Available online at www.sciencedirect.com
SCIENCE DIRECT®
Journal of Financial Economics 75 (2005) 319–359
JOURNAL OF Financial ECONOMICS
www.elsevier.com/locate/econbase

Can foreign firms bond themselves effectively by renting U.S. securities laws?☆

Jordan Siegel*

Harvard Business School, Morgan Hall 231, Soldiers Field, Boston, MA 02163, USA

Received 7 July 2003; accepted 9 February 2004
Available online 29 September 2004

Abstract

The study tests the functional convergence hypothesis, which states that foreign firms can leapfrog their countries' weak legal institutions by listing equities in New York and agreeing to

☆The author wishes to thank Don Lessard, Simon Johnson, Tarun Khanna, Jack Coffee, John de Figueiredo, Craig Doidge, Art Durnev, Alexander Dyck, Bob Gibbons, Arnoldo Hax, Timothy Heyman, Chappell Lawson, Amir Licht, Michael Piore, Alfred Plotkin, Roberto Rigobon, Andrei Shleifer, Daniel Siegel, Richard Siegel, Andrei Simonov, Scott Stern, Michael Weisbach, Daniel Wolfenzon, Chris Woodruff, an anonymous referee, and participants in the 2003 Annual Meeting of the American Finance Association, the IESE Global Conference 2003, the MIT organizational economics lunch seminar, the Harvard University Seminar on Latin American Political Economy, the Asian Institute of Corporate Governance 2nd Annual Conference, the Academy of International Business annual conference, the MIT Finance Lunch Seminar, the 2002 International Strategy Conference at the University of Michigan Business School, and seminar audiences at Michigan, NYU, George Washington University, and Washington University in St. Louis for helpful comments and criticisms on earlier versions of this paper. The author also wishes to thank Guillermo Babatz, Yxa Bazan, Gustavo Bello, Víctor Cárdenas, Gonzalo Castañeda, Michael Chafkin, Andrés Conesa, Efrén del Rosal, Daniel Eppelsheimer, Beatriz Estrada, Kristin Forbes, Catherine Friedman, Brian Gendreau, Altagracia Gutierrez, Ángeles Hewett, Josefina Ibañez, Catalina Jaime, S.P. Kothari, Raúl Livas, Florencio Lopez-de-Silanes, Sylvia Maxfield, Todd Mitton, Claudia Pacheco, Michael Pavelecky, Enrique Pérez Alonso, Gaspar Quijano, Humberto Real, Alonso Ríos, Andrew Thompson, Lester Thurow, Theresa Tobin, Eduardo Trigueros, and 116 attorneys involved in cases with cross-listed foreign firms for their advice and support during the process of data collection. The author acknowledges the financial support of the Division of Research at Harvard Business School, and also expresses gratitude to Isela Nuñez, Erick Torres, and the Torres family for their logistical assistance and hospitality during data collection. The usual caveat applies.

*Tel.: +617-495-6303; fax: +617-496-6859
E-mail address: jsiegel@hbs.edu (J. Siegel).

0304-405X/$ - see front matter
doi:10.1016/j.jfineco.2004.02.001

follow U.S. securities law. Evidence shows that the SEC and minority shareholders have not effectively enforced the law against cross-listed foreign firms. Detailed evidence from Mexico further shows that while some insiders exploited this weak legal enforcement with impunity, others that issued a cross-listing and passed through an economic downturn with a clean reputation went on to receive privileged long-term access to outside finance. As compared with legal bonding, reputational bonding better explains the success of cross-listings.

JEL classification: F21; G15; G34; K22; K42

Keywords: Law and finance; Corporate governance; Cross-listings; Reputation; Bonding

1. Introduction

In the literature on corporate governance, numerous studies find that a lack of legal protections for minority shareholders impedes the broad sharing of financial resources between investors and firms. Weak rule of law is associated with small equity markets, few publicly listed firms, small size of publicly listed firms, small valuation of firms relative to their assets, smaller dividend payouts made to minority investors, a lower correlation between investment opportunities and actual investments, and fewer IPOs.[1] Other studies show that weak financial development leads subsequently to slower economic growth.[2] While countries often want to strengthen their institutions, a legal system that fails to protect minority shareholders often proves difficult to change (Roe, 1996; Milhaupt, 1998; Bebchuk and Roe, 1999).

A complementary solution is offered by the functional convergence hypothesis, developed most broadly by Coffee (1999, 2002). The functional convergence hypothesis states that any foreign firm can grow in spite of the home country's weak legal institutions by listing foreign shares on a major U.S. exchange (Nasdaq, NYSE, or Amex), either directly or through an American Depositary Receipt (ADR). American laws covering U.S.-listed foreign firms can potentially deter insiders from engaging in fraud and embezzlement. Using agency theory, Coffee, as well as Fuerst (1998) and Stulz (1999) predict that U.S. laws could protect minority shareholders.

In this empirical study, I examine whether U.S. laws and regulations deterred insiders of Mexican firms from engaging in illegal asset taking, how the U.S. legal and regulatory institutions responded once the alleged asset taking took place, and how the financial markets responded in allocating subsequent resources to Mexican firms. The market for cross-listings has grown dramatically in economic terms, and today more than 15% of all firms listed on the NYSE stock exchange are domiciled abroad. While there are purely financial reasons for a firm to list its shares in the

[1]See La Porta et al. (1997, 2000, 2002), Kumar et al (2001), Claessens et al. (2002), and Wurgler (2000).

[2]See Beck et al. (2000); Demirguc-Kunt and Maksimovic (1998); King and Levine (1993); Levine (1999); Levine and Zervos (1998); Morck et al. (2000); Rajan and Zingales (1998); Wurgler (2000); and Schumpeter (1911).

U.S. market (Karolyi, 1998), recent studies conducted by Reese and Weisbach (2002), Mitton (2002), Doidge et al. (2004) and Doidge (2004) provide evidence indicating the importance of legal bonding. This study offers an extended analysis of whether foreign firms have, indeed, been able to bond themselves effectively through an economic downturn. Further, it examines the SEC's 70-year enforcement record against all U.S.-listed foreign firms.

The study suggests that reputational bonding explains the growth of cross-listings better than legal bonding. Without effective enforcement, a cross-listing can create a moral hazard problem any time there is an economic downturn in the foreign country. U.S. law enforcement neither deterred nor punished a group of Mexican insiders who collectively took billions of dollars from their firms. The study finds, moreover, that the SEC has rarely been able to enforce U.S. securities laws against any U.S.-listed foreign firm. Minority shareholders frequently attempt to use the U.S. courts to enforce the securities laws against cross-listed foreign firms. However, institutional obstacles also hinder minority shareholders, and they are often forced to accept token settlements. The insiders responsible for the governance abuses rarely are forced to pay any significant compensation to the shareholders. The public knowledge of this impunity further compounds the moral hazard problem. Minority shareholders often receive the amount of insurance the firm purchased before the governance scandal, and nothing more.

Even without effective law enforcement, the voluntary disclosure and subsequent following that result from a cross-listing enable many firms to bond themselves by building their reputation. This study ultimately suggests that a reputational mechanism channeled resources to a group of Mexican firms with a record of abiding by U.S. law through bad economic times. More generally, the prospect of creating a reputational asset can lead many, but not all, firms to observe rules that they are not forced to follow.

The theoretical framework and context relevant to this study are discussed in Section 2. A discussion of the data and the variables follows in Section 3. Section 4 presents the empirical evidence on asset taking by Mexican firms. Section 5 analyzes the lack of an effective response by the SEC and other U.S. legal institutions. Section 6 analyzes the history of enforcement against all U.S.-listed foreign firms. Section 7 shows how reputational bonding can explain the growth of the market for cross-listings even in the absence of effective U.S. law enforcement. Finally, Section 8 concludes.

2. Theoretical framework and context

The first part of the functional legal convergence hypothesis states that U.S. laws and regulations effectively deter malfeasance by foreign firm insiders (Coffee 1999, pp. 683–684). Coffee proposes,

> "[A] firm that today enters the U.S. market becomes subject to the Foreign Corrupt Practices Act, which precludes not only bribes and 'questionable

payments,' but all forms of off-books accounts and falsification of accounting records'' (1999, p. 695).

A listed ADR requires a foreign firm to disclose all shareholders whose ownership interest is greater than 10%. Whenever the foreign firm makes a tender offer to buy another company, it has to follow U.S. disclosure and procedural rules. A cross-listed foreign firm is prohibited from taking advantage of minority shareholders through a ''going private'' transaction. Lastly, firms and their insiders become liable in court for any fraudulent statement they make anywhere around the world.

The first testable implication of Coffee's argument is that insiders, during an emerging market crisis, will not engage in large-scale asset taking against outside investors if they already have bonded themselves through a listed ADR. During a downturn, an insider may find higher relative returns derive from asset taking than productive firm investment. Johnson et al. (2000) present a theoretical model showing that owner-managers always have a choice between putting the firm's resources (including outsiders' contributions) towards either productive firm investment or theft. When a domestic economic downturn presents itself, the owner-manager sees lower personal returns from productive firm investment and relatively higher personal returns from moving the money to a foreign bank account. According to the formal model, only legal penalties can deter insiders from such forms of expropriation.

The second part of the functional legal convergence hypothesis is that even if foreign insiders engage in malfeasance, the SEC and other U.S. regulatory and legal institutions will effectively protect investors and punish the foreign firms and/or their insiders. Coffee proposes that the SEC and U.S. law enforcement agencies can punish cross-listed foreign firms and their insiders for their malfeasance through the federal securities law (1999, pp. 683–684). He argues that the combination of SEC oversight and overall U.S. law enforcement would be used in practice to minimize agency costs (1999, p. 684). More recently, Coffee (2002) argues that even if the SEC were less than fully effective (citing evidence from this study), foreign insiders would still fear being sued by the American plaintiffs' bar.

Several recent empirical studies recognize that ADRs might be an effective bonding mechanism (Blass and Yafeh, 2001; Doidge et al., 2004; Lang, Lins et al., 2003). Mitton (2002) is the first to test the effect of ADRs as a bonding instrument in an emerging market crisis. He finds that through the intense, initial phase of the Asian Crisis (July 1997 to August 1998), firms with ADRs were valued higher than other firms that had received the same valuation by investors just prior to the crisis. Reese and Weisbach (2002) show that firms use ADRs as partial substitutes for weak legal institutions, and find that firms from a French Civil Law country are twice as likely to list on a major U.S. exchange as firms from an English Common Law country. Reese and Weisbach (2002) find further that issuing an ADR could help firms to attract outside finance for at least two subsequent years following a U.S. listing.

Other authors call for further empirical study to directly test the legal bonding hypothesis (see, e.g., Cheung and Lee, 1995; Licht, 2000; Leuz, 2003). MacNeil

(2001) finds that the real legal commitments made by foreign firms that listed in London are not as strong as they first appeared. La Porta, Lopez-de-Silanes, Shleifer, and Vishny (henceforth LLSV) (2000) believe that cross-listing in New York would improve disclosure, but would not give minority shareholders many effective rights. Fanto (1996) goes even further in arguing that SEC disclosure requirements are effectively meaningless, and Licht (2000, 2003) argues that managerial opportunism might lead insiders to take advantage of poor U.S. enforcement. One would predict, based on these latter arguments, that Mexican firms could not use U.S. listings to bond themselves.

For a number of reasons, the Mexican case studied here provides the right set of conditions for testing whether legal bonding by U.S.-listed foreign firms is effective. By 1994, Mexico had the greatest number of firms in any emerging market to have tried the legal bonding strategy, with the firms raising in the aggregate more than USD$6 billion. Mexico is also among a large group of important emerging economies that rank low in terms of the strength of their shareholder and creditor rights and the quality of their overall law enforcement (LLSV, 1998). The legal convergence hypothesis contends that such countries have the most to benefit from cross-listings precisely because of their weak legal institutions.

Second, if one wants to test the strength of legal bonding for emerging market firms, it is important to look at the all-too-frequent economic downturns in emerging markets. Of course, firms and individuals break the securities law even during economically robust times, as illustrated by the almost 400 litigation releases issued by the SEC against American defendants in 1997, 1998, and 1999. Yet, as Johnson et al. (2000) show, there is theoretical reason to believe that even more is stolen from outside investors during an economic downturn, and unfortunately, downturns recur frequently in emerging economies. Park and Lee (2001) compile data on 239 crises that occurred between 1970 and 1997, including 160 independent crises. Each of these crises occurred in developing countries and were accompanied by IMF intervention. Therefore, bonding means nothing if outside shareholders are not protected from total loss of their investment during a downturn.

In late 1994, Mexican firms experienced a crisis after their government became insolvent and turned to the Clinton Administration for a bailout. What happened in Mexico is in no way a meltdown and is in no way unusual. Park and Lee (2001) and Lee and Rhee (2002) both show that the 1994–1995 downturn in Mexico is a representative case of an economy, having opened up to trade, experiencing a rapid fall in GDP that is subsequently followed by a rapid macroeconomic recovery.

Third, and most importantly, the Mexican sample of cross-listings can be distinguished by its lack of a sample selection bias. To control for sample selection bias, I test a long list of possible instruments, including political connectedness, export orientation, leverage, size, and prior access to foreign capital. I find that not a single one of these instruments has any explanatory value in predicting which Mexican firms cross-listed before the 1994–1995 economic downturn. If cross-listings were a new development with uncertain costs and benefits to Mexican firms in 1990, then it is no accident that the subsample of cross-listed Mexican firms would appear random. Nor is it an accident that the prior ADR literature has never identified the

determinants of cross-listing in a systematic study. Most, if not all, instruments that one could list are invalid because they also have a direct effect on later firm performance.

Endogeneity is less of a problem for the present analysis because cross-listings are shown to have actually increased the marginal probability of asset taking through moral hazard. The prior literature suggests that it is the highest-quality firms that issue cross-listings (Doidge et al., 2004). Yet even the Mexican firms that were cross-listed and scandal-free were not necessarily among the highest-quality firms when one measures ROA and market value creation. Lins et al. (2004) show how one feature that distinguishes firms with cross-listings from other foreign firms is the amount of outside liquid capital they receive after cross-listing. This study does not find evidence that the highest-quality firms issued cross-listings; rather, it suggests that the large amount of outside liquid capital raised primarily by cross-listed Mexican firms (see Appendix B) presented a moral hazard problem due to the lack of U.S. law enforcement.

