)
Coverage			-0.005 (0.003)			-0.006 (0.004)
<i>N</i>	1558	1548	1558	1558	1548	1558
<i>Firm Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
<i>R</i> ²	0.022	0.023	0.024	0.042	0.042	0.044
<i>F</i>	3.951	3.567	3.281	9.555	8.759	7.294

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 8

Seemingly unrelated regressions (SUR).**Panel A. Before and After SOX.**

Dependent variable: Abnormal Returns (AR). Civil indicates the legal origin Civil or common law. Antidirectors equal the Antidirectors rights index. StockMarket is the Domestic Stock market development. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. SizeDifferential is the difference in log Assets with matching firm. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. OwnerConcentration indicates that there is at least one investor, insider or outsider, that owns at least 10% of the firm. Owner*Dual-Class is the interaction OwnerConcentration*Dual-class. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database.

	(1)		(2)		(3)	
	After	Before	After	Before	After	Before
Cross-Listed	-0.026 (0.091)	-0.097** (0.043)	-0.023 (0.090)	-0.092** (0.044)	-0.026 (0.089)	-0.093** (0.044)
InsiderCrossListed	-0.019 (0.121)	-0.229** (0.098)	-0.027 (0.119)	-0.227** (0.097)	-0.023 (0.121)	-0.228** (0.097)
Civil	-0.098* (0.051)	0.063* (0.036)	-0.093* (0.051)	0.064* (0.036)	-0.094* (0.052)	0.063* (0.036)
Antidirectors	0.003 (0.014)	0.013* (0.008)	0.002 (0.014)	0.013 (0.008)	0.003 (0.014)	0.013* (0.008)
StockMarket	-0.020* (0.012)	0.001 (0.013)	-0.019 (0.012)	0.000 (0.013)	-0.018 (0.012)	0.000 (0.013)
Owner*Dual-Class	-0.015 (0.061)	-0.01 (0.036)	-0.014 (0.062)	-0.011 (0.036)		
NYSE	0.103* (0.059)	0.004 (0.041)	0.106* (0.060)	0.008 (0.043)	0.105* (0.059)	0.006 (0.042)
SizeDifferential	0.01 (0.020)	-0.003 (0.014)	0.013 (0.021)	0.00 (0.014)	0.012 (0.020)	-0.001 (0.014)
InsiderOwner	-0.003 (0.104)	0.222** (0.096)	0.009 (0.101)	0.224** (0.095)	0.002 (0.097)	0.222** (0.096)
Coverage			-0.003 (0.007)	-0.003 (0.004)	-0.003 (0.007)	-0.003 (0.004)
Const	-1.498*** (0.078)	-1.299*** (0.050)	-1.496*** (0.078)	-1.298*** (0.050)	-1.499*** (0.078)	-1.301*** (0.050)
<i>N</i>	1548		1548		1558	
<i>Firm Effects</i>	Yes		Yes		Yes	
Chi 2	21.85		20.95		20.83	
Significantly Different?	***		**		**	
Cluster	177		177		178	

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 8 (*continued*)**Seemingly unrelated regressions (SUR).****Panel B. SUR by Capital-Raising Category**

Dependent variable: Abnormal Returns (AR). Civil indicates the legal origin Civil or common law. Antidirectors represent the Antidirectors rights index. StockMarket is the domestic stock market development. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. SizeDifferential is the difference in log Assets with matching firm. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. OwnerConcentration indicates that there is at least one investor, insider or outsider that owns at least 10% of the firm. Owner*Dual-Class is the interaction OwnerConcentration*Dual-class. InsideOwnerDual is the interaction Dual-Class * Insider Owner. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database. CapitalRaising indicates that the cross-listing is level 3.

