Chapter 12 Cross-Listing Behavior

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ABSTRACT

This chapter provides a summary of international cross-listing behavior. It discusses the internal and external factors that prompt firms to cross-list in the first instance, where to cross-list, and for some, instances in which to cross-delist. The chapter also examines the behavior of firms once they cross-list. Other topics discussed include raising capital and investment behavior, the behavior of controlling insiders once firms cross-list, and the effect of cross-listing behavior on firm value. The general conclusions suggest that internal factors predominantly explain cross-listing and delisting behavior. Large firms with sizable growth opportunities tend to cross-list. When these growth opportunities disappear, firms often cross-delist. Proximity predominantly dictates where firms cross-list. Firms typically list in countries that are geographically, culturally, and economically close to their own. The behavior of controlling insiders is altered once firms cross-list as a result of legal and market-wide forces. Firm value generally increases initially as a result of cross-listing, but general disagreement exists about the durability of these valuation gains.

INTRODUCTION

Corporations have increasingly become global or international. The cross-border activities that allow for firms to globalize include the following: greater participation in cross-border trade (Grant, 1987), mergers and acquisitions (M&As) (Moeller and Schlingemann, 2005), capital markets (Henderson, Jegadeesh, and Weisbach, 2006; Gozzi, Levine, and Schmukler, 2010), and international cross-listings (Karolyi, 2006). Much work has sought to examine how these firms behave once they become international. For example, Khanna, Palepu, and Srinivasan (2004), and Martynova and Renneboog (2008) examine how the governance practices of firms change once they trade their goods globally and engage in cross-border M&As. Schmukler and Vesperoni (2006) as well as Gozzi, Levine, and Schmukler (2008) examine how access to

international capital markets affects the maturity structure of corporate debt and firm value. This chapter provides an analysis of the behavior of international cross-listing firms.

The advent of cross-listing internationally is not new. In fact, firms have tended to cross-list on the stock exchanges of other countries since the beginning of the 20th century. However, only in recent decades has the cross-listing market experienced substantial growth, particularly in the United States and the United Kingdom. For example, the number of non-U.S. firms listing on U.S. exchanges increased from 673 in 1995 to a high of 971 in 2000. As Figure 12.1 shows, such growth was also evident in London, particularly via the Alternative Investment Market (AIM) since 1995, and also in the global depositary receipt market. Yet, in the last decade, and admittedly with some exceptions, the attractiveness of listing abroad appears to have waned. While the appetite for global stocks among investors remains strong (for example, the share of international firms in the portfolios of U.S. investors continues to increase), the number of firms cross-delisting has increased. This has not only led many to question the validity of cross-listing for firms but also prompted others to suggest superior alternatives (Siegel, 2009). Recently, Gagnon and Karolyi (2010) present some persuasive evidence suggesting that cross-listings will remain an important strategic venture for firms going forward.

(Insert Figure 12.1 about here)

This chapter characterizes the behavior of cross-listing firms. *Behavior* refers to how people act or react in response to external or internal stimuli. In this regard, the chapter examines which internal and external stimuli promote firms to initially cross-list abroad and why certain firms do not cross-list. Internal stimuli and firm level factors matter. These appear to have changed over time and are similar across countries that cross-list on the same exchange, but the factors differ in terms of their relative importance. External factors also matter in the sense that firms are more likely to cross-list after substantial development occurs in their home country. Factors external to the firm also influence where they cross-list. These factors include the financial/economic performance and proximity of the host market. In this instance, proximity embodies geographic, cultural (e.g., countries share a common language or colonial ties), economic and industrial proximity (i.e., firms tend to cross-list in countries where they trade

heavily and where the industrial base is similar to their own home country). Furthermore, because some of these factors are not fixed, the attractiveness of host markets varies over time.

This chapter also analyzes the behavior of firms once they cross-list. It concentrates on three distinct area: (1) investment and financing activity; (2) the behavior of controlling insiders who bond to a superior regulatory and legal regime (e.g., by listing in the United States); and (3) the valuation effects of listing abroad. Cross-listing, at least for firms listing in the United States, is associated with enhanced financing opportunities and increased investment, which ultimately fosters growth. The ability to derive these same benefits in the United Kingdom is limited in large part because the United Kingdom provides little or no bonding benefits for non-U.K. firms. This is because the main provisions of the rules set out by the United Kingdom Listing Authority (UKLA), the United Kingdom's equivalent of the Securities and Exchange Commission (SEC) in the United States, that seek to protect minority shareholders do not apply to foreign cross-listing firms (MacNeill and Lau, 2001; Licht, 2003). Bonding refers to any instance in which firms voluntarily improve their governance. Bonding arises through cross-listings if firms cross-list in countries where the host level of investor protection surpasses the level of protection that firms are subjected to in their home market.

Next, the post-listing behavior of controlling insiders/managers appears to be more aligned with the interests of their minority shareholders, although some notable exceptions exist. While the bonding that promotes this behavior appears to be incomplete, in the sense that cross-listing firms are not subject to the same scrutiny and oversight afforded to native firms, market forces dictate that firms with a need to bond (i.e., firms with an external financing need), actually do so. Bonding does not appear to motivate a cross-listing in the United Kingdom since non-U.K. firms seeking a secondary listing in the United Kingdom are not subject to many of the same rules that seek to protect minority shareholders to which native U.K. firms are subject. In this regard, finding that Doidge, Karolyi, Lins, Miller, and Stulz (2009c) and Lel and Miller (2008) do not uncover bonding benefits for non-U.K. firms cross-listing on the London Stock Exchange is not surprising.

Finally, general disagreement exists about the valuation gains from listing abroad, or more precisely, about the durability of these valuation gains. Doidge, Karolyi, and Stulz (2009a) suggest that the valuation gains from listing in the United States (what they term a "cross-listing premium") are permanent, and in contrast, find no such premium for firms cross-listing in the United Kingdom. Gozzi et al. (2008) and Sarkissian and Schill (2009a) refute the former, while Bianconi and Tan (2009) refute the latter. What is known is that firms that maintain a considerable amount of trading in the host market and increase and maintain their shareholder base enjoy permanent cross-listing premia. Dual-class (Canadian) firms experience permanent valuation gains irrespective of whether they attract new shareholders.