3. Data and variables

This paper uses a database of all Mexican companies with a Mexican equity listing prior to the crisis of 1994–1995. I specifically include all companies that were listed on the Mexico Stock Exchange (MSE) prior to September 1994. Banca Quadrum and Servicios Financieros Quadrum were the same firm going through a reorganization and name change in 1994. Banca Quadrum, the listed parent firm that emerged from the reorganization, is the one included here.

3.1. Time period of interest

The intense period of the Mexico crisis began on September 30, 1994, when the MSE's IPC Index finished its plateau and began to fall precipitously. Mitton (2002) used a similar method for defining the start of the 1997–1998 Asia crisis. I measure whether the dominant owners of Mexican firms engaged, or were alleged to have engaged, in illegal or legal asset taking between 1 January 1995 and 31 December 1999. This time frame was selected because, although some insiders began engaging in asset taking during the intense period of the crisis, it sometimes took years before they were discovered. I also examine whether the SEC took any action against these firms between January 1, 1995 and June 30, 2002. Because nearly every case of alleged asset taking is believed to have begun at the start of the economic downturn, the SEC and other U.S. legal and regulatory institutions had more than seven years to act.

3.2. Dependent variables

This section describes all variables and data sources. Appendix A shows in greater detail the variables, as well as the collected data on listed ADRs, unlisted ADRs,

illegal asset taking, and legal asset taking. The summary statistics for all the variables are shown in Panels A and B of Table 1, and the correlation matrix is shown in Panel C.

The first set of variables measures whether law enforcement agencies, regulators, and/or minority shareholders publicly accused a firm or its insiders of having engaged in asset taking. Sources include *Reforma*, *El Norte*, *El Financiero*, *Sourcemex Economic News & Analysis on Mexico*, *Mexico Corporate Monthly*, *LatinFinance*, *Forbes*, *Dow Jones International News*, *Wall Street Journal*, *Wall Street Journal Europe*, company annual reports, and company press releases. A dummy variable equals one for illegal asset taking when a firm's controlling owner and/or senior manager allegedly took assets illegally and then was publicly confirmed as having fled Mexico for a period of at least a year. Mexican law enforcement eventually accused these controlling owners and/or senior managers of theft, fraud, or embezzlement between January 1, 1995 and December 31, 1999. The accusations were in nearly every case corroborated by a combination of outside shareholders, stock exchange officials, government officials, law enforcement officials, market analysts, and journalists. First and foremost, the illegal governance abuses largely took place in public view, with the insider being seen plundering the firm's assets and fleeing the country (in some cases, hiding in the U.S.).

A second variable simply measures whether regulators, law enforcement, or minority shareholders accused the firm's controlling owner and/or senior manager of illegal asset taking. While a continuous measure of the assets taken would be desirable, several cases described in Table 3 and Appendix D are still under investigation as part of a Mexican legal proceeding. Since sufficiently precise figures are not available, this analysis relies on absolute measures of whether asset taking allegedly took place.

The variable for legal asset taking equals one if a firm's controlling owner and/or senior manager was publicly accused of legal asset taking by minority shareholders, law enforcement, and/or public regulators. Legal asset taking is defined as the taking by controlling shareholders and/or senior managers of substantial funds for themselves in ways that are not clearly proscribed in Mexican law and that are not consistently punished in Mexico. Legal asset taking, for example, can involve secret loans from the firm to a private entity owned by the controlling shareholder, or gross financial mismanagement in which large sums disappear from the firm's balance sheet. A final dummy is set equal to one if a firm or its insider was accused of any type of asset taking.

The study then measures whether each firm received fresh capital from the public equity or debt markets following the crisis. I compile an exhaustive database of all public debt and equity capital raisings by Mexican firms between January 1, 1995 and December 31, 1999. I choose a five-year period because it can often take several years to build a track record of good corporate governance. All public debt must be registered with the (MSE) I purposely included all debt capital raisings of any type, including industrial debentures and banker's bonds. I match the MSE data on public debt and domestic equity capital raisings with data from a Citibank database on foreign equity capital raisings by Mexican firms. The data are crosschecked with the

Table 1
Summary Statistics

Variable	Obs.	Mean	Std. Dev.	Min	Max
Panel A: variables					
Continuous variables					
[1] Amount of outside resources a firm received within five years of the crisis (in log form) Sources: Mexico Stock Exchange (MSE), Citibank ADR database, BONY ADR database, *Reforma*, *El Norte*, *El Financiero*, *Sourcemex Economic News & Analysis on Mexico*, *Mexico Corporate Monthly*, *LatinFinance*, *Forbes*, *Dow Jones International News*, *Wall Street Journal*, *Wall Street Journal Europe*, company annual reports, and company press releases	183	3.53	4.08	0.00	9.68
[2] Firm's 1993 Short-term foreign liabilities/Total liabilities Source: MSE	183	0.15	0.18	0.00	0.76
[3] Firm's 1993 Total liabilities/Total assets Source: MSE	183	0.49	1.10	0.00	14.86
[4] Firm's 1993 Foreign sales/National sales Source: MSE	183	0.15	0.65	0.00	7.72
[5] Firm's 1993 Log of assets Source: MSE	183	19.81	1.72	15.60	23.78
Indicator variables					
[6] Firm's owner and/or senior management engaged in illegal asset taking and fled Mexico	183	0.04	0.21	0.00	1.00
[7] Firm's owner and/or senior management was accused of any type of asset taking	183	0.13	0.34	0.00	1.00
[8] Firm's owner and/or senior management was accused of illegal asset taking	183	0.07	0.25	0.00	1.00
[9] Firm's owner and/or senior management was accused of legal asset taking Sources for variables [6]–[9]: Reforma, El Norte, El Financiero, Sourcemex Economic News & Analysis on Mexico, Mexico Corporate Monthly, LatinFinance, Forbes, Dow Jones International News, Wall Street Journal, Wall Street Journal Europe, company annual reports, and company press releases	183	0.11	0.32	0.00	1.00
[10] Firm received outside resources through equity, bonds, or syndicated loans in the five years after the crisis Sources: Mexico Stock Exchange (MSE), Citibank ADR database, BONY ADR database, *Reforma*, *El Norte*, *El Financiero*, *Sourcemex Economic News & Analysis on Mexico*, *Mexico Corporate Monthly*, *LatinFinance*, *Forbes*, *Dow Jones International News*, *Wall Street Journal*, *Wall Street Journal Europe*, company annual reports, and company press releases	183	0.44	0.50	0.00	1.00
[11] Firm has ADR	183	0.32	0.47	0.00	1.00
[12] Firm has listed ADR	183	0.13	0.33	0.00	1.00
[13] Firm has unlisted ADR Sources for variables [11]–[13]: SEC filings, Citibank ADR database	183	0.19	0.39	0.00	1.00
[14] Firm has owner seated in CMHN Sources: Schneider (2002), SEC filings, interviews with market analysts	183	0.20	0.40	0.00	1.00
[15] Foreign firm owns at least 10% of the Mexican firm Sources: company filings, interviews with senior managers	183	0.23	0.43	0.00	1.00

[16] Firm owned a 10% share in a bank pre-crisis Sources: company filings, interviews with senior managers	183	0.16	0.37	0.00	1.00
[17] Recommended by Baring Research Group for being a high-quality firm Source: Baring Research Group	183	0.05	0.23	0.00	1.00
[18] Firm's price-to-book-value ratio (PBVR) Source: MSE	113	2.29	4.37	−32.23	28.32
[19] Age of firm since incorporation Source: MSE	181	24.64	21.21	0.00	93.00
[20] (Age of firm since incorporation)-squared Source: MSE	181	1054.12	1547.99	0.00	8649.00
Firm belongs to:					
[21] Petroleum industry (PET)	183	0.01	0.07	0.00	1.00
[22] Finance/real estate industry (FRE)	183	0.27	0.45	0.00	1.00
[23] Consumer durables industry (CDR)	183	0.11	0.32	0.00	1.00
[24] Basic industry (BAS)	183	0.15	0.36	0.00	1.00
[25] Food/tobacco industry (FTB)	183	0.15	0.36	0.00	1.00
[26] Construction industry (CNS)	183	0.09	0.28	0.00	1.00
[27] Capital goods industry (CAP)	183	0.03	0.16	0.00	1.00
[28] Transportation industry (TRN)	183	0.02	0.13	0.00	1.00
[29] Utilities industry (UTI)	183	0.02	0.15	0.00	1.00
[30] Textiles/trade industry (TEX)	183	0.10	0.31	0.00	1.00
[31] Services industry (SVS)	183	0.02	0.13	0.00	1.00
[32] Leisure industry (LSR) Source for variables [21]–[32]: MSE	183	0.03	0.16	0.00	1.00

Variable	No ADR of Any Type = 125 firms				ADR (Any Type) = 58 firms				Listed ADR = 23 firms				Unlisted ADR = 35 firms			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
Panel B: univariate statistics by ADR type																
[1] Amount of outside resources a firm received within five years of the crisis (in log form)	2.60	3.75	0.00	9.20	5.51	4.07	0.00	9.68	6.65	3.62	0.00	9.68	4.77	4.23	0.00	9.64
[2] Firm's 1993 Short-term foreign liabilities/Total liabilities	0.14	0.19	0.00	0.76	0.16	0.18	0.00	0.65	0.15	0.17	0.00	0.58	0.17	0.18	0.00	0.65
[3] Firm's 1993 Total liabilities/Total assets	0.52	1.32	0.00	14.86	0.41	0.26	0.00	1.15	0.43	0.22	0.00	0.96	0.40	0.29	0.00	1.15
[4] Firm's 1993 Foreign sales/National sales	0.16	0.75	0.00	7.72	0.12	0.36	0.00	1.88	0.13	0.39	0.00	1.85	0.12	0.34	0.00	1.88
[5] Firm's 1993 Log of assets	19.41	1.77	15.60	23.78	20.68	1.22	17.91	23.63	20.85	1.31	17.91	23.63	20.57	1.16	18.07	22.90
[6] Firm's owner and/or senior manager engaged in illegal asset taking and fled Mexico	0.02	0.15	0.00	1.00	0.09	0.28	0.00	1.00	0.04	0.21	0.00	1.00	0.11	0.32	0.00	1.00
[7] Firm's owner and/or senior manager was accused of any type of asset taking	0.07	0.26	0.00	1.00	0.26	0.44	0.00	1.00	0.26	0.45	0.00	1.00	0.26	0.44	0.00	1.00
[8] Firm's owner and/or senior manager was accused of illegal asset taking	0.03	0.18	0.00	1.00	0.14	0.35	0.00	1.00	0.09	0.29	0.00	1.00	0.17	0.38	0.00	1.00

Table 1 (*continued*)

Variable	No ADR of Any Type = 125 firms				ADR (Any Type) = 58 firms				Listed ADR = 23 firms				Unlisted ADR = 35 firms			
	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max	Mean	Std. Dev.	Min	Max
[9] Firm's owner and/or senior manager was accused of legal asset taking	0.06	0.23	0.00	1.00	0.24	0.43	0.00	1.00	0.26	0.45	0.00	1.00	0.23	0.43	0.00	1.00
[10] Firm received outside resources through equity, bonds, or syndicated loans in the five years after the crisis	0.34	0.47	0.00	1.00	0.66	0.48	0.00	1.00	0.78	0.42	0.00	1.00	0.57	0.50	0.00	1.00
[14] Firm has owner seated in the CMHN	0.11	0.32	0.00	1.00	0.40	0.49	0.00	1.00	0.35	0.49	0.00	1.00	0.43	0.50	0.00	1.00
[15] Foreign firm owns at least 10% of the Mexican firm	0.21	0.41	0.00	1.00	0.29	0.46	0.00	1.00	0.26	0.45	0.00	1.00	0.31	0.47	0.00	1.00
[16] Firm owned a 10% share in a bank pre-crisis	0.15	0.36	0.00	1.00	0.19	0.40	0.00	1.00	0.39	0.50	0.00	1.00	0.06	0.24	0.00	1.00
[17] Recommended by Baring Research Group for being a high-quality firm	0.02	0.13	0.00	1.00	0.14	0.35	0.00	1.00	0.17	0.39	0.00	1.00	0.11	0.32	0.00	1.00
[18] Firm's Price-to-book-value Ratio (PBVR)	2.45	3.59	0.17	28.32	2.10	5.21	−32.23	9.20	2.96	1.68	0.58	7.45	1.42	6.79	−32.23	9.20
[19] Age of firm since incorporation	26.59	21.90	0.00	93.00	20.48	19.18	1.00	69.00	20.96	19.10	1.00	58.00	20.17	19.51	2.00	69.00
[20] (Age of firm since incorporation)-squared	1182.87	1681.15	0.00	8649.00	781.07	1185.90	1.00	4761.00	788.00	1171.95	1.00	3364.00	776.51	1212.00	4.00	4761.00
[21] Petroleum industry (PET)	0.00	0.00	0.00	0.00	0.02	0.13	0.00	1.00	0.00	0.00	0.00	1.00	0.03	0.17	0.00	1.00
[22] Finance/real estate industry (FRE)	0.32	0.47	0.00	0.00	0.17	0.38	0.00	1.00	0.13	0.34	0.00	1.00	0.20	0.41	0.00	1.00
[23] Consumer durables industry (CDR)	0.14	0.35	0.00	0.00	0.05	0.22	0.00	1.00	0.04	0.21	0.00	1.00	0.06	0.24	0.00	1.00
[24] Basic industry (BAS)	0.17	0.38	0.00	0.00	0.12	0.33	0.00	1.00	0.13	0.34	0.00	1.00	0.11	0.32	0.00	1.00
[25] Food/tobacco industry (FTB)	0.14	0.35	0.00	0.00	0.17	0.38	0.00	1.00	0.22	0.42	0.00	1.00	0.14	0.36	0.00	1.00
[26] Construction industry (CNS)	0.06	0.23	0.00	0.00	0.16	0.37	0.00	1.00	0.22	0.42	0.00	1.00	0.11	0.32	0.00	1.00
[27] Capital goods industry (CAP)	0.02	0.13	0.00	0.00	0.05	0.22	0.00	1.00	0.00	0.00	0.00	1.00	0.09	0.28	0.00	1.00
[28] Transportation industry (TRN)	0.00	0.00	0.00	0.00	0.05	0.22	0.00	1.00	0.04	0.21	0.00	1.00	0.06	0.24	0.00	1.00
[29] Utilities industry (UTI)	0.00	0.00	0.00	0.00	0.07	0.26	0.00	1.00	0.17	0.39	0.00	1.00	0.00	0.00	0.00	1.00
[30] Textiles/trade industry (TEX)	0.10	0.31	0.00	0.00	0.10	0.31	0.00	1.00	0.04	0.21	0.00	1.00	0.14	0.36	0.00	1.00
[31] Services industry (SVS)	0.02	0.15	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
[32] Leisure industry (LSR)	0.02	0.15	0.00	0.00	0.03	0.18	0.00	1.00	0.00	0.00	0.00	1.00	0.06	0.24	0.00	1.00