	(1)		(2)		(3)	
	CR	NCR	CR	NCR	CR	NCR
Cross-Listed	-0.084 (0.066)	-0.081* (0.043)	0.035 (0.074)	-0.081* (0.046)	0.015 (0.074)	-0.083* (0.046)
InsiderCrossListed	-0.095* (0.053)	-0.017 (0.049)	-0.367*** (0.134)	-0.041 (0.090)	-0.365*** (0.133)	-0.041 (0.091)
Civil	-0.072 (0.053)	0.089* (0.053)	-0.054 (0.047)	0.043 (0.036)	-0.060 (0.047)	0.040 (0.037)
Antidirectors	0.005 (0.016)	0.021* (0.012)	0.006 (0.014)	0.010 (0.007)	0.009 (0.014)	0.009 (0.008)
StockMarket	-0.021* (0.011)	-0.009 (0.015)	-0.020** (0.010)	-0.024* (0.013)	-0.018* (0.010)	-0.023* (0.013)
Owner*Dual-Class			-0.143*** (0.049)	0.048 (0.039)	-0.145*** (0.048)	0.048 (0.039)
NYSE	0.070 (0.071)	0.047 (0.049)	0.105 (0.064)	0.018 (0.037)	0.097 (0.062)	0.014 (0.037)
SizeDifferential	-0.037* (0.019)	-0.004 (0.017)	-0.019 (0.017)	0.005 (0.015)	-0.027* (0.016)	0.003 (0.015)
OwnerConcentration	0.186** (0.090)	-0.140 (0.102)				
Dual-Class	-0.179** (0.079)	0.070* (0.040)				
InsideOwnerDual	0.136 (0.101)	-0.018 (0.073)				
InsiderOwner			0.343*** (0.113)	0.014 (0.084)	0.325*** (0.113)	0.010 (0.086)
Coverage			-0.007 (0.006)	-0.003 (0.004)		
Const	-1.269*** (0.058)	-1.396*** (0.060)	-1.280*** (0.058)	-1.393*** (0.061)	-1.279*** (0.058)	-1.394*** (0.061)
<i>N</i>	1548		1548		1548	
<i>Firm Effects</i>	Yes		Yes		Yes	
Chi 2	24.86		20.70		21.03	
Significantly Different?	***		**		**	
Cluster	177		177		177	

Standard errors are in parentheses. * $p < .10$, ** $p < .05$, *** $p < .01$.

Table 9

Robustness checks. Hausman-Taylor panel estimates.

Dependent variable: Abnormal Returns (AR). StockMarket represents the domestic stock market development. Cross-Listed is a dummy variable equal to one in the Cross-Listing year and thereafter. SizeDifferential is the difference in log assets with matching firm. ExcessOIBD is the matching-firm adjusted operating performance. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. InsiderCrossListed is the interaction Cross-Listed*InsiderOwner. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. Antidirectors equal the Antidirectors rights index. InsideOwnerDual is the interaction Dual-Class * Insider Owner. Coverage is the number of analysts following the firm or the number of estimations from different analysts reported by I/B/E/S database.

	(1)	(2)	(3)	(4)	(5)	(6)
Cross-Listed	-0.066 (0.043)	-0.025 (0.049)	-0.026 (0.049)	-0.063 (0.043)	-0.012 (0.049)	-0.055 (0.043)
InsiderCrossListed	-0.084* (0.047)	-0.184** (0.077)	-0.184** (0.078)	-0.091* (0.050)	-0.185** (0.077)	-0.081* (0.049)
StockMarket	0.02 (0.036)	0.012 (0.035)	0.013 (0.035)	0.02 (0.035)	0.015 (0.035)	0.023 (0.035)
SizeDifferential	-0.064*** (0.019)	-0.062*** (0.019)	-0.061*** (0.019)	-0.064*** (0.019)	-0.048** (0.019)	-0.050*** (0.019)
ExcessOIBD _t	0.064 (0.170)	0.064 (0.170)	0.059 (0.170)	0.061 (0.170)	0.072 (0.169)	0.068 (0.169)
ExcessOIBD _{t+1}	0.743*** (0.172)	0.738*** (0.172)	0.736*** (0.172)	0.740*** (0.172)	0.765*** (0.172)	0.765*** (0.172)
ExcessOIBD _{t+2}	0.280* (0.160)	0.268* (0.159)	0.275* (0.159)	0.276* (0.160)	0.279* (0.158)	0.285* (0.159)
Antidirectors	0.01 (0.031)	0.008 (0.030)	0.008 (0.030)	0.01 (0.030)	0.005 (0.029)	0.007 (0.029)
Dual-Class	0.013 (0.065)		0.01 (0.064)			
InsiderOwner		0.133 (0.083)	0.135 (0.083)		0.150* (0.081)	
InsideOwnerDual				0.041 (0.076)		0.051 (0.074)
Coverage					-0.010** (0.004)	-0.009** (0.004)
<i>N</i>	1313	1323	1313	1313	1323	1313
<i>Country Effects</i>	Yes	Yes	Yes	Yes	Yes	Yes
chi2	78.25	81.38	81.34	78.73	87.91	84.56
F	3.26	3.39	3.25	3.28	3.52	3.38