Finally, the chapter examines whether internal or external stimuli explain the delisting decision of firms in the last decade. The literature appears to suggest that firm-level characteristics, and not external factors, i.e., the Sarbanes-Oxley Act (SOX) of 2002, explain the delisting decision. Chaplinsky and Ramchand (2009) show that the tendency of non-U.S. firms to leave U.S. capital markets has long been explained by firm-level characteristics. Since 1961 they show that the length of time that firms stay in the United States has steadily declined, and that the vast majority of these delistings have been involuntary by firms that are typically small, unprofitable, with low U.S. trading volume and analyst coverage. Thus, while the number of delistings has increased since SOX, the underlying reasons firms delist from U.S. capital markets, namely deteriorating firm quality, explains delisting activity before and after SOX.

The chapter proceeds as follows. The next section examines why firms cross-list abroad. It then outlines the geography of cross-listing and examines the factors determining the location of cross-listing. The remaining sections discuss the capital raising behavior of firms, the behavior of the controlling insiders once firms cross-list, and ultimately how cross-listing affects firm value. The next to last section examines why firms are cross-delisting. The final section provides a summary and conclusions.

WHY DO FIRMS CROSS-LIST ABROAD?

The decision to cross-list abroad has attracted considerable attention in the last three decades. To uncover the motives behind cross-listing abroad, a natural starting point has been to survey the managers of those firms that cross-list abroad, and in some instances, those firms that do not. Saudagaran (1988), Mittoo (1992), Fanto and Karmel (1997), Bancel and Mittoo (2001), and Houston and Jones (2002) provide invaluable survey evidence on these points.

The results from surveys reveal numerous important points. First, the motives for listing abroad have changed over time. While some of the traditional motives remain important, more recent surveys suggest that an international cross-listing serves to complement other aspects of a firm's strategic operations. Firms now cross-list in countries where they already have sizable operations, sales, customers, and strategic partners. In summary, firms tend to follow their export routes when devising listing routes. Additionally, an international cross-listing often pre-dates substantial M&A activity in the host market, in part because cross-listing equity can serve as an "acquisition currency." Cross-listing serves to further enhance the visibility of the firm in the host country, which tends to complement the operations of the firms in these host markets.

Consider the findings of Mittoo (1992) as well as Bancel and Mittoo (2001). Together these papers survey the managers of European and Canadian firms listing in the Unites States. Both sets of managers cite very similar reasons for cross-listing, but the reasons for listing differ in their relative importance for both sets of managers. European managers, who were surveyed much later, cite "increased liquidity, prestige and image" as the most important benefit from listing in the United States, followed by "growth of shareholder base/appeal to foreign investors," "increased access to foreign capital markets/financing ability," "facilitated implementation of the global strategy," and "enhanced stock performance/stock liquidity." Only 12 percent of respondents believe that a cross-listing delivers no benefits.

For Canadian managers, "growth of shareholder base/appeal to foreign investors" is most important, followed by "increased access to foreign capital markets/financing ability," "increased liquidity, prestige and image," and "enhanced stock performance/stock liquidity." For

these firms, “facilitated implementation of the global strategy” is less important, but perhaps has become more important recently. The desire for “increased liquidity, prestige and image” is consistent with Fuerst (1998) and Moel (1999) who motivate cross-listings as a means for firms to communicate their private information, and thus signal their quality to the market. The positive stock price reactions that firms experience upon listing (Miller, 1999), and the negative stock price reaction experienced by their peers who refrain from cross-listing (Melvin and Valero-Tonone, 2009) is at least partially consistent with the theoretical predictions of these signaling models.

In a follow-up to Mittoo’s (1992) study, Houston and Jones (2002) find that Canadian managers’ perceptions of the benefits and costs of cross-listing have become more favorable over time. In the Houston and Jones study, 69 percent, as opposed to 32 percent in the Mittoo study, cite enhanced trading volume as a benefit of listing in the United States; 60 percent compared to 23 percent give greater analyst coverage as a reason for listing. These firms also note other potential reasons for listing, not mentioned by Mittoo, including a lower cost of capital and, to a lesser degree, an improved credit rating and ease of employee stock acquisition. The realization of some of these benefits, especially for firms in civil law countries, relies crucially on the ability of the firms to bond to equitable treatment of their minority shareholders. These firms can do so by cross-listing on U.S. exchanges, thus presenting themselves to the same scrutiny and oversight faced by U.S. firms. In this regard, firms cross-list to improve their corporate governance as predicted by the legal bonding hypothesis. The legal bonding hypothesis suggests that firms can voluntarily improve their governance by cross-listing in countries where, relative to their home country, investors enjoy greater protection. Thus, the perceived benefits from listing are not mutually exclusive.

Firms that list on organized exchanges (i.e., Level 2 and 3 American Depositary Receipts (ADRs) and ordinary lists) tend to reap the greatest gains from listing (i.e., Level 1 and Rule 144a ADRs). Level 1 firms trade over the counter (OTC), and Rule 144a ADRs are privately placed to Qualified Institutional Buyers (QIB) on Portal. Level 2 and capital raising Level 3 ADRs trade on U.S. stock exchanges such as the New York Stock Exchange (NYSE),

the National Association of Securities Dealers Automated Quotation System (NASDAQ), and the American Stock Exchange (AMEX). Level 1 and Rule 144a firms are subject to minimal listing and regulatory requirements. Both are exempt from reconciling their accounts to U.S. generally accepted accounting principles (GAAP) and are minimally affected by the SOX. They require minimal SEC registration and are exempt from the SEC's reporting and accounting obligations under Rule 12g3-2(b). In contrast, Level 2 and 3 firms are subject to more onerous listing and regulatory requirements. These firms are mandated to provide greater disclosures and reconcile their accounting procedures to U.S. GAAP. These firms are subject to both the oversight of the SEC and the same securities laws that apply to native U.S. firms. For example, firms are subject to civil liability under Section 18 of the 1934 Securities and Exchange Act. These firms are also subject to the listing requirements and governance obligations of the individual exchanges, which can be waived in certain instances.