	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]	[18]	[19]	[20]

Panel C: correlation matrix. (see Panels A and B for the key)

[1]	1.000							
[2]	0.020	1.000						
[3]	0.111	0.105	1.000					
[4]	0.072	0.285***	0.002	1.000				
[5]	0.438***	−0.113	−0.001	−0.005	1.000			
[6]	0.028	−0.069	−0.007	−0.006	0.165**	1.000		
[7]	0.155**	0.040	0.201***	−0.043	0.195***	0.550***	1.000	
[8]	−0.053	−0.063	0.004	−0.021	0.195***	0.807***	0.682***	1.000

[9]	0.143*	0.084	0.208***	−0.033	0.157**	0.426***	0.923***	0.528***	1.000													
[10]	0.984***	0.015	0.090	0.089	0.401***	0.027	0.147**	−0.055	0.132*	1.000												
[11]	0.333***	0.060	−0.045	−0.026	0.345***	0.142*	0.257***	0.199***	0.271***	0.299***	1.000											
[12]	0.292***	0.012	−0.020	−0.009	0.230***	0.000	0.146**	0.033	0.174**	0.264***	0.557***	1.000										
[13]	0.149**	0.061	−0.037	−0.024	0.215***	0.168**	0.182**	0.208***	0.174**	0.132*	0.714***	−0.184**	1.000									
[14]	0.320***	0.087	0.124*	0.000	0.322***	0.092	0.208***	0.087	0.246***	0.270***	0.330***	0.138*	0.274***	1.000								
[15]	−0.010	0.143*	0.088	0.036	0.049	−0.119	−0.063	−0.147**	−0.038	−0.021	0.093	0.023	0.091	0.074	1.000							
[16]	0.215***	0.035	−0.034	−0.025	0.094	−0.095	0.047	−0.117	0.072	0.205***	0.047	0.233***	−0.140*	0.108	0.138*	1.000						
[17]	0.211***	−0.011	−0.024	−0.031	0.270***	−0.051	−0.093	−0.064	−0.087	0.176*	0.250***	0.199***	0.128*	0.298***	0.037	0.218***	1.000					
[18]	0.029	−0.110	−0.036	−0.084	−0.015	−0.359***	−0.201**	−0.284**	−0.202***	0.025	−0.040	0.076	−0.116	−0.136	−0.008	0.030	0.062	1.000				
[19]	−0.061	0.146**	0.025	0.016	−0.050	−0.094	−0.128*	−0.141*	−0.102	−0.052	−0.135*	−0.066	−0.103	−0.037	0.109	0.056	0.147**	−0.013	1.000			
[20]	−0.052	0.099	0.003	−0.001	−0.018	−0.065	−0.102	−0.109	−0.078	−0.047	−0.122	−0.066	−0.088	−0.041	0.081	0.026	0.122	−0.004	0.944***	1.000		
[21]	−0.064	−0.006	0.024	−0.007	−0.039	−0.016	−0.029	−0.020	−0.027	−0.065	0.109	−0.028	0.152**	−0.037	−0.041	−0.033	−0.018		0.051	0.023		
[22]	−0.010	−0.500***	−0.038	−0.142*	0.186**	0.229***	0.089	0.184**	0.010	−0.021	−0.154**	−0.122	−0.080	−0.095	−0.224***	−0.238***	−0.147**	0.0962	−0.135*	−0.030		
[23]	−0.0951	0.364***	−0.031	0.229***	−0.251***	−0.077	−0.038	−0.095	−0.022	−0.075	−0.135*	−0.085	−0.088	−0.096	0.205***	0.026	−0.011	−0.028	0.114	0.034		
[24]	0.022	0.192***	0.167**	0.132*	0.013	−0.091	0.015	−0.051	0.038	0.023	−0.061	−0.024	−0.052	0.013	0.194***	0.140*	0.031	−0.096	0.125*	0.082		
[25]	0.031	0.041	−0.061	−0.085	0.090	−0.091	−0.120	−0.113	−0.105	0.023	0.037	0.068	−0.014	0.164**	0.051	0.140*	0.165**	0.087	−0.079	−0.090		
[26]	0.106	−0.019	−0.018	−0.035	0.043	−0.066	−0.063	−0.082	−0.051	0.117	0.163**	0.174**	0.046	0.037	−0.035	0.072	0.096	0.039	0.016	0.003		
[27]	−0.010	−0.007	0.001	0.001	0.027	−0.036	0.134*	0.226***	0.150**	−0.013	0.102	−0.064	0.174**	−0.001	−0.093	−0.074	−0.040	0.053	−0.047	−0.036		
[28]	0.068	0.093	0.038	0.065	0.090	0.393***	0.205***	0.314***	0.224***	0.060	0.190**	0.081	0.156**	0.149**	−0.072	0.059	−0.031	−0.439***	−0.055	−0.051		
[29]	0.194***	−0.011	−0.019	−0.018	0.1236*	−0.032	0.053	−0.040	0.063	0.170**	0.220***	0.394***	−0.073	0.111	0.093	0.035	0.129*	0.096	−0.040	−0.036		
[30]	−0.088	0.040	−0.023	−0.057	−0.146**	−0.073	−0.026	−0.090	−0.010	−0.083	−0.001	−0.075	0.062	−0.082	−0.020	−0.006	−0.082	0.007	0.087	0.100		
[31]	−0.112	−0.060	−0.013	−0.007	−0.156**	−0.028	−0.050	−0.034	−0.047	−0.114	−0.088	−0.049	−0.063	−0.065	−0.072	−0.057	−0.031		−0.071	−0.065		
[32]	−0.022	0.091	−0.012	−0.025	−0.115	−0.036	−0.065	−0.044	−0.060	−0.013	0.030	−0.064	0.089	−0.001	−0.093	−0.074	−0.040	−0.004	0.009	−0.013		

Note: One cell was blank because there were no PBVR data in late September 1994 for the one firm in the petroleum industry.
Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.

Bank of New York public ADR database, each of the earlier-named periodicals, and each company's own financial releases. To facilitate comparison across firms, I convert all peso-denominated capital raisings into U.S. dollars using the exchange rate on the exact day that the capital raisings were realized. The capital raisings are then converted into 1995-constant dollars by discounting the 1996–1999 data for annual changes in the U.S. consumer price index. Because the numbers range from the millions to the tens of billions of dollars, I take the log of the above final number.

3.3. Principal independent variables

Mexican firms cross-listed through the four types of ADRs. While firms also have the option of listing their shares directly on a U.S. exchange, there are no examples of a Mexican-domiciled firm that had done so during the period studied here. Firms that did not raise fresh capital in the U.S. equity market chose between a Level I and a Level II ADR. The Level I ADR trades on the over-the-counter (OTC) market, with bid and ask prices published daily in the pink sheets; a Level I ADR can potentially place a firm under the microscope of institutional investors, but does not offer investors any legal protection. The Level II ADR, in contrast, comes under the jurisdiction of the U.S. SEC. The firm must list its shares on one of the three main U.S. exchanges and follow the strict listing requirements of those exchanges. The firm must reconcile its financial statements to meet U.S. accounting standards (U.S. GAAP) and must deliver detailed financial information to the SEC (Rock, 2002). The firm's senior managers and directors are liable in U.S. courts for any material misstatements or other securities law violations.

Mexican firms that did raise new capital in the U.S. equity market chose between a Rule 144a ADR and a Level III ADR. Firms that wanted to avoid SEC oversight could use Rule 144a to sell their shares privately to a select group of Qualified Institutional Buyers (QIBs), including Fidelity, Alliance Capital, and Janus. Alternatively, firms issued a Level III ADR, for which the SEC requires a full reconciliation of the firm's financial statements with U.S. GAAP. The firm under Level III ADRs faces U.S. legal liability and sells its new shares on the NYSE, NASDAQ, or AMEX.

The first pair of independent variables measures whether the firm had a listed or unlisted ADR prior to September 1994. For this study, I include Hylsamex, a firm that had submitted its financial information to the public and that received approval for its unlisted ADR just prior to the crisis. Hylsamex's shares did not begin trading in the U.S. until four weeks after the crisis began. Inclusion of this firm does not substantively affect any of the results. Data come from a combination of SEC filings and a Citibank database covering all information supplied by the various depositary banks. This study differentiates between Level I/Rule 144a ADRs that carry little, if any, legal protection for investors and Level II/Level III ADRs that do offer such protection. A dummy variable equals one when a firm had a listed ADR (Level II or Level III) prior to September 30, 1994. A second dummy equals one when the firm had an unlisted ADR (Rule 144a or Level I) prior to September 30, 1994.

3.4. Control variable

The next set of variables measure other important firm characteristics that could explain variation in the dependent variables. Political connectedness, for example, can be an important characteristic affecting performance. Fisman (2001) shows that as much as a quarter of the market capitalization of some Indonesian firms was derived from their ties to the Suharto government. Schneider (2002) shows that, in the case of Mexico, an elite group of businessmen belonging to the *Consejo Mexicano de Hombres de Negocio* (Mexican Council of Businessmen, or CMHN) was granted special access to the Mexican president. The CMHN, until the last election, even enjoyed limited veto power over the selection of the ruling party's presidential candidate. Lopez-de-Silanes and Zamarripa (1995) provide empirical evidence showing that auction winners in the Mexican privatization of government-owned banks received an average discount of 20% on the book value of assets because the auctions were not fully competitive. While the CMHN supposedly represents only the largest firms, its membership list from December 1993 shows that several of the largest firms in Mexico were not represented and that some businessmen from medium-sized firms had won the secret vote for membership.

A dummy variable for political connectedness equals one for firms whose owner and/or senior executive were represented in the CMHN. I include only firms in which the largest part of the representative's wealth was invested. Information is obtained from 20-F filings and interviews with market analysts to determine where the largest part of the representative's wealth was invested. Data on CMHN membership is from Schneider (2002).

Interviews with Mexican managers suggest that having a foreign owner, even a minority foreign owner, could improve outside monitoring and, thus, firm-level governance and performance over time. Another dummy equals one if a foreign entity owned more than 10% of the firm. The data comes from company filings and interviews with senior managers.

A third dummy variable equals one if a firm and/or its controlling shareholder owned at least a 10% stake in a separate Mexican banking institution. Although the Mexican banking system largely failed after the crisis, not all banks in the sample collapsed. The government took over many banks, but before it offered a bailout of the sector, several insiders had used money from their non-banking firms to prop up their ailing bank. To measure this variable, I use data from company filings and interviews with managers.

I include additional controls for underlying firm quality, reputation, and growth opportunities, as it is essential in testing the effectiveness of an institutional strategy to control for these factors. One important control variable is a forward-looking analyst measure of firm quality taken before the economic downturn began. A January 1992 publication from Baring Casa de Bolsa provides detailed buy, sell, and hold recommendations on Mexican firms. A dummy equals one for firms that received a buy or core-holding recommendation. From 1993 to 1995, Baring Casa de Bolsa was recognized in the *Institutional Investor*'s "All Latin America Research Survey" and in *Globalfinance* magazine as having one of the best Mexican research

teams. I confirm through archival research that the same firms being recommended by Baring were also recommended by the Research Department at Grupo Financiero Banamex-Accival. Another important control variable is a proxy for growth opportunities. I use the price-to-book-value ratio (PBVR) for all firms with minimally liquid stock in the month prior to the initial onset of the crisis. The value taken is for the last trading date in September, just prior to the initial decline in the IPC index. Next, to control for the firm's reputation, it is important to note that, as in many emerging economies, the number of new entrepreneurs coming to market sharply increases after liberalization. In the Mexican case, the number of firms listed on the MSE roughly doubled between 1989 and 1994. As a result, many firms were "unknown quantities," making it difficult to distinguish among them based on most known factors. The most fundamental proxy for reputation is the age of the firm at the time of the crisis. I therefore control for firm age in years as of September 1994. Using the log of the firm's age since first incorporation has no significant effect on the results of the models, although the age variable itself tends to lose some statistical significance when measured in log form. Furthermore, given the fact that as age increases its positive effect on building reputation may continue to increase though at a slower rate, I also control for the square of the firm's age as of September 1994. An alternative but similar control would be the number of years since the firm's IPO in Mexico. These two variables have a high correlation, and the results are the same regardless of which one is used.

Next, I include four control variables that measure each firm's financial condition, size, sources of finance, and export orientation. If these controls were not included, one might ask whether the coefficient for cross-listings is really being determined by these more obvious sources of firm heterogeneity. Data for each of these four variables come from the MSE. First, firms with short-term foreign liabilities, ceteris paribus, will suffer disproportionately from the all-too-frequent currency devaluations that plague most emerging economies. The cost of dollar-denominated debt could explode relative to other firms in the home economy, and this explosion could dramatically reduce the returns to projects within the firm and make this group of insiders more likely to engage in asset taking. Therefore, I measure each firm's short-term foreign liabilities divided by total liabilities for the year 1993.

Second, there is an ongoing debate about whether leverage facilitates bonding or tempts a firm's insiders to expropriate outsiders in environments with weak legal institutions. Because the literature continues to focus on this variable, it is important to confirm that it is not driving the underlying results on cross-listings. To focus on a firm's overall indebtedness, I measure each firm's total liabilities divided by total assets for the year 1993.