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 10

Cross-sectional regressions

$$BHAR_i = \mu + \sum_{j=1}^k \beta_j x_i^j + v_i$$

Dependent Variable: Three-Year Abnormal Returns (BHAR-POST & BHAR-PRE). Civil indicates the legal origin Civil or common law. Antidirectors is the Antidirectors rights index. StockMarket is the domestic stock market development. NYSE is a dummy variable if the firm's host stock exchange is the NYSE. SizeDifferential is the difference in log Assets with matching firm. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. CapitalRaising indicates that the cross-listing is level 3. Dual-Class equals to one if the firm uses more than one class of stock and with different voting rights. Global is a dummy variable equal to 1 if the firm cross-listed after 1997. Turnover-POST (Turnover-PRE) measures the turnover during the three-year post- (pre-) cross-listing period. Coverage-POST is the median number of analysts following a firm during the three years after cross-listing as reported by I/B/E/S database. InsideOwnerDual is the interaction Dual-Class * Insider Owner. The dependent variable is BHAR-POST in regressions one to five and BHAR-POST in regressions six to eight.

	BHAR-POST					BHAR-PRE		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
InsiderOwner	-0.338** (0.142)	-0.335** (0.142)	-0.329** (0.149)	-0.348** (0.152)	-0.346** (0.144)	0.891** (0.440)	0.905** (0.411)	0.975** (0.407)
Civil	0.035 (0.161)	0.002 (0.164)	0.031 (0.169)	-0.006 (0.177)	-0.02 (0.172)	-0.197 (0.437)	-0.19 (0.435)	-0.103 (0.439)
Antidirectors	0.017 (0.036)	-0.002 (0.041)	-0.008 (0.042)	-0.012 (0.043)	-0.004 (0.041)	0.19 (0.138)	0.189 (0.136)	0.242* (0.140)
StockMarket	-0.093** (0.038)	-0.104*** (0.040)	-0.098** (0.041)	-0.100** (0.041)	-0.106*** (0.040)	-0.259 (0.199)	-0.262 (0.198)	-0.241 (0.200)
NYSE	0.24 (0.187)	0.26 (0.188)	0.285 (0.193)	0.281 (0.193)	0.256 (0.189)	-0.456 (0.673)	-0.408 (0.676)	-0.4 (0.676)
SizeDifferential	0.118 (0.072)	0.126* (0.072)	0.153* (0.081)	0.143* (0.082)	0.122* (0.073)	0.02 (0.320)	0.015 (0.318)	0.056 (0.318)
CapitalRaising	-0.056 (0.144)	-0.107 (0.153)	-0.079 (0.158)	-0.086 (0.159)	-0.112 (0.154)	0.329 (0.408)	0.301 (0.410)	
Dual-Class	-0.134 (0.177)	-0.124 (0.177)	-0.222 (0.184)	-0.237 (0.186)	-0.132 (0.179)		-0.416 (0.558)	-0.489 (0.553)
Global		0.163 (0.164)	0.106 (0.170)	0.133 (0.174)	0.177 (0.167)			-0.316 (0.424)
Turnover-POST			-0.006 (0.029)	-0.009 (0.030)				
Coverage-POST				0.016 (0.022)	0.009 (0.021)			
InsideOwnerDual						-0.301 (0.675)		
N	150	150	139	139	150	67	67	67
R ²	0.154	0.16	0.168	0.171	0.161	0.188	0.192	0.193
F	3.241	2.99	2.606	2.408	2.696	1.703	1.758	1.760
Adj-R ²	0.107	0.107	0.104	0.100	0.102	0.077	0.083	0.083

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.