SOX requires chief executive officers (CEOs) and chief financial officers (CFOs) to personally certify that information in each year filed under form 20-F is accurate and free from material misstatements and omissions. SOX also requires that the financial statements and other financial information in the report fairly present, in all material respects, the issuer's financial position and results of operations and cash flows. Country-level factors also attend to a firms listing decision. According to Claessens and Schmukler (2007), firms that cross-list tend to be from wealthy countries with open economies and sound macroeconomic fundamentals. Finally, the decision of where to cross-list is also governed by various factors. Amongst other factors, firms tend to cross-list in countries, which are geographically and culturally proximate to their own. This issue is examined in detail later in the chapter. Thus, both external and internal (firm-level) factors appear to affect the cross-listing decision.

The before-mentioned studies also examine the potential costs of cross-listing, which represent the major reason for not listing abroad. Mittoo's (1992) survey evidence shows that 60 percent of the 62 responding managers cite the costs associated with "SEC reporting/compliance requirements/U.S. GAAP" as the primary deterrent to listing abroad. The legal fees associated with listing also represent a substantial cost. However, the perception of

costs by the managers of cross-listing firms has changed over time. Houston and Jones (2002) find that the perceived costs of listing, at least for listing firms, no longer represent sizable barriers to listing, but are more an “irritant.” This evidence is consistent with Fernandes and Giannetti (2008), who find that while firms may believe initial listing costs are difficult to meet, they are not difficult to maintain. In contrast, European managers cite the costs associated with “public relations/road shows” as the dominant cost of listing abroad. Finally, 60 percent of European firms and 61 percent of Canadian firms believe that the benefits outweight the costs, At least in the case of European firms, this has likely changed since many large European firms have left U.S. capital markets since SOX. The reasons for delisting from U.S. capital markets are explored later in the chapter.

Researchers who examine the characteristics of firms listing abroad find other empirical evidence that tends to complement the survey evidence. In his study of 223 cross-listed companies from the United States, Canada, Europe, and Japan, Saudagaran (1988) identifies size and the ratio of foreign sales to total sales as the main determinants of whether firms cross-list abroad. King and Segal (2009) also find that these factors are primary determinates of whether Canadian firms choose to cross-list in the United States. Firms with a low return on assets, low dividend yield, lower leverage, and higher value are more likely to cross-list. Interestingly, Pagano, Roell, and Zechner (2002) find that while the before-mentioned traits also characterize European firms cross-listing in the United States, European firms cross-listing on other European exchanges share few common traits with their peers that list in the United States. Unlike their high-growth, high-tech peers mentioned earlier, European firms listing on other European exchanges rely more on leverage and do not grow, as measured using total asset growth, more than a control group once they cross-list. Firm characteristics also appear to vary by listing type in the United States (Boubakri, Cosset, and Samet, 2010).

WHERE DO FIRMS CROSS-LIST ABROAD?

The previous section outlines why firms cross-list. This section examines where firms cross-list and how this has changed over time.

At the end of the first decade of the 21st century, firms wanting to pursue a cross-listing abroad had many options. Sarkissian and Schill (2009a) document how, over time, exchanges from 34 countries have hosted international (pure exchange-traded) firms. This number has risen dramatically over time. In the first decade of the 1900s, firms cross-listed on five exchanges (Belgium, France, Switzerland, the Netherlands, and the United Kingdom). By the 1950s, the number of host exchanges had risen to nine (including Austria, Canada, Luxembourg, and the United States), and to 14 in the 1970s (now including Australia, Germany, Japan, Malaysia, and Singapore). Substantial growth has occurred since the 1970s from 16 host exchanges in the 1980s, to 24 in the 1990s, and finally to 30 in 2000s. The last two decades have also witnessed the entry of new host markets. In the 1990s, firms cross-listed in Brazil, Denmark, Hong Kong, Italy, Norway, Peru, South Africa, and Spain for the first time. Since then, Argentina, Finland, Israel, Mexico, Poland, Portugal, Taiwan, and the United Arab Emirates have joined the host market ranks. In total, these 34 exchanges have accommodated 3,683 cross-listing firms over time. The largest exchanges have been the United States (1415), followed by the United Kingdom (494), Luxembourg (285), France (208), Germany (193), and Switzerland (176) (Sarkissian and Schill, 2009a).

Despite the growth in the number of host exchanges, a relatively small number of exchanges have consistently dominated the host cross-listing market. For example, in the last decade of the 20th century, 30 international exchanges hosted just fewer than 800 firms. These listings have been concentrated in the top six markets: the United States (367), United Kingdom (71), Luxembourg (118), Canada (58), Italy (19), and France (18). Collectively, these countries account for almost 82 percent of all listings in that decade. In short, while the number of host exchanges has risen over time, listing activity is concentrated in a small number of exchanges. Second, since the 1950s, the top six host markets have attracted between 78 percent and 94 percent of the entire number of listings. Furthermore, only 12 distinct host markets have occupied the top six host market positions since the 1950s: the United States and the United Kingdom (every decade); France (five decades); Switzerland (four decades); Belgium,

Luxembourg, and the Netherlands, (three decades); Germany (two decades); and Canada, Italy, Japan, and New Zealand (one decade each).

Among the 12 dominant host markets, considerable variation in rankings exists over time. This is consistent with the notion that cross-listing activity occurs in waves in different markets. That is, the relative attractiveness of each exchange changes over time, and in specific periods, some exchanges are more popular than others. Although the United States has been the top host cross-listing market for the last three decades, this has not always been the case. In the 1950s, the United States ranked a lowly sixth, behind Belgium in first place. France occupied the top market position in the 1960s and the United Kingdom held this distinction in the 1970s. Cross-listing wave activity is also evident with the popularity of Japan in the 1980s and more recently New Zealand in the 1990s.