Third, export orientation, itself seen as a sign of quality in many recent studies, also has a direct effect on an emerging-market firm's cash flows during an economic downturn at home. If the home country's currency is devalued as part of the downturn, as is often the case, having a dollar-denominated foreign revenue stream will raise the dollar-denominated cash flow relative to other home-country firms and, thus, reduce the relative likelihood of insider asset taking. A lower likelihood of asset taking can, in turn, increase the attractiveness of the firm to outside resource

providers. To focus on export orientation, each firm's foreign sales are divided by Mexican national sales for the year 1993. Fourth, it is important to control for firm size, given that it could have an important effect on market power and access to outside finance. I therefore take the natural log of each firm's 1993 total assets. Finally, I control for industry effects, as the last two decades of Strategy research have shown strong within-country correlations in firm-level performance by industry. Thus, it is important to confirm that industry effects are not driving the main results of interest. I apply Campbell's (1996) method and include dummies for 11 of 12 industrial sectors, with the consumer durables dummy being dropped.

4. Asset taking

Since the legal bonding hypothesis proposes that ADRs deter all major forms of asset taking by foreign insiders, I initially focus the analysis on deterrence.

First, as Table 2 shows, eight firms had their insiders take assets illegally and leave Mexico for at least a year. Leaving one's own firm and exiting Mexico for a period of up to several years is the most perfectly observable action of all. Some of the insiders in these cases selected the United States and Canada as their hiding places—a surprising choice if they had feared the U.S. legal jurisdiction. It is also interesting to note that only insiders in the financial services and transportation sectors took assets illegally and fled the country. Although there are not enough instances of this type to use multivariate analysis, the important observation is that all eight of the firms either had ADRs or were tied to firms with ADRs. Three had listed ADRs directly, three were directly part of a financial group with a listed ADR, and two had unlisted ADRs.

Next, I examine all cases of illegal and legal asset taking by Mexican insiders. The data in Table 3 and Appendix D show that the insiders of cross-listed firms were alleged to have stolen hundreds of millions of dollars. Moreover, the illegal abuses covered in this study were not exposed by SEC-mandated reports. Nearly every one of the large-scale illegal governance abuses took place in public view, often meaning that the insider was seen leaving Mexico and that business associates witnessed the firm's looting. As of 2004, insiders of three more cross-listed Mexican firms had been publicly accused of illegal asset taking for actions they publicly took in even more recent years. A significant number of insiders clearly were not deterred by witnessing how the U.S. securities law was enforced against others in the years after the Mexico crisis.

The severity of this asset taking by Mexican insiders is the strongest empirical rejection so far of the legal deterrence hypothesis. In nearly all illegal asset taking cases, the insider did not contest the substance of the allegation, but only the legal penalty. As described in Panel A of Table 1, 11 firms had insiders accused of illegal asset taking, and 20 firms had insiders accused of legal asset taking. Of the 11 firms whose insiders were accused of illegal asset taking, two had a listed ADR directly and six had an unlisted ADR. Of the 20 firms whose insiders were accused of legal asset taking, six had a listed ADR and eight had an unlisted ADR.

In Table 4, I perform a Probit analysis. For ease of interpretation, rather than reporting the coefficients, I report the change in the probability of asset taking for an infinitesimal change in each independent, continuous variable, and the discrete change in the probability of asset taking for dummy variables. These were generated using the dprobit STATA command. As shown with all controls included in Model 3, having a listed ADR was associated with a 37.40% greater likelihood ($p<.01$) of having an insider engage in any type of asset taking. Moreover, having a cross-listing is significantly associated with all types of asset taking in isolation. As shown with all controls included in Model 10, having a listed ADR is associated with a 37.26% greater likelihood ($p<.05$) of having an insider engage in legal asset taking. The results are robust even when I artificially reduce the sample so that the mean size and foreign-denominated indebtedness are the same for firms with or without cross-listings. Also, the results are substantively similar when the financial sector is temporarily excluded. Furthermore, I confirm that the cross-listed firms and the firms without cross-listings have a difference regarding export orientation and overall leverage only due to one outlier in each case. The results are robust even when one artificially removes the two outliers. I further confirm that when the one outlier with a liabilities-to-assets ratio of 14.86 is dropped, the results continue to be robust. As a further robustness check, I investigate and confirm that the combination of having foreign-currency-denominated debt and a low export orientation is not driving the results.

Table 2
These firms had insiders who were confirmed by law enforcement, shareholders, and regulators as having illegally taken assets and having fled Mexico

Firm	Firm has ADR or is tied to firm with ADR	Insider's chosen destination
Abaco Grupo Financiero, S.A. de C.V.	Listed ADR	Suburb of Vancouver, BC, Canada[a]
Aerovias de Mexico, S.A. de C.V.	Listed ADR	Switzerland
Banco Mexicano, S.A.	Owned by Grupo Financiero Invermexico, which had listed ADR	San Antonio, TX, USA
Banpais, S.A.	Listed ADR	San Diego, CA, USA
Corporacion Mexicana de Aviacion, S.A. de C.V.	Unlisted ADR	Switzerland
Grupo Financiero Asemex Banpais, S.A. de C.V.	Owned Banpais, which had Listed ADR	Spain
Grupo Financiero Invermexico, S.A. de C.V.	Unlisted ADR	San Antonio, TX, USA
Grupo Financiero Mexival, S.A. de C.V.	Partner Firm with Banpais, which had Listed ADR	Spain

Note: These eight cases involved five Mexican individuals; hence, the same destination appears twice in some cases.

[a]The chief insider was arrested in Nuevo Leon, Mexico, but one of the chief codefendants and a director of the financial group was arrested in Canada in May 2001 by way of a Mexican extradition request.

The primary theoretical question of interest is whether having a listed ADR deters large-scale asset taking during an economic downturn. The answer, as reported in Tables 2–4 and Appendix D, is unequivocally no. A large number of Mexican insiders engaged in large-scale asset taking despite the fact that they had bonded themselves and their firms through a listed ADR.

5. U.S. institutional response

The SEC has done little to punish Mexican controlling shareholders who engaged in illegal asset taking. The SEC's only punishment of Mexican firms since the crisis has been to delist six Mexican firms together with the NYSE: Altos Hornos de México, Grupo Sidek, Banpais, Grupo Mexicano de Desarollo, Grupo Financiero Serfin, and Bufete Industrial. Two individual series of Grupo Iusacell shares were delisted due to the low number of shares in public hands, and the share series were then reorganized and sold to what is now Verizon Communications. Interestingly, of the six firms delisted, Banpais was the only one whose controlling shareholder was charged with illegal asset taking in Mexico. The NYSE made its decision separately, on the grounds of Banpais' failure to meet the objective NYSE listing criteria relating to the firm's share price, stockholder equity, and market capitalization.

A Lexis search of all U.S. federal and state court cases in the last six years shows that none of these Mexican firms has been charged by the U.S. government with wrongdoing under the securities laws. In addition, there has been only one private civil case involving a Mexican firm (Banpais) for violations of the U.S. securities laws, and that case was filed shortly before the Mexican crisis began. What is most interesting is that Mexican insiders allegedly looted the firm months after that case resulted in a $9.25 million settlement. Fear of the U.S. plaintiffs' bar (Coffee, 2002) clearly did not deter these insiders.

There have been isolated disputes over contracts and other matters that do not fit the criteria set out above. For example, in May 2001, the SEC charged two groups of Mexican investors with illegal insider trading of U.S.-listed firms. The SEC did not charge them with any wrongdoing within their own Mexican firms. Nor has the SEC taken any legal action directly against the Mexican firms that these investors control. Moreover, there has not been a single U.S. case in which either the government or a private party sought redress for the same illegal asset taking that was an indictable crime in Mexico. Although the SEC has (sometimes) enforced the law against securities fraud for U.S. firms, it has taken no action to recover any of the billions of dollars taken from investors in U.S.-listed Mexican firms.

6. Legal action taken against all cross-listed foreign firms

Further evidence shows that the SEC has rarely acted effectively to enforce the law against any cross-listed foreign firm. Assuming that the past findings have some merit, one would predict that the SEC has had a record of punishing violations by

Table 3
This table provides details on the accusations of illegal asset taking

Firm	Brief summary of the accusations of illegal asset taking	Year in which the illegal asset taking allegedly took place	Those making the accusation	What subsequently happened to the firm and the firm's owner/senior manager
Abaco Grupo Financiero, S.A. de C.V.	Jorge Lankenau raised $170 million from Abaco's customers, shareholders, and other investors for a high-yield bond fund. Regulators alleged that instead of purchasing bonds, Lankenau invested $130 million in Abaco stock. Another $40 million was invested in an Atlanta land deal. After learning some of the facts, minority shareholders tried to pull their money out. To back up the redemptions, Lankenau allegedly stole $80 million from Abaco's Banca Confia to put in the fund. After regulators caught him a second time, Lankenau allegedly put $75 million of the $80 million back into Banca Confia. Another $5 million disappeared, and regulators suspected that Lankenau actually stole the $5 million plus an undetermined percentage of the initial $170 million. A codefendant named Jose Raul Monter Ortega was a director and stands accused of participating in the fraud.	1996–97	Customers, minority shareholders and Mexican regulators	Lankaneu was first put under house arrest and, later, put in prison in northern Mexico on charges of fraud and embezzlement. Monter Ortega was arrested in Canada in May 2001 through a Mexican extradition request. Another insider, Eduardo Camarena Lagaspi, was a fugitive for five years before being arrested in the U.S. in 2002. Mexico's National Banking and Securities Commission (CNBV) was the first to investigate the charges. The CNBV ordered the sale of Abaco's Banca Confia to Citibank at a firesale price of $45 million together with a commitment to recapitalize the bank with an infusion of $120 to $130 million in fresh capital. Both the Mexican Stock Exchange and the New York Stock Exchange subsequently delisted Abaco Group Financiero.

Aerovias de Mexico, S.A. de C.V.	Executive Gerardo de Prevoisin Legorreta allegedly embezzled $61 million at the start of the Mexico crisis from the parent company of the Aeromexico and Mexicana airlines.	September, 1994	Minority shareholders and Mexican law enforcement	Gerardo de Prevoisin Legorreta was arrested in Zurich, Switzerland in August 1998. He was brought to Mexico, spent time in prison, and then was allowed bail in April 2001. Mr. de Prevoisin, who was arrested in Switzerland, was eventually convicted of the charge in November 2002. But in February 2003, a federal court in Mexico City ruled that prosecutors acted improperly and voided Mr. de Prevoisin's sentence. Mr. de Prevoisin is now suing the Mexican government to retake assets it seized.
Banco Mexicano, S.A.	Senior executive Salvador Madero Madrigal allegedly stole $8 million from Grupo Financiero Invermexico, the parent company of Banco Mexicano.	1995	Minority shareholders and Mexican law enforcement	Salvador Madero Madrigal was arrested in San Antonio, Texas in January 1999. Regulators ordered that the bank be sold to Banco Santander Central Hispano of Spain.
Banpais, S.A.	Ramiro Solis Suarez, ex-president, and Angel Isidoro Rodriguez Saez, ex-owner, each stand accused of stealing more than $70 million.	1995	Minority shareholders and Mexican law enforcement	Ramiro Solis Suarez, ex-president of Grupo Financiero Banpais, was arrested in San Diego in January 1999 on multimillion-dollar fraud charges. Solis' former boss at Banpais, bank owner Angel Isidoro Rodriguez Saez, was arrested in June 1998 in Spain, but was later acquitted on statute-of-limitations grounds.
Corporacion Mexicana de Aviacion, S.A. de C.V.	Executive Gerardo de Prevoisin Legorreta allegedly embezzled $61 million at the start of the Mexico crisis from the parent company of the Aeromexico and Mexicana airlines. He fled to Zurich, Switzerland and remained there for four years before being arrested.	September, 1994	Minority shareholders and Mexican law enforcement	Gerardo de Prevoisin Legorreta was arrested in Zurich, Switzerland in August 1998. He was brought to Mexico, spent time in prison, and then was allowed bail in April 2001. Mr. de Prevoisin, who was arrested in Switzerland, was eventually convicted of the charge in November 2002. But in February 2003, a federal court in Mexico City ruled that prosecutors acted improperly and voided Mr. de Prevoisin's sentence. Mr. de Prevoisin is now suing the Mexican government to retake assets it seized.
Grupo Financiero Asemex Banpais, S.A. de C.V.	Ramiro Solis Suarez, ex-president of Banpais, allegedly stole $8 million. Angel Isidoro Rodriguez Saez, the owner of the bank and parent financial group, allegedly stole approximately $80 million.	1995	Minority shareholders and Mexican law enforcement	Financial group owner Angel Isidoro Rodriguez Saez was arrested in June 1998 in Spain on multi-million dollar fraud charges. His case was later dismissed in Mexico on statute-of-limitations grounds.

Table 3 (*continued*)

Firm	Brief summary of the accusations of illegal asset taking	Year in which the illegal asset taking allegedly took place	Those making the accusation	What subsequently happened to the firm and the firm's owner/senior manager
Grupo Financiero Invermexico, S.A. de C.V.	Senior executive Salvador Madero Madrigal allegedly stole $8 million from Grupo Financiero Invermexico, the parent company of Banco Mexicano. A $50 million loan from Grupo Financiero Invermexico was also found in the Swiss bank account of Raul Salinas, the brother of former Mexican President Carlos Salinas.	1995	Minority shareholders and Mexican law enforcement	Salvador Madero Madrigal was arrested in San Antonio, Texas in January 1999. Both the Mexican Stock Exchange and the New York Stock Exchange subsequently delisted Grupo Financiero Invermexico. Regulators sold the group to Banco Santander Central Hispano of Spain.
Grupo Financiero Mexival, S.A. de C.V.	Angel Isidoro Rodriguez Saez allegedly used funds from Mexival to purchase Banpais, and he later allegedly stole at least $80 million in 1995.	1995	Minority shareholders and Mexican law enforcement	Financial group owner Angel Isidoro Rodriguez Saez was arrested in June 1998 in Spain on multi-million dollar fraud charges. His case was later dismissed in Mexico on statute-of-limitations grounds.
Grupo Sidek, S.A. de C.V.	Brothers Jose and Jorge Martinez-Guitron, cofounders of Sidek, were accused by minority shareholders of a diverse range of illegalities. Their asset taking allegedly helped lead to the effective bankruptcy of the entire business group.	1995	Minority shareholders, Mexican creditors, and Mexican regulators	Jose and Jorge Martinez-Guitron were removed from management. Jose Martinez-Guitron was eventually charged with illegal tax evasion.
Grupo Simec, S.A. de C.V.	The controlling owners, Jose and Jorge Martinez-Guitron, were accused by minority shareholders, creditors, and regulators with having conducted a diverse range of illegalities. Their asset taking allegedly helped lead to the effective bankruptcy of the entire business group.	1995	Minority shareholders, creditors, and Mexican regulators	Jose and Jorge Martinez-Guitron were removed from management. Jose Martinez-Guitron was eventually charged with illegal tax evasion.