Table 11
Seemingly unrelated regressions

$$BHAR_i = \mu + \sum_{j=1}^k \beta_j x_i^j + v_i$$

Dependent Variable: BHAR-POST & BHAR-PRE. Before and After SOX. Civil indicates the legal origin Civil or common law. Antidirectors equal the Antidirectors rights index. StockMarket is the Domestic Stock market development. InsiderOwner indicates that the firm has an insider-owner or group of insider-owners with at least 10% claim in the company. Ownership Concentration indicates that there is at least one investor, insider or outsider, which owns at least 10% of the firm. Dual-class equals to one if the firm uses more than one class of stock and with different voting rights. CapitalRaising indicates that the cross-listing is level 3. SOX equals one during and after the approval of SOX (2002). NYSE is a dummy variable if the firm's host stock exchange is the NYSE. Cross-Listed is a dummy variable equals to one in the cross-listing year and thereafter. InsiderCrossListed is the result of interaction Cross-Listed*InsiderOwner. Owner*Dual-Class is the interaction Ownership Concentration*Dual-class. InsideOwnerDual is the interaction Dual-Class * Insider Owner. SizeDifferential is the difference in log assets with the matching firm. Coverage-POST is the median number of analyst following a firm during the three years after cross-listing. Turnover-POST (Turnover-PRE) measures the turnover during the three-year post- (pre-) cross-listing period. The dependent variables are BHAR-POST in columns one to four and BHAR-PRE in columns five to eight.

	BHAR-POST				BHAR-PRE			
	Before	After	Before	After	Before	After	Before	After
InsiderOwner	-0.269** (0.125)	-0.176 (0.224)	-0.348** (0.139)	-0.135 (0.200)	0.937** (0.401)	0.157 (0.489)	0.960*** (0.360)	0.567 (0.571)
Civil	0.364 (0.232)	0.049 (0.357)	-0.051 (0.174)	0.278 (0.230)	-0.498 (0.585)	0.393 (1.180)	-0.454 (0.529)	-0.187 (1.220)
Antidirectors	0.177*** (0.063)	-0.091 (0.099)			0.288 (0.189)	0.644* (0.337)	0.31 (0.192)	0.484 (0.352)
StockMarket	-0.063 (0.058)	-0.102* (0.053)	-0.150** (0.059)	-0.070** (0.033)	-0.555* (0.321)	1.352*** (0.443)	-0.569* (0.302)	0.925* (0.514)
NYSE	0.361** (0.153)	0.341** (0.170)	0.356** (0.148)	0.333* (0.188)	-0.952 (1.135)	5.013*** (1.331)	-0.855 (1.099)	4.055** (1.826)
SizeDifferential	0.087 (0.058)	0.282*** (0.075)	0.117* (0.065)	0.285*** (0.069)	0.021 (0.411)	-0.041 (0.250)	-0.134 (0.417)	0.070 (0.182)
Dual-Class	-0.007 (0.172)	-0.232 (0.179)	-0.155 (0.166)	-0.179 (0.176)			-0.824** (0.365)	0.577 (0.854)
Turnover-POST			-0.01 (0.009)	0.011 (0.119)				
Coverage-POST			0.016 (0.022)	-0.007 (0.032)				
InsideOwnerDual					-0.555 (0.495)	1.900 (1.369)		
N	148		138		66		66	
Firm Effects	Yes		Yes		Yes		Yes	
Chi 2	13.35		6.91		25.76		10.65	
Significantly Different?	*		-		***		-	
Cluster	148		138		66		66	

Standard errors are in parentheses. * p<.10, ** p<.05, *** p<.01.