Two recent papers attempt to explain these listing patterns. Sarkissian and Schill (2009a) suggest that cross-listing waves partly result from superior relative financial/economic performance in the host market. In this regard, France in the 1960s, Japan in the 1980s, Luxembourg in the 1950-1970s, and the United States in more recent years all owe their popularity to their economic/financial health. Also, albeit inadvertently, the Unites States and the United Kingdom have benefited from governance reform measures in home markets in terms of attracting cross-listed firms. Since firms are more (less) likely to cross-list in countries with high (low) levels of investor protection (disclosure requirements), governance reforms at home render cross-listings in smaller, less regulated markets futile for these firms. Thus, firms are more likely to cross-list on U.S. and U.K markets because they offer the highest level of investor protection, all else being equal. This is also what Fernandes and Giannetti (2008) find. Finally, Sarkissian and Schill as well as Fernandes and Giannetti relate cross-listing attractiveness to market timing. Firms are more likely to list in countries where the magnitude of the (temporary) valuation gains is highest. This is consistent with market timing because firms are likely to cross-list where stock prices are highest, and thus where the short-term valuation gains arising from market timing are greatest. Since market timing, by definition, only delivers short-term value gains, long-term gains from cross-listing are likely to manifest through a combination of

bonding, enhanced liquidity, improvements in a firms information environment, and a larger shareholder base. These issues are discussed later in the chapter.

The top host markets are not universally popular, but owe their popularity to the patronage of one/two home markets. Belgium owes its popularity in the 1950s to U.S. and Canadian firms, and the United Kingdom to South African mining firms. Without such support, the share of foreign listings in Belgium and the United Kingdom would have dropped from 21.1 percent to 3.6 percent and 19.3 percent to 9.7 percent, respectively. The Netherlands and Switzerland also owe their popularity in the same period to U.S. firms. In the 1960s, U.S. and Belgium firms predominantly favored France while the United Kingdom owed its popularity to U.S. and South African firms. In the 1970s, together with U.S. firms, Irish firms helped popularize cross-listings in the United Kingdom. In the 1980s, Canadian, Israeli, and U.K. firms helped to maintain the position of the United States as the top host market. In the same years, U.S. and U.K. listings largely determined Japan's popularity. Finally, in the 1990s, the wave of emerging market listings helped to maintain the position of the United States and the United Kingdom as the top host markets. Canadian firms still listed predominantly in the United States, while Australia owed much of its popularity to listings by firms from New Zealand (Sarkissian and Schill, 2009a).

Home market cross-listing activity has also varied over time. The largest patrons of host markets have been Canada (651), followed by the United States (551) (despite a fall off in patronage in recent times), the United Kingdom (285), Japan (234), and Australia (172). In fact, the drop in U.S. patronage partly explains why some countries such as Belgium no longer occupy the top six host market positions as they previously had done. The same countries have tended to dominate both host and home markets.

Much of the growth in the cross-listing market has occurred since the 1970s. Since then, the cross-listing market has grown considerably, rising from 255 listings in the 1970s to 741 in the 1980s and then to 1,550 in the 1990s. During the first decade of the 21st century, the number has fallen to 797. Cross-listings by Canadian firms rose from 16 in the 1970s to 177 in the 1980. For U.S. firms over the same period, cross-listings rose from 80 to 181. Between the

1980s and 1990s, listing rose as follows: Australia from 33 to 102 firms; Ireland from 10 to 45 firms; Israel from 20 to 90 firms; the Netherlands from 19 to 69 firms, and the United Kingdom from 65 to 130 firms. Only the United States and Japan contributed less to overseas listings in the same period, decreasing from 181 to 101 firms and from 83 to 71 firms, respectively.

These listings also reveal sizable "proximity preferences," as evidenced by Sarkissian and Schill (2004). They show that firms predominantly list in countries that are geographically close, culturally close (e.g., countries share a common language, and/or share a colonial past), economically close (i.e., firms cross-list in markets in which the trade heavily), and/or industrially close (i.e., firms cross-list in countries with a similar industrial base). This partly explains why Irish firms list in the United Kingdom, Canadian firms list in the United States, and New Zealand firms list in Australia. U.S. firms dominate listings in Canada. Firms from Hong Kong are the largest single group of firms listing in Japan. Geographically-close Austria, Belgium, Switzerland, and the Netherlands dominate cross-listings in Germany. In short, these examples show that the home bias plays an important role in cross-listing.

FINANCING AND INVESTMENT

The survey evidence presented earlier suggests that access to capital remains a primary motivation behind a firm's decision to cross-list abroad. Cross-listing is expected to reduce firm-level financing constraints. Lins, Strickland, and Zenner (2005) were the first to empirically examine this prediction in an explicit manner, while Reese and Weisbach (2002) implicitly do so. Lins et al. use the standard but much-criticized investment-cashflow sensitivity regression approach of Fazzari, Hubbard, and Petersen (1988) and Kaplan and Zingales (1997, 2000). Because financially constrained firms face a higher cost of external capital than less financially constrained firms, such firms rely more heavily on internal funds as measured using cashflow to finance their growth opportunities. Cross-listing on U.S. exchanges is expected to reduce this investment-cashflow sensitivity. In turn, the effects should be greatest for the most severely financially constrained firms.

Lins et al. (2005) test this proposition using a sample of 81 developed and 105 emerging market firms from 1980 to 1996. Cross-listing reduces financing constraints. The authors find that the investment-cashflow sensitivity is reduced by 30 percent. This reduction in investment-cashflow sensitivity is solely among emerging market firms and for firms where legal protection is weak. Their evidence also shows how firms predominantly use equity financing once they cross-list.