Grupo Situr, S.A. de C.V.	The controlling owners, Jose and Jorge Martinez-Guitron, were accused by minority shareholders, creditors, and regulators with having conducted a diverse range of illegalities. Their asset taking allegedly helped lead to the effective bankruptcy of the entire business group.	1995	Minority shareholders, creditors, and Mexican regulators	Jose and Jorge Martinez-Guitron were removed from management. Jose Martinez-Guitron was eventually charged with illegal tax evasion.

Table 4
This table presents the results of Probit regressions on the exposure of asset taking, illegal asset taking and legal asset taking. For ease of interpretation, rather than reporting the coefficients, I report the change in the probability of asset taking for an infinitesimal change in each independent, continuous variable, and the discrete change in the probability of asset taking for dummy variables. These are generated using the dprobit STATA command. In Models 1–5, the dependent variable is a dummy that equals one when either the firm's controlling shareholder or senior manager was accused of taking part in any type of asset taking. In Models 6–7, the dependent variable is a dummy that equals one when either the firm's controlling shareholder or senior management was accused of illegal asset taking. In Models 8–10, the dependent variable is a dummy that equals one when either the firm's controlling shareholder or senior manager was accused of legal asset taking. Robust standard errors are shown below in brackets.

	DV: all asset taking					DV: illegal asset taking		DV: legal asset taking		
Model number	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
			Controlling for growth opportunities and reputation	Matched sample based on size	Matched sample based on foreign-denominated indebtedness					Controlling for growth opportunities and reputation
Firm has listed ADR	0.218**	0.221**	0.374***	0.513***	0.389***	0.071	0.198**	0.239***	0.233**	0.373***
	[0.106]	[0.138]	[0.183]	[0.184]	[0.184]	[0.078]	[0.203]	[0.106]	[0.138]	[0.185]
Firm has unlisted ADR	0.204***	0.218***	0.419***	0.459***	0.427***	0.151***	0.087*	0.195***	0.167***	0.345***
	[0.085]	[0.089]	[0.143]	[0.229]	[0.147]	[0.072]	[0.098]	[0.083]	[0.073]	[0.136]
Firm has owner seated in the CMHN		0.097**	0.114	0.181***	0.137*		−0.012		0.127***	0.164**
		[0.059]	[0.086]	[0.105]	[0.095]		[0.016]		[0.061]	[0.092]
Foreign firm ownership pre-crisis		−0.048	−0.067	−0.009	−0.080*		a		−0.033	−0.057
		[0.028]	[0.040]	[0.012]	[0.046]				[0.025]	[0.040]
Firm owned a bank pre-crisis		0.187**	0.340***	0.612***	0.392***		a		0.166**	0.306***
		[0.101]	[0.153]	[0.171]	[0.167]				[0.092]	[0.148]
Short-term foreign liabilities/Total liabilities		0.222*	0.368**	0.041	0.372*		−0.134		0.202**	0.347**
		[0.143]	[0.221]	[0.074]	[0.241]		[0.129]		[0.125]	[0.215]
Total liabilities/Total assets		0.027***	0.155*	0.087***	0.188**		−0.020		0.019***	0.198**
		[0.001]	[0.109]	[0.079]	[0.128]		[0.040]		[0.007]	[0.121]
Foreign sales/National sales		−0.141***	−0.231***	−0.069***	−0.254***		−0.052		−0.122***	−0.237***
		[0.051]	[0.091]	[0.060]	[0.103]		[0.043]		[0.047]	[0.093]
Log of assets		0.018**	−0.029**	−0.023**	−0.043**		0.010		0.010	−0.033**
		[0.010]	[0.018]	[0.020]	[0.027]		[0.013]		[0.008]	[0.020]
Recommended pre-crisis as high-quality firm by Baring		a	a	a	a		a		a	a
Price-to-book-value ratio (pre-crisis)			−0.055***	−0.016***	−0.063***					−0.055***
			[0.029]	[0.014]	[0.033]					[0.029]

Age since incorporation			−0.006**	−0.002**	−0.006*					−0.006**
			[0.004]	[0.002]	[0.004]					[0.004]
(Age since incorporation) squared			0.000**	0.000**	0.000**					0.000**
			[0.000]	[0.000]	[0.000]					[0.000]
All Industry controls included	No	Yes	Yes	Yes	Yes	No	Yes	No	Yes	Yes
Joint *p*-value for the industry controls		0.075	0.002	0.011	0.002		0.026		0.162	0.005
Number of observations	183	164	110	75	105	183	70	183	164	110
Log pseudo-likelihood	−65.501	−45.724	−28.463	−17.078	−27.704	−40.534	−20.335	−58.992	−40.890	39.430
p-value	0.004	0.001	0.001	0.001	0.001	0.025	0.000	0.003	0.001	0.006
Pseudo R^2	0.079	0.330	0.454	0.561	0.458	0.085	0.292	0.095	0.348	0.451

Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.
The letter a denotes the fact that the dummy was dropped from the Probit regression since none of the firms with the dummy equal to one had insiders accused of asset taking.
Note: The sample size drops from 183 to 164 in Model 2 because among the nine firms from the petroleum, non-financial services, and leisure industries, and among the 10 firms recommended pre-crisis by Baring, none had insiders accused of asset taking. Those firms are automatically dropped from the Probit regression when the above variables are included. The sample size in Model 3 is 110 because not all firms had liquid stock necessary for computing PBVRs. The sample size in Model 4 drops further to 75 because a matched sample is used based on average firm size. The sample size in Model 5 is 110 because of the matched sample based on foreign-denominated indebtedness. The sample size in Model 7 drops to 70 because there were no accusations of illegal asset taking against the firms with foreign ownership; the firms that owned a bank pre-crisis; the firms from the petroleum, food and tobacco, construction, utilities, textile/trade, non-financial services, and leisure industries; and the one remaining firm that was recommended pre-crisis by Baring. Also, the two remaining firms from the transportation industry each had insiders accused of illegal asset taking. These firms were all automatically dropped from the probit regression. The sample size in Model 9 drops to 164 because there were no accusations of legal asset taking against the 10 firms recommended pre-crisis by Baring, or against the nine firms from the petroleum, non-financial services, and leisure industries. The sample size in Model 10 is 110 because not all firms had liquid stock necessary for computing PBVRs.

U.S.-listed foreign firms. A further Lexis search of all SEC legal enforcement releases shows that the SEC had taken few enforcement actions against cross-listed foreign firms during 1934–2002.

To determine the SEC's record, I first search all SEC litigation releases between January 1, 1995 and June 30, 2002 for actions taken against cross-listed firms. I then interview 116 plaintiffs' attorneys in 2002 to crosscheck and identify any remaining SEC enforcement actions. The attorneys interviewed represented the most active in the area of securities law and represented all major offices of all prominent law firms in this area. Several of the attorneys had 30 years of experience and had personal involvement in the earliest cases. As a further check, I search both Lexis and the entire SEC web site (including administrative proceedings) by the names of all companies ever targeted by private plaintiffs. As Table 5 shows, in the six-and-a-half-year-long period, the SEC took legal action against only 13 cross-listed foreign firms. Remarkably, despite the widespread asset taking during this period, the SEC did not take a single action against cross-listed firms domiciled in Mexico, South Korea, Brazil, or Russia.[3]

The record in Table 5 also shows that the SEC did not often succeed in prosecuting the small number of foreign insiders that it did, in fact, pursue. In the MTC Electronic Technologies case, the insiders were living abroad and simply ignored the large judgment against them. In the ACLN case, although private plaintiffs charged the company with massive financial fraud, the SEC has done nothing more than temporarily suspend trading in the firm for ten days. In the case of Montedison, despite the fact that the company had allegedly engaged in $398,000,000 in false reporting, the SEC accepted a settlement payment of just $300,000, with no admission of wrongdoing. In that case, the SEC invoked a rare application of the Foreign Corrupt Practices Act to a cross-listed foreign firm, but the enforcement was largely ineffective. Finally, in the Veba case, despite the harm caused by the company's lies about its upcoming merger, the SEC agreed to settle the case for no more than a commitment by the company not to violate the securities laws again.[4]

[3]It is worth emphasizing that this study purposely excludes cases against foreign nationals who were found guilty of insider trading in U.S.-domiciled companies. This analysis also excludes the action taken by the SEC against U.S.-domiciled Credit Suisse First Boston Corporation for kickbacks it received in exchange for giving certain brokerage customers privileged access to the El Sitio IPO. The target was a U.S.-domiciled broker, and the SEC made no allegation that El Sitio was involved in the alleged securities fraud. Private plaintiffs, it should be noted, have separately made their own accusations against El Sitio, a cross-listed Argentinean firm. Lastly, the analysis excludes the 1999 state cases involving Amway Asia and Amway Japan. There, even though the cross-listed firms were legally domiciled abroad, the owner accused of improper conduct was a U.S. firm.

[4]It is important to note the cases that are excluded from the analysis. First, the SEC has prosecuted foreign nationals for insider trading in U.S.-domiciled and U.S.-listed firms, and in May 2002 prosecuted a Mexican businessman named Jose Zollino for his alleged $325 million fraud connected to his U.S.-domiciled brokerage firm. The SEC does also have a track record of seeking redress against foreign entities (often phantom entities) and foreign nationals for selling fake or otherwise fraudulent securities directly to American individual investors (such as through an Internet Ponzi scheme). In one recent case in July 2002, the SEC prosecuted a company for Internet fraud that was incorporated in Nevada but with headquarters

I next find that throughout its history, the SEC has rarely taken action against cross-listed firms or their insiders for violations of the federal securities laws. I conduct a Lexis search of all SEC litigation releases since 1933, using keywords "depositary receipt" or "ADR" or the individual names of all U.S.-listed foreign firms targeted by private plaintiffs. I then search the SEC web site (including a record of all administrative proceedings) by the names of all companies ever targeted as securities law violators by private plaintiffs. This search found only two additional cases against a foreign firm with a cross-listing. One 1984 case against Canadian firm ITC involved its violation of the registration and anti-fraud provisions of the Federal Securities Act. The other 1984 case involved the Canadian firm Grandma Lee's and its insider's selling of unregistered securities in the United States. In the interviews with most of the private plaintiffs' attorneys, I collect data on whether the SEC had acted informally or formally in their cases. The only cases named were the ones in Table 5, plus the recent Asia Pulp & Paper case, in which the SEC is believed to have held back approval in 2000 for a proposed exchange that would have reduced the company's outstanding debt. Whether the SEC acted informally, based on corporate governance grounds, is unknown. Overall, the interviews with plaintiffs' attorneys suggest that any informal action by the SEC in favor of their clients was uncommon, or otherwise is unknown.

I next determine if private litigation effectively substituted for SEC enforcement. An extensive search is conducted for published and unpublished civil court cases that involved private plaintiff actions against cross-listed foreign firms between the enactment of the Securities Act of 1933 and the Securities Exchange Act of 1934 and June 30, 2002. A Lexis search finds securities cases involving U.S.-listed foreign firms; however, these findings exclude a large number of very recent and unpublished cases. Therefore, I search for cases on Stanford Law School's Securities Class Action Clearinghouse database, which covers the years 1995 to 2001. I then request interviews with all the private plaintiffs' attorneys who had ever sued a cross-listed foreign firm. I interview the attorneys listed on the complaints and court decisions, as well as many attorneys identified through referrals—116 in total. Through this exhaustive data collection, the published and unpublished cases are identified (as shown in Appendix E).

Clearly, the SEC and private plaintiffs each possess the legal standing to sue foreign firms for securities fraud. The first of two key laws is the Securities Act of 1933, which "prohibits fraudulent or deceptive practices in any offer or sale of securities" (Ratner and Hazen, 2002, pp. 10). The second, the Securities Exchange Act of 1934, which created the SEC, provides disclosure requirements and prohibits "manipulative or deceptive devices or contrivances" related to the purchase or sale of securities (Ratner and Hazen, 2002, pp. 10,11). Starting in the late 1960s, the

(*footnote continued*)
in Australia. This bizarre case and any similar cases are excluded because the incorporation is in the U.S. and, separately, because the firm was not listed on a major U.S. exchange. Such illegal acts are easier to detect because either an American citizen is directly robbed of their money, or one of the American stock exchanges can identify unusual stock trades (see Tribukait, 2003).

Table 5
The rarity and ineffectiveness of SEC action
This table shows the history of SEC legal action taken against all U.S.-listed foreign firms and their insiders between January 1, 1995 and June 30, 2002. An exhaustive search of SEC documents revealed few enforcement actions against cross-listed foreign firms prior to 1995. This table includes the five cases in which the SEC sued cross-listed foreign firms in court as well as the one case in which the SEC accepted a formal administrative settlement without going to court.

SEC legal release date	Company name (with home country in parenthesis)	Notes
06/07/02	Baan (Netherlands)	The SEC settled its administrative proceedings with the auditor of U.S.-listed Baan for hiding his personal business ties to the company. The auditor's firm is an affiliate of Ernst & Young. The auditor agreed to pay a $400,000 civil fine and to provide evidence to his independence in all future Dutch audits presented to the SEC.
1/29/98 and 4/4/02	MTC Electronic Technologies (Canada)	Insiders engaged in false disclosure and accounting fraud. MTC Electronic Technologies is a British Columbian company listed on the NASDAQ. One associate of the company insiders agreed in 1998 through a SEC administrative proceeding to cease and desist from future violations of the securities laws. A U.S. district judge order the insiders in April 2002 to pay $33.49 million. The judge also ordered them to avoid all future violations of the securities laws and barred them from being officers or directors of any public firm. The insiders have been living abroad and have largely ignored the case.
3/18/02	ACLN (Cyprus, Belgium)	The SEC suspended U.S. trading of the cross-listed firm's shares after it became public that the firm's financial statements were fraudulent. The trading suspension lasted for the customary ten days and then was lifted.
7/24/97 and 4/26/01	International Nesmont Industrial Corporation (Canada)	Insiders inflated the Canadian/NASDAQ-listed company's income and assets. In 2001, the insiders were barred from serving as officers or directors of a public corporation and were enjoined against future violations of the federal securities laws. Because the court accepted their inability to pay, the insiders central to the case did not have to pay the judgment against them. Another insider paid a $35,000 fine.
3/30/01	Montedison (Italy)	Despite the fact that the insiders had allegedly inflated company income by $398 million, the SEC accepted a settlement from the company of just $300,000 with no admission of wrongdoing. The SEC left it to the Italian courts to recoup the ill-gotten gains of the former company insiders.
9/28/00	E.ON AG (formerly Veba AG) (Germany)	The cross-listed German firm falsely denied merger discussions that in fact resulted in a merger with another German firm. The firm, without accepting or denying the charge, agreed with the SEC to a cease-and-desist settlement related to the false denial of merger discussions. The merger between the two German firms had been completed the year before and was not affected.

9/27/00, 8/12/96, and 9/6/95	Luxottica S.p.A. (Italy)	The SEC sought disgorgement of over $600,000 plus interest from an insider in the U.S.-listed Italian firm and her associate. Another business partner of those two individuals settled his case with the SEC for $1,000,000. One of the board members of the firms had earlier settled his case with the SEC for $100,000. The insider still being pursued had allegedly learned of the firm's impending takeover of a U.S. firm and had engaged with associates in illegal insider trading in her employer's ADRs.
8/12/99, 1/21/99, and 1/13/99	Livent, Inc. (Canada)	The Canada-based firm and its insiders were charged with eight years of fraud. The company agreed to a cease-and-desist order and agreed to cooperate in the prosecution of the former insiders. Two of the many insiders charged in the case have thus far agreed to pay disgorgement and prejudgment interest. Others have agreed to cease-and-desist orders, to being barred from practicing their profession before the SEC in the future, and to being barred from serving as officers or directors of a public company. The SEC's investigation is continuing. Separately, the U.S. Attorney's Office for the Southern District of New York prosecuted criminal cases against four insiders. Two pled guilty to one felony count each, and two others have been charged with 16 felony counts each.
5/17/99	Insignia Solutions PLC (Canada)	The U.S.-listed Canadian firm was accused of fraudulent financial reporting. The SEC settled the case through an administrative proceeding by which the company agreed to cease and desist from further violations of the U.S. securities laws. The SEC did not recoup any shareholder losses.
8/5/98 and 1/3/96	Sony (Japan)	Sony, which has an ADR listed on the NYSE, allegedly gave inadequate disclosure about the financial condition of Sony Pictures. The case was settled through a $1 million fine paid by the company, a cease-and-desist order, and changes in Sony's reporting practices. The SEC did not recoup losses for outside shareholders.
4/9/97	Objective Invest Holding, S.A. (Luxembourg)	An insider engaged in illegal insider trading in Olicom, a Danish/NASDAQ-listed company. The insider agreed to settle the case by paying $386,000 and committing not to violate the federal securities laws in the future. The SEC did not deliver direct relief to outside shareholders in this case.
2/23/96 and 6/19/95	Sea Containers, Ltd. (Bermuda)	Prior to their Swedish firm's tender offer for the Bermuda-based shipping company, insiders of the Swedish firm engaged in insider trading. A judge issued a default decision against them some seven years later, ordering the two men to disgorge $924,088 in trading profits and $748,220 in prejudgment interest. Private plaintiffs had reached a settlement in their case against these insiders five years before the SEC brought charges and nearly six years before the court took action through a default judgment.
1/3/96	Pathe Communications Corp. (France)	Firm insiders were charged with responsibility for materially false and misleading disclosures. As a result, they were not forced to pay any fine. They signed a cease-and-desist order without admitting or denying any illegality. Most of the alleged violations occurred before the summer of 1990, when the U.S. Congress gave the SEC the authority to levy fines for civil violations of federal securities laws. Separately, by October 1999, Credit Lyonnais had paid $4 million to the government to avoid facing criminal charges for its past association with Pathe insiders.

courts began formalizing rules enabling large class actions for violations of the federal securities laws (Klein and Coffee, 2000, p. 156). In 1988, the U.S. Supreme Court embraced the "fraud on the market" theory, by which an individual who purchases securities can be injured by a company's misrepresentation even if that person was unaware of the misrepresentation at the time she traded (Klein and Coffee, 2000, p. 156). In 1988, the Supreme Court also held that any misrepresentation or omission could be considered legally "material" if "there is a substantial likelihood that a reasonable investor would consider it important" for making an investment (Klein and Coffee, 2000, p. 157). In 1990, Congress increased the SEC's power by allowing it to issue cease-and-desist orders against firms in violation of the securities laws and to impose fines or order disgorgement of ill-gotten gains in administrative proceedings (Ratner and Hazen, 2002, p. 18).

The prior literature has not done enough to emphasize the numerous legal and institutional obstacles that private plaintiffs face in successfully enforcing the law against a cross-listed foreign firm. Private plaintiffs seeking redress against U.S.-listed foreign firms have most often appealed to Securities Exchange Act Rule 10b-5. This rule adopted by the SEC to enforce the Securities Exchange Act prohibits a wide range of fraud. Nevertheless, the U.S. Supreme Court has ruled that no insider can be found guilty of violating Rule 10b-5 if the plaintiff has not shown that the insider acted with "scienter." This decision has given U.S. federal judges considerable discretion to decide whether a plaintiff has shown that the insider acted willfully, or else recklessly ignored the illegality of her actions (Ratner and Hazen, 2002, p. 143). In several of the cases listed in Appendix E, the judges went on record as stating that the plaintiffs had failed to show "scienter." Often, in practice, the plaintiffs must produce internal company documents showing that the insiders knew that what they were saying to the public was deceptive. Even in U.S. cases, few plaintiffs have been able to shoulder that level of evidence.

A further legal challenge to plaintiffs came with the 1995 passage of the Private Securities Litigation Reform Act (PSLRA) by the U.S. House of Representatives and U.S. Senate over President Clinton's veto. Already under Rule 9(b) of the Federal Rules of Civil Procedure, plaintiffs were required to detail their allegations of fraud "with particularity," and a federal district court judge retained some discretion in deciding whether the plaintiffs' allegations met this standard. By passing the PSLRA, a two-thirds majority of Congress decided that where legal liability requires "proof that the defendant acted with a particular state of mind, the [plaintiff's] complaint shall . . . state with particularity facts giving rise to a strong inference that the defendant acted with the required state of mind" (Ratner and Hazen, 2002, p. 142). Thus, the PSLRA raised the legal standard that plaintiffs must meet, and also ordered the judge to block the plaintiff from gaining discovery of documents and witnesses while a defendant's motion to dismiss is pending. Foster, Dunbar, Martin, Juneja, and Allen (2002, p. 24) show that the proportion of overall securities fraud cases ending in dismissal has since increased.

Moreover, some federal judges have gone further, by requiring plaintiffs to prove that their loss was a direct result of the defendant's misrepresentations (Ratner and Hazen 2002, p. 150). Foreign insiders were already difficult to pursue because they

can try to hide in a foreign jurisdiction, but these additional procedural hurdles have made the plaintiffs' cases even more difficult.

Another empirical fact highlighted in Appendix E which has not been in the literature on legal bonding, is that cross-listings rarely protect the foreign shareholders who purchase the firm's shares on the foreign market. The belief in the literature is that once a foreign firm lists its shares in the U.S., all minority shareholders receive some measure of protection. Some U.S. judges have allowed class actions to include foreign shareholders who purchased on foreign exchanges. However, judges often have ruled—on the legal principle of forum non conveniens—that it would be legally more convenient for the foreign shareholders to stay in their home legal jurisdiction, no matter how weak the legal institutions at home.

A final and key impediment to outside shareholders is that U.S. corporate laws designed directly to deter self-dealing and tunneling do not apply to foreign cross-listed firms. While domestic minority shareholders can directly sue domestic controlling shareholders for illegal self-dealing through so-called "oppression" suits, the shareholders of cross-listed firms lack these rights. Moreover, another type of suit, a derivative suit, also does not apply to cross-listed firms. A derivative suit allows the minority investor to sue on behalf of the firm against a law-breaking company officer, and, thus, force the officer to pay the firm back. In fact, in no country where cross-listings occur do derivative suits and oppression suits apply to cross-listed foreign firms. This makes apparent the fact that, in at least this key dimension, even U.S. legal protections for the shareholders of cross-listed firms are weak (Licht, 1998). Klein and Coffee explain specifically in reference to U.S. derivative suits governing U.S. firms, that "[i]f a corporate official violates any of the duties he or she owes to the corporation, American law recognizes the right of a shareholder to sue in the corporation's behalf to redress this injury" (2000, p. 196). The cross-listings literature has, nevertheless, overlooked the fact that in the U.S., both oppression suits and derivative suits are based on the corporate law of the company's place of incorporation. Because state corporate laws regarding self-dealing do not apply to cross-listed firms, the U.S. courts (even at the federal level) have thrown out attempts to seek derivative action against foreign insiders. One notable case was Batchelder v. Kawamoto (147 F.3d 915), in which the American plaintiffs sued an insider of U.S.-listed Honda Motor Company on behalf of the Honda Corporation. The federal judge ruled that the derivative action was not allowed in the U.S. The lead plaintiff's attorney explained in an interview that a derivative action in Japan would be too lengthy and costly to pursue.

The corporate governance literature has emphasized the moral hazard faced by insiders engaging secretly in transfer pricing and other types of tunneling. Although this type of tunneling would be best dealt with through derivative actions and oppression suits, the literature on cross-listings and legal bonding has overlooked the fact that it is not possible to take these actions against foreign cross-listed companies. Licht (1998) similarly argues that the federal securities laws are weak with regard to self-dealing. This institutional incompleteness is the result of a doctrinal distinction between corporate law (which fails to cover cross-listed foreign firms) and federal securities law. The evidence from past cases and attorney interviews shows that,

while it is possible to include an individual's theft from a corporation as part of a 10b(5) case, it would be more appropriate as a derivative case. Yet, as the Honda case demonstrates, the ADR purchaser lacks the right to pursue a derivative action in the U.S.

One might ask at this point why firms from emerging economies do not list their shares in host countries with tougher rules allowing for oppression suits and derivative suits. The answer is that the opportunity does not exist, as no country affords this opportunity through cross-listings alone. While securities law can travel across borders to at least theoretically cover foreign cross-listed firms, corporate law does not travel. A firm is liable only for the corporate law at the site of its incorporation. Since corporate law is what makes oppression suits and derivative suits possible, it would not matter if another country has better corporate law as long as it does not apply to foreign cross-listed firms. In order to become liable for these types of suits, a firm would have to incorporate in a country that allows for them, and therefore assume the character and responsibilities of a domestic firm.

Moreover, even when plaintiffs succeed in gathering sufficient evidence of insider wrongdoing for disclosure violations related to U.S. securities law, settlements have tended to be a small fraction of the dollar amount lost. Simmons (1996) finds that, in the four years prior to the passage of the PSLRA, the median settlement as a percentage of estimated damages was just 7.2%. Simmons and colleagues at Cornerstone Research (2002) find that the median settlement percentage dropped to an even lower 5.1% in the six years after the passage of the PSLRA (December 22, 1995 through December 31, 2001). Using a slightly different methodology, Foster, Martin, Juneja, and Dunbar (1999) from the economic consulting firm National Economics Research Associates report similar results. Foster, Martin, Juneja, and Dunbar include settlements from 1991 to June 1999, and they find that the median settlement rate over the entire period was just 5.82%.

While estimating damages depends on the parameters included in the event study analysis, the difference between the lower-end and higher-end estimates is reported in Bajaj et al., (2000), who find that the plaintiff-style estimate is 16.66% and the defendant-style estimate is 4.96% for the average settlement between 1988 and 1999. Bajaj et al., (2000, p. 24) further find that the average recovery rate falls steeply once the estimated damages measured conservatively rise above $10 million (which is the case in 637 out of 807 settlements). They find that the average recovery rate is 14.21% for cases with estimated damages measured conservatively at between $10 million and $49.99 million dollars; 7.87% for cases with estimated damages measured conservatively at between $50 million and $99.99 million dollars; and 4.25% for cases with estimated damages measured conservatively at over $100 million.

Using the data compiled in Bajaj et al. (2000), I confirm that there is no economically or statistically significant difference between the settlements granted by domestic and foreign firms. Moreover, the evidence does not support the hypothesis that those foreign firms with an economically significant amount of assets held in the U.S. would be compelled to pay larger restitution to outside shareholders (Doidge et al., 2004). Few cases resulted in court-mandated judgments, and the settlements

accepted by all parties did not increase based on the size or presence of a company's U.S. subsidiary or division.

Even considering for a moment a world in which the median settlement recovery was an unrealistically high 50%, the system of infrequent and ineffective SEC enforcement combined with 50% recovery would be far less effective than Coffee (2002) suggests. First of all, the plaintiff typically has to share 25–33% of the settlement with her attorneys. Furthermore, any settlement should be listed as income on a plaintiff's tax form and, therefore, serves to pay back the government for any capital gains credits the plaintiff previously wrote off. In most cases, the individual insider rarely pays any portion of the settlement and is instead bailed out by the firm or the firm's insurance policy. If the plaintiffs are still shareholders of the firm, then they are, in a sense, taking money from their own ongoing investment in the company's future earnings to compensate themselves for the insider's individual fraud. Foreign insiders are rarely jailed, let alone forced to use their own funds to pay a settlement. A system in which defendants must hire the equivalent of expensive private police is far from a strong institutional system. The costs of state law enforcement would be shared at lower cost by all taxpayers and would protect a larger population of investors.

A key finding of this study is also that the SEC has not been able and/or willing to be the world's governance enforcement agency. The commission does not maintain foreign offices, and, instead, relies on the case-by-case cooperation of foreign law enforcement agencies. Some foreign regulatory agencies are simply incapable or unwilling to cooperate.