Foucault and Gehrig (2008) theorize that firms make better investment decisions once they cross-list because cross-listing improves the value of information in stock prices, thus enabling managers to learn more about, and value more precisely, their firm's growth opportunities. In subsequent work, Foucault and Fresard (2010) show empirically that this is in fact the case. Once firms cross-list, corporate investment to stock price sensitivities increase. This arises because cross-listing enhances the quantity and quality of information that managers can learn from the stock market. This information is conveyed to managers through their stock price. In turn, this new information guides firm investment decisions. Flavin and O'Connor (2010) indicate that the post-listing financing preferences of emerging market firms are dependent on whether the firm was previously deemed investable. However, evidence by Doidge et al. (2009a) shows that the ability of firms to raise capital in the United States does not apply to listings in the United Kingdom. While the increase in the number of capital issues is similar in the United States and the United Kingdom, the dollar amounts raised are much lower in the United Kingdom. For firms cross-listing in the United States, total equity raised increased from $29 billion to $151 over the listing period. The comparable figures in the United Kingdom show that total equity raised increased from $8 billion to just under $13 billion.

Khurana, Martin, and Periera (2008) find that having greater access to external finance results in greater externally financed growth for firms. These authors employ the externally financed growth rates advocated in Demirguc-Kunt and Maksimovic (1998) and use a sample of 476 firms from 38 countries cross-listed in the United States. Their results show that cross-listing is associated with greater externally financed growth. Furthermore, the effects are largest for Canadian firms, followed by Level 3 capital raising firms, and finally Level 2 firms in the

United States. The authors find no such effect for Level 1 listings and no systematic differences across countries in ways predicted by the bonding hypothesis

Further, the growth associated with cross-listing also manifests through external growth (e.g., due to greater merger acquisition activity). Numerous studies document the role that ADRs play as an "acquisition currency". In a sample of 196 European U.S. listed firms, Tolumen and Torstilla (2005) find that a greater proportion of acquisitions are financed by equity post-listing. In a follow-up study, however, Burns, Francis, and Hasan (2007) find that the use of equity-financed acquisitions by non-U.S. firms does not match that of native U.S. firms.

THE LEGAL BONDING HYPOTHESIS

The *legal bonding hypothesis* suggests that firms can improve their home-level governance by cross-listing on the exchanges of countries providing superior governance to that provided at home. In this sense, legal bonding to the country in which they are cross-listed is a general phenomenon that applies to any instance in which firms cross-list in countries with superior governance. It represents a voluntary commitment by firms to improve their governance or a committment to a governance framework that Goergen and Renneboog (2008) refer to as "contractual corporate governance." Typically, firms seeking bonding benefits do so by cross-listing on the exchanges of common law countries, namely the United States and the United Kingdom, since investors tend to be better protected under these legal regimes (La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1998). Furthermore, firms with the greatest need for bonding should be more inclined to cross-list on these exchanges. Thus, a priori, the expectation is that firms should cross-list if they have sizable agency conflicts or if they are from legal regimes where investors are not well protected. This is because cross-listing should better align the interests of the controlling insiders with their minority investors, and the effects should be greatest for these firms. Whether legal bonding sufficently aligns the interests of controlling insiders with their minority investors remains an open empirical question.

Much evidence in favor of the legal bonding hypothesis stems from examining whether the gains promised by the legal bonding hypothesis are realized once firms cross-list and also

from investigating whether these gains are highest for firms with the greatest need for bonding. In this regard, researchers have studied whether, for example, exchange cross-listings in the United States result in a reduced cost of capital, enhanced investment, reduced financing constraints, and ultimately higher firm value as predicted by the bonding hypothesis. The initial evidence, at least from the U.S. perspective, supports this view. Reese and Weisbach (2002) show that once firms cross-list, the likelihood of issuing equity increases from 46 offerings beforehand to 111 within two years of listing, This activity is concentrated amongst civil law firms. Doidge, Karolyi, and Stulz (2004) show that this manifests into what they term a "cross-listing premium" which is in line with the bonding hypothesis. This premium is greatest for Level 2 and 3 exchange-traded firms and especially Level 2 and 3 exchange-traded firms from civil law countries. In subsequent work, Hail and Leuz (2009) show that almost half of the valuation gains for exchange-traded firms arise from a reduction in their cost of capital, as predicted by the bonding hypothesis. For firms not subject to the bonding regime, their listing premium arises from a revision in growth expectations.

Other studies directly examine the governance-related effects of cross-listing. Using voting premia of dual-class shares, Doidge (2004) shows that private benefits of control decrease for Level 2 and Level 3 firms once they cross-list. Consitent with these findings, King and Segal (2009) find that dual-class Canadian firms also enjoy a large permanent cross-listing premium. Ayyagari and Doidge (2010) examine if cross-listing in the United States materializes into convergence toward a more dispersed ownership structure, as is common in the United States and common-law countries in general. They show that listing in the United States is associated with a greater likliehood of control changes (increase of 25 percent), but find no evidence of a shift away from concentrated ownership structures. O'Connor (2006) finds that exchange-traded firms in the United States pay significanly lower dividends post-listing, which is consistent with the notion that these firms substitute dividends (in their agency role) for better governance.

In contrast, no such bonding effects arise for firms listing on the London Stock Exchange (Doidge et al. ,2009c). This is in line with Troeger (2007), who suggests that the motives of firms

cross-listing in the United Kingdom differ from those cross-listing in the United States. Not surprisingly, Doidge et al. (2009a), uncover a cross-listing premium for U.S. cross-listings, but not for firms cross-listing in the United Kingdom.

The bonding hypothesis has also been the subject of much criticism. While presenting all of the evidence against the bonding hypothesis is beyond the scope of this chapter, it does present some of the more persuasive evidence. Ferris, Kim, and Noronha (2009) as well as Karolyi (2010) provide a comprehensive review.

The first criticism relates to *litigation risk*, which is the possibility that shareholder protection fails to materialize. In this regard, many question the enforcement policy of the SEC against foreign private issuers. For example, its most vocal critics (Licht, 2001, 2003; Siegel, 2005) consistently argue that actions by the SEC against badly behaved foreign firms have been insufficient. Licht (2003) goes so far as to suggest that the enforcement laws put in place by the SEC remain largely 'illusionary' for non-U.S. firms, as non-U.S. firms are subjected to a less stringent regime than that laid out for U.S. firms. Siegel asseses SEC enforcement policy toward a sample of Mexican firms cross-listed in the United States. He finds that SEC action against asset tunneling Mexican firms has been limited (only 25 cases in total) and weak because the SEC has not recovered the assets. *Asset tunneling* refers to the transfer of assets from firms for the benefit of controlling shareholders (Johnson, LaPorta, Lopez-de-Silanes, and Shleifer, 2000). In defense of the SEC, Mitton (2001) finds that during the Asian crises, Asian firms cross-listed in the United States perfomed the best. Doidge et al. (2009c) conclude that such monitoring acts as a sizable deterrent preventing many firms from cross-listing in the first instance.

Two caveats are worth noting. First, Siegel's (2005) evidence is not a damning indictment of the bonding hypothesis. While he refutes the claim that non-U.S. firms enjoy legal bonding because they clearly do not in this instance, he suggests that some bonding exists, namely through the certification role of what are termed 'reputational intermediaries' such as analysts, rating agencies, auditors, and investment bankers. Thus, bonding in the United States, and perhaps elsewhere, is reputational rather than legal in nature. Second, Siegel finds

evidence supporting the view that bonding also manifests itself through market forces, as originally predicted by Stulz (1999) and Coffee (1999, 2002). Subseqent to their 'ill-behavior', the Mexican firms identified by Siegel experience difficulty raising capital internationally. Recent work by Crawford (2009) serves to enhance the view that bonding arises through a combination of legal institutions and market forces.

The second line of criticism typically finds evidence against some of the persuasive findings presented by Doidge et al. (2004) and Doidge (2004) in favor of the bonding hypothesis. These studies question the permanence of the premium documented by Doidge et al. (2009a). The studies suggest that the behavior of firm value around the time of listing and in the long-run is inconsistent with the bonding hypothesis because cross-listing does not produce a long-term or permanent effect on firm value, as predicted by the bonding hypothesis. Instead, the behavior of Tobin's *q* for cross-listing firms is more consistent with the market segmentation and market timing hypotheses. This is what Bris, Cantale, and Nishiotis (2007), Gozzi et al. (2008), and Sarkissian and Schill (2009a, 2009b) find.

Unlike Doidge et al. (2004), Pinegar and Ravichandran (2004) document a large cross-listing premium for Rule 144a, especially for those firms from weak legal regimes. This is surprising given that these firms are not subject to the onerous governance requirements required of Level 2/3 firms. However, O'Connor (2009a) finds contrary evidence using a larger sample of firms compared to Pinegar and Ravichandran (2004).

The analysis of Fresard and Salva (2010) also appears inconsistent with the bonding hypothesis. They compare non-U.S. cross-listing firms to U.S. firms and uncover a persistent "foreign firm discount." The discount may reflect the lack of "legal bonding" and the fact that firms with the greatest need for bonding experience the largest discount is also evidence against the bonding hypothesis. The fact that U.S. investors still incorporate firms' home market institutions when forming their valuations of non-U.S. firms suggests that these investors also question the effectiveness of legal bonding in the United States. Pinegar and Ravichandran (2003) find results that question the validity of using voting premia in dual-class shares to

measure private benefits. In doing so, they question the robustness of the findings of Doidge (2004).

DOES CROSS-LISTING INCREASE FIRM VALUE?

In general, researchers have adopted two approaches to examine whether cross-listing is associated with increased firm value. The first approach uses standard event study methodology to examine the share price reaction to cross-listings while the second approach uses valuation metrics. For brevity's sake, the chapter concentrates on the latter. Miller (1999), Foerster and Karolyi (1999), and Mittoo (2003) offer studies that employ cumulative abnormal returns generated using event studies to examine the valuation gains from cross-listing.

In studies using valuation metrics, the average (median) value of cross-listed firms is compared to non-cross-listed firms either in a single year (cross-section) or over time (using panel/longitudinal methods). To proxy for firm value, many researchers use Tobin's *q*, where *Tobin's q* is defined as the book value of debt plus market capitalization divided by the book value of assets. Since Tobin's *q* compares the market value of the firm's assets to its value, it provides a measure of the "premium" that investors place on a firm's future prospects. A priori, cross-listing is expected to increase this premium.

Two of the earliest papers to use valuation metrics are Lang, Lins, and Miller (2003) and Doidge et al. (2004). Both studies compare the value of cross-listed to non-cross-listed firms in a single year, 2003 and 1997, respectively. In line with the evidence presented earlier, characteristics of cross-listed versus non-cross-listed firms tend to differ. For example, compared to non-cross-listed firms, cross-listed firms tend to be larger and more profitable, have greater growth opportunities, and are more highly valued even before cross-listing. As a result, since the goal is to establish if cross-listing leads to higher firm value, one must control for the possible "endogeneity" of the cross-listing decision, i.e., causation runs from firm value to cross-listing. This is commonly referred to as *self-selection bias*. The goal then for researchers is to separate the effects of firm characteristics and cross-listing on firm value. The most common approaches applied in the literature to account for self-selection bias are: (1) matching

methods (Litvak, 2007b; O'Connor, 2009b); (2) treatment effects/two-stage least squares/Heckman (1979) model (Lang et al., 2003; Doidge et al. 2004; O'Connor, 2009a, 2009b); and (3) fixed effects (panel) methods (Doidge et al., 2009a; O'Connor, 2009a, 2009b).