The lesson to be drawn from this analysis is that the rules of the game are different in practice than as formally established. Some rules simply cannot be strictly enforced across borders, while the enforcement of other rules could require large resource investments. To understand institutions, one has to carefully analyze both the formal rules and their informal application. Often the informal application of legal institutions is not what would be predicted by an isolated analysis of formal institutions. Even in the U.S., which the literature ranks as having some of the strongest and most complete legal institutions in the world, institutions do not always work in practice as they are ostensibly designed to function.

7. How bonding works even without law enforcement

Even in contexts in which the government does not enforce the law, the market itself has preserved the potential for cross-listings. This section describes how market-based reputational bonding works, referring once again to the Mexican example. The theoretical rationale for reputational bonding is derived from the formal model in Diamond (1991), in which firms can show over time, through good insider behavior, that they deserve a reputational asset in the market for outside capital. As Appendix F explains in greater detail, the prospect of building a reputational asset can help firms in emerging economies, where outside capital is scarce, to receive privileged access to this capital. First, these firms must pass

through an economic downturn without any hint of scandal, and through this reputation-building mechanism they will gain privileged access to the global capital markets. While this market-based system of reward and punishment is imperfect, it does have the ability to explain the growth in cross-listings.

7.1. How reputational bonding works: the Mexican case

I use the Mexican case to show how reputational bonding can work even without U.S. law enforcement. The first significant finding is that only one firm whose insiders engaged in illegal asset taking received additional outside public resources after the scandal became public. That exception was Aerovía de México, which received resources after a government takeover.

The second major finding, shown in Table 6, is that firms with ADRs that did not engage in either illegal or legal forms of asset taking were more likely to receive outside resources and, in fact, received a significantly larger amount of outside resources in the five years following the crisis. As shown with all controls included in Model 3, having a listed ADR adds a 29.48% greater probability ($p<.05$) of receiving outside resources from the capital markets within five years of the crisis, while none of the firms with listed ADRs whose insiders were accused of engaging in illegal asset taking received resources. Moreover, as shown with all controls included in Model 8, having a listed ADR and not having engaged in any form of asset taking is associated with receiving significantly more resources in the five years after the crisis ($p<.10$). This Tobit regression is performed on the full sample of firms, and the coefficient is of greater economic significance than any other variable. Just as in the earlier analysis, the results are the same even when I artificially truncate the sample to contain only firms with the same mean size and foreign-denominated indebtedness as the cross-listed firms. The evidence suggests that market-based incentives led Mexican firms to follow rules that they were not forced to follow.

The results pass a series of robustness checks. I confirm that the results are robust to using varying definitions of the dependent variable, including the square and cube of the log of total resources received and the log of total resources received in its undiscounted form. The results are robust to using different definitions of firm size, including the square and cube of total assets and the log values of those measures. When the firms in the financial sector are excluded from the full sample, the listed ADR results in Models 3 and 7 continue to be statistically significant ($p<.10$). I confirm that debt, export orientation, short-term dollar-denominated debt, and the interaction between short-term dollar-denominated debt and export orientation are not underlying variables driving the ADR results.

Lastly, as a final test of reputational bonding, I run a proportional hazards model and control for unobserved heterogeneity. To show that cross-listings directly benefit firms, one must control for unobserved heterogeneity; otherwise, the benefits of a cross-listing could be attributed solely to underlying firm quality. In a panel setting, one can observe firms' propensities to attract outside resources at different points in time. The problem with running the regression as a yearly panel is that some firms acquire outside resources in year x and might not require additional resources for

another year or more. This situation is analogous to the "lumpy investment" problem that Whited (2002) analyzes for U.S. firms and their internal investments.

Following Whited (2002), I therefore use a hazard model to test for the rate at which Mexican firms received outside resources. To control for unobserved firm heterogeneity, I correct all standard errors for clustering at the firm level. Similar to Whited's method, I define as a "resource event" every instance a Mexican firm received a ratio of outside resources to prior-year firm size that was larger than the median ratio for that firm's industry during the 1995–1999 period. Alternatively, a "resource event" is defined as cases in which a Mexican firm received a ratio of outside resources to prior-year firm size that is larger than the average ratio for that firm's industry during 1995–1999. Since the average is larger than the median, the latter test is more restrictive, focusing on the largest infusions of investment. With the available longitudinal data, I control for prior reputation, industry, political connectedness, foreign-denominated leverage, leverage, firm size, and export orientation. Bank ownership is no longer a variable of interest because most of the banks went bankrupt in 1995. The data on foreign ownership is not complete enough to be able to use in the panel setting, and in any case, foreign ownership is not a significant variable in the earlier regressions. Lastly, the variable on Baring-recommended firms from 1992 and 1994 PBVRs lose their meaning over time. Moreover, it is better to control for unobserved firm heterogeneity by correcting the standard errors for clustering at the firm level. This is exactly what is done.

The results lend further support to the reputational bonding hypothesis. As shown in Model 4 of Table 7, having a listed ADR and not being accused of any governance scandal increased the rate at which a firm received large outside investments greater than the median ratio of outside resources to prior-year firm size for its industry by 79.61%. Similarly, as reported in Model 8, having a listed ADR and not being accused of any governance scandal increased the rate at which a firm received outside investments greater than the average ratio to firm size for its industry by 110.48%. All of the results for listed ADRs are statistically significant. Moreover, the hazard model shows evidence of a separating equilibrium. If a firm had a listed ADR and was accused of asset taking, the rate at which that firm acquired additional resources fell to zero.

It is important to note why the market incentive alone should not be expected to have totally eliminated asset taking. Bebchuk (1992) describes "special distributive issues" in which the manager directly gains more from an antitakeover provision than the company and outside shareholders lose. In the Mexican case, the insiders might have directly benefited less from building the reputational asset than did the firm and its minority shareholders.

Nevertheless, the results suggest that firms did face a reputational penalty from illegal asset taking that was far more severe than any punishment they received from the legal institutions. This result broadly supports the earlier findings of Karpoff and Lott (1993) and Badrinath and Bolster (1996), who find that the market punishes firms for environment violations and for corporate fraud far more severely than the government does. Banerjee and Duflo (2000) show, in turn, that positive reputation effects enable many Indian software firms to achieve more favorable and flexible

Table 6
This table presents the results of regressions on firms' receiving new resources by equity, publicly held debt, or syndicated loans from the capital markets during 1995–99. Models 1–4 present the results of a Probit regression on receiving any outside resources during this period. For ease of interpretation, rather than reporting the Probit coefficients, I report the change in the probability of receiving any outside resources for an infinitesimal change in each independent, continuous variable, and the discrete change in the probability for dummy variables. These were generated using the dprobit STATA command. Models 5–10 present the results of a Tobit regression on the amount of resources received by a firm. Standard errors are shown below in brackets. For the Probit models, robust standard errors are shown below.

	Probit model: probability of receiving resources				Tobit model: amount of resources received					
Model number	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	[9]	[10]
			FRE firms temporarily excluded	Controlling for growth opportunities and reputation			FRE firms temporarily excluded	Controlling for growth opportunities and reputation	Matched sample based on size	Matched sample based on foreign-denominated indebtedness
Firm has listed ADR	1.483***	0.838**	0.868*	0.295**	8.799***	3.698*	4.159*	3.888**	3.898**	4.178**
	[0.359]	[0.414]	[0.480]	[0.094]	[2.066]	[2.168]	[2.179]	[1.895]	[1.862]	[1.819]
Firm has listed ADR and insiders were accused of illegal asset taking	a	a	a	a						
Firm has listed ADR and insiders were accused of any type of asset taking					−9.088***	−2.502	−5.263	−6.657	−6.244	−7.268*
					[4.601]	[4.333]	[5.074]	[4.180]	[4.330]	[4.012]
Firm has unlisted ADR	0.633**	0.530*	0.294	0.247*	4.987***	4.068**	3.387*	3.828**	0.972	3.721**
	[0.263]	[0.318]	[0.361]	[0.116]	[1.787]	[1.767]	[1.860]	[1.617]	[1.753]	[1.552]
Firm has unlisted ADR and insiders were accused of illegal asset taking	0.041	0.271	−7.891***	0.063						
	[0.894]	[0.969]	[1.048]	[0.258]						
Firm has unlisted ADR and insiders were accused of any type of asset taking					−6.398	−4.588	−14.275***	−5.538	−2.884	−6.115
					[4.134]	[4.051]	[5.130]	[4.070]	[4.179]	[3.908]
Firm or its insiders were accused of illegal asset taking	−0.259	−0.834	a	a						
	[0.693]	[0.597]								
Firm or its insiders were accused of any type of asset taking					6.275**	2.017	6.635*	3.737	2.120	3.922
					[2.748]	[2.664]	[3.403]	[3.010]	[3.417]	[2.909]
Firm has owner seated in the CMHN		0.422	0.468	0.147		2.197	2.402	1.802	2.084	2.058
		[0.273]	[0.345]	[0.116]		[1.548]	[1.717]	[1.355]	[1.358]	[1.302]
Foreign firm ownership pre−crisis		−0.532**	−0.655**	−0.328**		−2.817*	−2.909*	−3.292**	−0.717	−3.046**
		[0.269]	[0.290]	[0.127]		[1.506]	[1.493]	[1.398]	[1.558]	[1.348]

Firm owned a bank pre-crisis		0.686**	0.686**	0.329***		3.588**	3.020*	4.221***	3.093*	3.835**
		[0.308]	[0.325]	[0.091]		[1.635]	[1.569]	[1.593]	[1.679]	[1.577]
Short-term foreign liabilities/Total		−0.309	−0.212	0.153		−2.442	−2.233	0.609	4.812	1.121
liabilities		[0.703]	[0.694]	[0.323]		[4.392]	[4.037]	[4.099]	[5.261]	[3.923]
Total liabilities/Total assets		0.158**	0.250**	0.069***		0.734	0.487	0.436	−3.676	0.347
		[0.064]	[0.118]	[0.025]		[0.490]	[0.500]	[0.411]	[2.915]	[0.398]
Foreign sales/National sales		0.258**	0.237**	0.078		1.221	1.280*	0.560	−1.304	0.529
		[0.127]	[0.120]	[0.052]		[0.832]	[0.769]	[0.707]	[1.986]	[0.673]
Firm size		0.321***	0.278**	0.056		1.744***	1.253**	0.542	0.110	0.040
		[0.073]	[0.115]	[0.042]		[0.439]	[0.595]	[0.466]	[0.705]	[0.494]
Recommended pre-crisis as high-quality		−0.084	0.082	−0.041		−1.574	−0.563	−0.877	−0.899	−0.371
firm by Baring		[0.557]	[0.553]	[0.239]		[2.528]	[2.366]	[2.099]	[2.025]	[2.040]
Price-to-book-value ratio (pre-crisis)				−0.001				0.002	−0.052	−0.002
				[0.012]				[0.129]	[0.119]	[0.124]
Age since incorporation				0.000				−0.008	0.098	0.061
				[0.008]				[0.094]	[0.108]	[0.100]
(Age since incorporation) squared				0.000				0.000	−0.001	−0.001
				[0.000]				[0.001]	[0.002]	[0.002]
Industry controls included	No	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
Joint *p*-value for the industry controls		0.993	0.805	0.135		0.982	0.991	0.349	0.050	0.113
Number of observations	181	173	124	104	183	183	133	113	86	108
p-value	0.000	0.000	0.000	0.029	0.000	0.000	0.000	0.002	0.053	0.002
LR ψ^2(degrees of freedom) (for tobit model)					26.25(5)	67.86(24)	61.52(23)	49.62(25)	37.4(25)	50.77(25)
Log likelihood	−112.161	−90.783	−61.981	−51.945	−339.469	−318.664	−227.594	−238.424	−192.212	−229.804
Pseudo R^2	0.097	0.235	0.272	0.250	0.037	0.096	0.119	0.094	0.089	0.100

Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.

The symbol a denotes the fact that none of the U.S.-listed firms whose insiders engaged illegal asset taking received resources as defined in the model.

Note: In Model 1, the sample size drops from 183 to 181 because the two U.S.-listed firms whose insiders were accused of illegal asset taking did not receive outside resources as defined in the model. These two firms were automatically dropped from the Probit model once the interaction variable for cross-listing combined with accusation of illegal taking was included. In Model 2, the sample size drops from 183 to 173 because the two U.S.-listed firms, the one firm from the petroleum industry, and the three firms from the non-financial services industries received no resources. In addition, the four firms from the utilities industry all received resources as defined in the model. These firms were automatically dropped from the probit regression when all such variables were included in the model. In Model 3, the sample size dropped to 124 because the finance/real estate firms were excluded from the analysis, because industry firms none of the five firms from the petroleum and non-financial services received resources as defined in the model, because the one remaining U.S.-listed firm did not receive resources, and because all four of the utilities received resources. The Probit regression automatically dropped these firms once all these variables were included in the model. In Model 5, the sample drops to 104 because not all firms had liquid stock necessary for computing PBVRs. In Model 7, the sample size dropped to 133 because firms from the finance/real estate industry were excluded from the analysis in that panel. In Model 8, the sample size is 113 because not all firms had liquid stock necessary for computing PBVRs. The sample size drops to 86 in Model 9 and to 108 in Model 10 because of the matched panels based on average size and average foreign-denominated indebtedness.

Table 7
This table presents the results of a proportional hazard model using the Weibull distribution on firms' receiving new resources by equity, publicly held debt, or syndicated loans during 1995–99. The "resource event" in Models 1–4 occurs every time a firm receives an infusion of outside resources controlled for firm size that is above the median for the firm's industry during the 1995–99 period. The "resource event" in Models 5–8 occurs every time a firm receives an infusion of outside resources controlled for firm size that is above the average for the firm's industry. Appendix A describes all variables in detail. All standard errors are corrected for clustering at the firm level. Robust standard errors are shown below the hazard ratios.