The approach adopted in Lang et al. (2003) and Doidge et al. (2004) is to regress Tobin's *q* on simple 0/1 cross-listing dummies and control variables in a single year. After correcting for self-selection bias, both studies find that cross-listing firms tend to be worth more than non-cross-listing firms. In turn, Doidge et al. show that the "cross-listing premium" is greatest for ordinary lists and Level 2 and 3 ADRs, as only these firms subject themselves to bonding (see the top left graph outlined in Figure 12.2). In contrast, cross-listing firms tend to be worth 14 percent less than U.S. firms, which Fresard and Salva (2010) term a "foreign firm discount." However, the magnitude of the discount tends to decrease for characteristics that proxy for a firm's recognition and familiarity. Compared to poorly governed cross-listing foreign firms, well-governed cross-listing foreign firms also appear to be valued at a smaller discount relative to U.S. firms. In summary, cross-listing firms are worth, on average, 16.5 percent more than non-cross-listing firms. This premium rises to 37 percent for exchange-traded firms. Given their cross-sectional nature, these findings cannot address whether the cross-listing premia are permanent or transitory.

General disagreement exists about the permanency of these valuation premia. Doidge et al. (2009a) show that this cross-listing premium has persisted over time and is thus permanent. Figure 12.2 plots cross-listing premia for Level 1, Level 2/3, and Rule 144a firms from 1992 to 2005 taken from a working paper version of Doidge et al. (2009b). Level 2/3 and Level 1 firms are worth more than non-cross-listing firms in every year, although Level 2/3 firms invariably enjoy the largest cross-listing premia. In contrast, since 2000, Rule 144a firms no longer enjoy a cross-listing premium.

(Insert Figure 12.2 about here)

The top row of Figure 12.3 reinforces this point because it depicts the value of firms cross-listing in the United States in event time. The valuation premia persist and appear to be

permanent. That is, the coefficient estimate on the "greater than three years post-listing" dummy is positive and statistically significant for Level 1 and Level 2/3 firms, but is greater for the latter (the white and gray shaded areas in the top left graph of Figure 12.3 are positive and statistically different from zero, but the gray area is greater). Figure 12.3 also shows that cross-listing firms experience a run-up in value before listing. Value peaks in the year of listing and falls-off thereafter. This pattern appears to be consistent with the notion that firms time their decision to cross-list after a period of strong performance. In general, this pattern appears to manifest itself across host exchanges (Sarkissian and Schill 2009a). Mitton and O'Connor (2010) document similar behavior in firm value for a sample of emerging market firms that become investable. Gozzi et al. (2008) report similar evidence for firms that raise capital on international markets.

(Insert Figure 12.3 about here)

An examination of U.S. and U.K. cross-listings reveals that cross-listing premia appear to be the sole preserve of U.S. listings (see the bottom left panel of Figure 12.2 and the top right panel of Figure 12.3). No U.K. cross-listing premium exists, and in some years, ordinary listings are worth substantially less than non-cross-listed firms in three years (1994, 1996, and 1997). Consistent with these findings, O'Connor (2009c) finds no cross-listing premium for Irish firms listed in London as ordinary lists. Bianconi and Tan (2009) find to the contrary. According to them, a cross-listing premium exists in both the U.S. and U.K. markets. Comparisons are difficult between the Bianconi and Tan and Doidge et al. (2009a) study because Bianconi and Tan analyze fewer countries over a shorter time period than do Doidge et al.. Unlike Doidge et al., Bianconi and Tan do not examine if the valuation gains from cross-listing in the United Kingdom are permanent.

King and Segal (2009) also document permanent cross-listing premia for both dual-class Canadian firms listed in the United States and single-class firms that can attract and maintain their shareholder base. This suggests that bonding, whether legal or market based, is likely to

explain the valuation gains for poorly governed firms. In contrast, since the bonding gains are likely to be much lower for well-governed firms, these firms must attract and maintain a larger shareholder base in order to experience a cross-listing premium. For poorly governed firms, the gains from bonding are sufficiently large, thus ensuring that they do not have to significantly widen their shareholder base to gain from cross-listing. An examination of the sources of the valuation gains from cross-listing follows.

Gozzi et al. (2008) and Sarkissian and Schill (2009a, 2009b) refute the findings of Doidge et al. (2009a). Using a sample of U.S. cross-listing firms and firms raising capital internationally, Gozzi et al. find that the valuation gains are not permanent but transitory because they disappear once the firm enters its third year of listing. Using a sample of global cross-listings consisting of 33 distinct host markets, Sarkissian and Schill (2009a) show that the results of Gozzi et al. also appear to be present in other than U.S. markets. In contrast, the "foreign firm discount" persists over time and appears permanent (see bottom right panel of Figure 12.2).

General disagreement also appears to exist about the sources of the valuation gains and the relative importance of each source vis-à-vis one another in explaining the gains from listing. The principal theories that attempt to explain the valuation gains from listing are: (1) the investor recognition hypothesis (Merton, 1987), whereby neglected firms or firms about which investors are unaware become more visible to investors and analysts upon listing, which in turn serves to widen their shareholder base; (2) the bonding hypothesis; (3) the market segmentation hypothesis; and (4) the liquidity hypothesis, whereby firms now trade on larger and more liquid host exchanges.

Lang et al. (2003) relate the cross-listing premium to improvements in a firm's information environment, namely through increases in analyst coverage and reduced forecast accuracy, which is consistent with both the recognition and bonding hypotheses. King and Segal (2009) show that the relative importance of the investor recognition hypothesis and the (not necessarily) mutually exclusive bonding hypothesis depends on the firm's ownership

structure. Single-class share Canadian firms must attract and maintain their shareholder base in the United States if they want to experience permanent valuation gains from listing. In contrast, dual-class shares do not have to do so. Dual-class shares enjoy a permanent cross-listing premium, irrespective of whether they broaden their shareholder base. For these firms, the gains from bonding are sufficient to generate a permanent cross-listing premium.