	Resource events above median for industry				Resource events above average for industry			
	[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]
	Main variables	Plus main controls	Plus industry	Plus controls for prior reputation	Main variables	Plus main controls	Plus industry	Plus controls for prior reputation
Firm has listed ADR	2.975***	2.102**	1.791**	1.796*	3.420***	2.809***	2.286**	2.105*
	[0.949]	[0.642]	[0.502]	[0.539]	[1.223]	[1.058]	[0.829]	[0.840]
Firm has listed ADR and insiders were accused of any type of asset taking	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]	[0.000]
Firm has unlisted ADR	3.170***	2.193***	2.157***	2.099***	3.236***	2.768***	2.902***	2.553***
	[1.097]	[0.662]	[0.623]	[0.606]	[1.112]	[1.064]	[1.045]	[0.928]
Firm or its insiders were accused of any type of asset taking	0.354*	0.504	0.385*	0.382*	0.648	0.923	0.719	0.644
	[0.219]	[0.294]	[0.212]	[0.205]	[0.393]	[0.559]	[0.378]	[0.333]
Firm has owner seated in the CMHN		1.226	1.258	1.292		1.215	1.121	1.186
		[0.310]	[0.286]	[0.295]		[0.381]	[0.323]	[0.349]
Foreign liabilities/Total liabilities		1.575	5.306***	4.684**		3.389***	6.772***	6.321**
		[0.567]	[3.065]	[2.860]		[1.469]	[4.920]	[4.755]

Total liabilities/Total assets		0.118***	0.161***	0.165***		0.132***	0.184***	0.187***
		[0.071]	[0.075]	[0.075]		[0.094]	[0.101]	[0.100]
Foreign sales/National sales		1.024*	1.010	1.010		1.020	1.003	0.998
		[0.014]	[0.016]	[0.016]		[0.014]	[0.017]	[0.020]
Firm size		1.781***	1.605**	1.609**		1.103	1.095	1.129
		[0.354]	[0.321]	[0.323]		[0.240]	[0.254]	[0.262]
Age since incorporation				0.976				0.966
				[0.017]				[0.021]
(Age since incorporation) squared				1.000				1.000
				[0.000]				[0.000]
Industry controls included	No	No	Yes	Yes	No	No	Yes	Yes
Number of subjects	177	175	175	174	177	175	175	174
Number of events	117	117	117	117	67	67	67	67
Time at risk	259670	257479	257479	256018	259670	257479	257479	256018
Number of observations	1479	1469	1469	1462	1479	1469	1469	1462
Wald $\psi 2$	692.2(4)	564.69(9)	1327.66(19)	1396.28(21)	763.7(4)	647.46(9)	1418.46(19)	1360.91(21)
Log pseudo-likelihood	−291.757	−269.737	−257.730	−255.684	−205.188	−195.774	−188.319	−185.804
Prob $>\psi 2$	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Asterisks denote significance levels: * indicates significance at the 10% level, ** at the 5% level, and *** at the 1% level.

contracts with outside clients. The reputational asset found here is also related to that derived in Gomes' (2000) formal game-theoretical model, in which insiders have a personal financial incentive (in terms of their ability to sell their own shares at the highest price) to build and protect a reputational asset. The present analysis suggests, in addition, that the prospect of future capital raisings is another incentive for insiders to respect minority shareholder interests.

8. Conclusion

This study reveals how and to what extent formal institutions or rules of the game can have one meaning on paper and quite another in practice in the field of corporate governance. The study suggests that in order to understand the effect of institutions on micro-level firm actions, it is necessary to examine both how the institutions are written and how they are implemented.

From a macro-level institutional design perspective, ADRs are far from a perfect substitute for strong foreign law enforcement in preventing fraud, theft, embezzlement, and legal asset taking. In the Mexican case, for example, listed ADRs did not always serve as an effective bonding mechanism for deterring malfeasance. If listed ADRs had been legally effective, the controlling shareholders of several firms with listed ADRs would not have decided to risk U.S. liability and take so many assets out of their firms for personal use.

The evidence focuses on the reputational consequences that result from cross-listings. However, I must acknowledge that the available data for this specific study do not allow me to distinguish between a series of potentially complementary mechanisms leading up to those reputational consequences. The evidence presented in Section 7 shows that the international capital markets cut off all new resources to cross-listed Mexican firms as soon as their insiders were accused of large-scale asset taking. It also has been shown that the market strongly rewards cross-listed firms for not being accused of any large-scale asset taking during an economic downturn. This market reward for reputation has been demonstrated even after controlling for unobserved firm heterogeneity. Reputational bonding could occur solely as the result of giving capital to a firm, watching the firm reveal its true type during a downturn, and then distributing a series of more economically significant rewards and punishments based on revelations. Reputational bonding could be further strengthened if the U.S. information environment were stronger. Thus, in situations in which the business press and stock analysts are effective in rooting out governance abuses, reputational bonding is further strengthened. Future research, using additional data collection to distinguish among the population of cross-listed firms, should examine the mechanisms behind the reputional consequences and, thus, help to further the reputational bonding hypothesis.

This study also supports the argument that institutional analysis requires a comprehensive examination of whether the formal rules differ significantly from the rules that are enforced in practice. Pistor et al. (2000) show that while transition economies can import foreign laws, the de facto implementation of the legal

framework is often weak and incomplete. Kogan et al. (2002) show how related pairs of countries have imitated each other's formal governance laws without having converged in de facto corporate governance practices. This study, in turn, shows that American governance rules affecting U.S.-listed foreign firms are much stricter in writing than in practice.

Besides courts, alternative enforcement mechanisms can also explain why firms choose to follow formal rules that they are not coerced to follow. In this study, the market punished firms much more harshly than did the SEC (which usually did not punish them at all). The market also gave firms a positive incentive (in the form of future resource flows) to follow the law. In the U.S., just as in emerging markets, institutional analysis requires making a distinction between the formal rules of the game and the informal rules and enforcement mechanisms that firms are forced to abide by in practice.

Appendices A–F. Supplementary analysis tools

A collection of macros that can be applied to sequence batches of up to 5000 sequences can be obtained from our web site (http://igm.ccc.uab.edu/~schroeder/publications/).

Appendices A–F. Supplementary data

The online version of this article contains additional supplementary data. Please vist doi:10.1016/j.jfineco.2004.02.001.

References

Badrinath, S., Bolster, P., 1996. The role of market forces in EPA enforcement activity. Journal of Regulatory Economics 10, 165–181.

Bajaj, M., Mazumdar, S., Sarin, A., 2000. Securities class action settlements: an empirical analysis. Research Report of LECG Finance/Damages Group.

Banerjee, A., Duflo, E., 2000. Reputation effects and the limits of contracting: a study of the Indian software industry. Quarterly Journal of Economics 115, 989–1018.

Bebchuk, L., 1992. Federalism and the corporation: the desirable limits on state competition in corporate law. Harvard Law Review 105, 1437–1511.

Bebchuk, L., Roe, M., 1999. A theory of path dependence in corporate governance and ownership. Stanford Law Review 52, 127–170.

Beck, T., Levine, R., Loayza, N., 2000. Finance and the sources of growth. Journal of Financial Economics 58, 261–300.

Blass, A., Yafeh, Y., 2001. Vagabond shoes longing to stray: why foreign firms list in the United States. Journal of Banking and Finance 25, 555–572.

Campbell, J., 1996. Understanding risk and return. Journal of Political Economy 104, 298–345.

Cheung, C., Lee, J., 1995. Disclosure environment and listing on foreign stock exchanges. Journal of Banking and Finance 19, 347–362.

Claessens, S., Djankov, S., Fan, J., Lang, L., 2002. Disentangling the incentive and entrenchment effects of large shareholdings. Journal of Finance 57, 2741–2771.

Coffee Jr., J., 1999. The future as history: the prospects for global convergence in corporate governance and its implications. Northwestern Law Review 93, 641–707.

Coffee Jr., J., 2002. Racing towards the top?: the impact of cross-listings and stock market competition on international corporate governance. Columbia Law Review 102, 1757–1831.

Cornerstone Research, 2002. Post-Reform Act securities case settlements; cases reported through December 2001. Research Report of Cornerstone Research.

Demirguc-Kunt, A., Maksimovic, V., 1998. Law, finance, and firm growth. Journal of Finance 53, 2107–2139.

Diamond, D., 1991. Monitoring and reputation: the choice between bank loans and directly placed debt. Journal of Political Economy 99, 689–721.

Doidge, C., 2004. U.S. cross-listings and the private benefits of control: evidence from dual class firms. Journal of Financial Economics 72, 519–553.

Doidge, C., Karolyi, K., Stulz, R., 2004. Why are foreign firms listed in the U.S. worth more? Journal of Financial Economics 71, 205–238.

Fanto, J., 1996. The absence of cross-cultural communication: SEC mandatory disclosure and foreign corporate governance. Journal of International Law and Business 17, 119–207.

Foster, T., Martin, D., Juneja, V., Dunbar, F.C., 1999. Trends in Securities Litigation and the Impact of PSLRA. Research Report of National Economic Research Associates, Inc.

Foster, T., Dunbar, F., Martin, D., Juneja, V., Allen, L., 2002. Recent trends VII: PSLRA, six years later. Research Report of National Economic Research Associates, Inc.

Fuerst, O., 1998. A theoretical analysis of the investor protection regulations argument for global listing of stocks. Unpublished working paper, Yale University.

Fisman, R., 2001. It's not what you know … Estimating the value of political connections. American Economic Review 91, 1095–1102.

Gomes, A., 2000. Going public without governance: managerial reputation effects. Journal of Finance 55, 615–646.

Johnson, S., Boone, P., Breach, A., Friedman, E., 2000. Corporate governance in the Asian financial crisis, 1997–98. Journal of Financial Economics 58, 141–186.

Karolyi, G.A., 1998. Why Do Companies List Shares Abroad? A Survey of the Evidence and Its Managerial Implications. Blackwell Publishers, Boston.

Karpoff, J., Lott Jr., J., 1993. The reputational penalty firms bear from committing criminal fraud. Journal of Law and Economics 36, 757–802.

King, R., Levine, R., 1993. Finance and growth: schumpeter might be right. Quarterly Journal of Economics 108, 717–738.

Klein, W., Coffee Jr., J., 2000. Business Organization and Finance; Legal and Economic Principles, Ed. Foundation Press, New York.

Kogan, J., Khanna, T., Palepu, K., 2002. Globalization and similarities in corporate governance: a cross-country analysis. Unpublished working paper, Harvard University.

Kumar, K., Rajan, R., Zingales, L., 2001. What determines firm size? Unpublished working paper, University of Southern California.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 1997. Legal determinants of external finance. Journal of Finance 52, 1131–1150.

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

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., Vishny, R., 2002. Investor protection and corporate valuation. Journal of Finance 57, 1147–1170.

Lang, M., Lins, K., Miller, D., 2003. ADRs, analysts, and accuracy: does cross listing in the U.S. improve a firm's information environment and increase market value? Journal of Accounting Research 41, 317–345.

Lee, J., Rhee, C., 2002. Macroeconomic impacts of the Korean financial crisis: comparison with the cross-country patterns. World Economy 25, 539–562.

Leuz, C., 2003. Discussion of ADRs, analysts, and accuracy: does cross listing in the U.S. improve a firm's information environment and increase market value? Journal of Accounting Research 41, 347–362.
Levine, R., 1999. Law, finance, and economic growth. Journal of Financial Intermediation 8, 8–35.
Levine, R., Zervos, S., 1998. Stock markets, banks, and economic growth. American Economic Review 88, 537–558.
Licht, A., 1998. Regulatory arbitrage for real: international securities regulation in a world of interacting securities markets. Virginia Journal of International Law 38, 563–638.
Licht, A., 2000. Genie in a bottle? Assessing managerial opportunism in international securities transactions. Columbia Business Law Review 2000, 51–120.
Licht, A., 2003. Cross-listing and corporate governance: bonding or avoiding? Chicago Journal of International Law 4, 141–163.
Lins, K., Strickland, D., Zenner, M., 2004. Do foreign firms issue equity on U.S. stock exchanges to relax capital constraints? Journal of Financial and Quantitative Analysis, forthcoming.
Lopez-de-Silanes, F., Zamarripa, G., 1995. Deregulation and privatization of commercial banking. Revista de Análisis Económico 10, 113–164.
MacNeil, I., 2001. Competition and convergence in corporate regulation: The case of overseas listed companies. Unpublished working paper, University of Aberdeen.
Milhaupt, C., 1998. Property rights in firms. Virginia Law Review 84, 1145–1195.
Mitton, T., 2002. A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. Journal of Financial Economics 64, 215–241.
Morck, R., Yeung, B., Yu, W., 2000. The information content of stock markets: Why do emerging markets have synchronous price movements? Journal of Financial Economics 58, 215–260.
Park, Y., Lee, J., 2001. Recovery and sustainability in East Asia. NBER Working Paper 8373.
Pistor, K., Raiser, M., Gelfer, S., 2000. Law and finance in transition economies. The Economics of Transition 8, 325–368.
Rajan, R., Zingales, L., 1998. Financial dependence and growth. American Economic Review 88, 559–586.
Ratner, D., Hazen, T., 2002. Securities Regulation in a Nutshell, seventh Ed. West Group, St. Paul.
Reese Jr., W., Weisbach, M., 2002. Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings. Journal of Financial Economics 66, 65–104.
Rock, E., 2002. Securities regulation as lobster trap: a credible commitment theory of mandatory disclosure. Cardozo Law Review 675, 675–704.
Roe, M., 1996. Chaos and evolution in law and economics. Harvard Law Review 109, 641–669.
Schneider, B., 2002. Why is Mexican business so organized? Latin American Research Review 37, 77–118.
Schumpeter, J., 1911. A Theory of Economic Development. Harvard University Press, Cambridge.
Simmons, L., 1996. Rule 10b-5 litigation: an examination of merit and nonmerit-based factors associated with litigation outcomes. Unpublished Ph.D. dissertation, University of North Carolina at Chapel Hill.
Stulz, R., 1999. Globalization of equity markets and the cost of capital. Journal of Applied Corporate Finance 12, 8–25.
Tribukait, H., 2003. The invisible enforcer? Price behavior of Mexican firms cross-listed on the NYSE around earnings announcements. Unpublished working paper, Harvard University.
Whited, T., 2002. External finance constraints and the intertemporal pattern of intermittent investment. Unpublished working paper, University of Michigan.
Wurgler, J., 2000. Financial markets and the allocation of capital. Journal of Financial Economics 58, 187–214.