Although this finding suggests that the legal bonding hypothesis explains a large part of the listing gains, disagreement exists about just how much. Bris et al. (2007) suggest that the market segmentation hypothesis accounts for about twice as much as the bonding hypothesis in explaining the gains from listing. The fact that the valuation gains do not appear to be permanent would violate the bonding hypothesis, which predicts a long-term enduring effect on firm value. Consequently, Gozzi et al. (2008) attribute the transitory valuation gains associated with listing to the market timing and segmentation hypotheses. Both King and Segal (2004) and Litvak (2009) attribute the cross-listing premium to the level of host market trading experienced by cross-listed firms. In turn, this suggests that firms experiencing "flow-back" (i.e., trading migrates back to their home exchange) may not experience a permanent cross-listing premium. Finally, Fresard and Salva (2010) highlight the importance of investor recognition and familiarity in explaining the "foreign firm discount." Firms that attract and expand their shareholder base tend to enjoy the largest "cross-listing premium" and the smallest "foreign firm discount."

WHY ARE FIRMS CROSS-DELISTING?

In recent years, the emphasis has shifted toward examining why firms are delisting or deregistering from capital markets, most notably in the United States, and why fewer firms are listing in the United States. In recent years, the result of this trend is that net cross-listings on U.S. exchanges have been negative. For example, since 2001, net cross-lists on U.S. and U.K. exchanges have been negative in seven separate years. Over the same period, net lists for Level 1 and Rule 144a list types have been positive in all but one year (2003) as shown in Figure 12.4.

(Insert Figure 12.4 about here)

To try and establish the cause of such trends, researchers have generally focused on two possible explanations. The first relates to the bonding hypothesis. If the bonding hypothesis holds, the additional disclosures mandated under SOX serve to enhance the bonding role and thus the attractiveness of listing in the United States. In this regard, the "cross-listing premium" of Doidge et al. (2004) should increase because this premium increases in the host level of investor protection holding growth opportunities constant. Thus, given SOX, firms are more likely to remain listed in the United States, and, in turn, more firms are likely to cross-list. Yet, the observable trends (firms delisting or deregistering and less firm cross-listing) are only consistent with the bonding hypothesis, if and only if, firms are delisting/deregistering, because they no longer either require external financing or they can finance internally. Both instances lessen the need to list and render the costs associated with listing unjustifiable. This is often referred to as the costs savings rationale for delisting/deregistering. Furthermore, because SOX also increases the costs for controlling insiders to expropriate wealth from minority shareholders, the firms most likely to delist/deregister are poorly governed firms.

In a study of U.S. firms that voluntarily deregistered from the SEC before and after SOX, Leuz, Triantis, and Wang (2008) find support in favor of both the agency conflicts and cost saving theories of deregistrations. Thus, the observable trends are consistent with the bonding hypothesis if firm-level fundamentals (e.g., firms with little or no growth opportunities, no need for external financing, and poorly governed firms) and not the associated listing costs explain why firms cross-delist or deregister. If this is true, firms delist or deregister because the benefits from listing have disappeared for these firms.

Cross-delisting or deregistering under Rule 12h-6 should benefit these firms because this rule removes the now irrelevant costs associated with listing. In turn, if the bonding hypothesis is correct, the cross-listing premium should be maintained and may even rise for the firms that refrain from delisting. Thus, the cross-listing premium should have consistently fallen, and perhaps have disappeared, for those that leave. Finally, if the bonding hypothesis is correct, the market reaction to SOX should be positive because this legislation further reinforces the bonding mechanism and leads to higher firm value. If the bonding hypothesis explains

cross-delistings, it will at least partially explain why firms are no longer cross-listing in the United States and/or are cross-listing on less regulated markets. Piotroski and Srinivasan (2008) and Chaplinsky and Ramchand (2009) explore this possibility.

On the other hand, the loss of competitiveness hypothesis (Doidge et al., 2009b) suggests that the additional provisions mandated under SOX impose additional deadweight costs on cross-listing firms. In turn, these costs are such that they render the net benefits from listing negative. In this instance, firms are over-regulated, resulting in excessive costs and lower-benefits or perhaps negative-net benefits from listing, which ultimately cause these firms to delist or deregister. Thus, the loss of competitiveness hypothesis suggests that, unlike the bonding hypothesis, costs and not benefits explain the observable trends. Even firms with sizable growth opportunities and the need for external finance are likely to cross-delist or deregister because of the associated costs. At the exchange-level, this results in a loss of competitiveness vis-à-vis competitors. Firms leave an exchange and potentially go to other competing exchanges. In turn, firms that are eligible to list in the United States now list elsewhere. Both effects result in fewer firms cross-listing in the United States. Under the predictions of the loss in competitiveness hypothesis, cross-listing premia should decrease post-SOX and the market reaction to SOX and delistings or deregistrations should be negative. In turn, the market reaction should be more negative for firms with sizable growth opportunities and the need for external finance.

The market reaction to SOX has been mixed. On the one hand, Berger, Li, and Wong (2005) find a positive stock price reaction to SOX for their sample of 490 firms cross-listed in the United States. The effects are even more pronounced for firms from countries where investor rights are poorly enforced. These firms gain most from bonding. In contrast, both Li (2007) and Litvak (2007a) conclude otherwise. Both find that, in line with the loss of competitiveness hypothesis, SOX imposes excessive costs on non-U.S. firms rendering the U.S. market over-regulated.

Zingales (2007), Litvak (2007b, 2008), and Doidge et al. (2009b) all examine cross-listing premia given SOX. Both Zingales (2007) and Litvak (2007b, 2008) find that the cross-listing premium has fallen since SOX, although the Zingales study is subject to various limitations. In a more robust framework, Litvak (2008) also finds that the cross-listing premium has fallen since SOX. The fall is greatest for firms that have the least to gain from SOX, namely small firms domiciled in countries with a reputation for fair treatment of their minority investors.

Doidge et al. (2009b) find evidence to the contrary and support for the bonding hypothesis. For firms that remain cross-listed, the cross-listing premium has not fallen over time. However, the cross-listing premium does fall for deregistering firms, which is consistent with the notion that their growth opportunities have fallen over time, rendering a cross-listing futile because these firms no longer require external financing. Doidge et al. (2009a) find similarly in an earlier paper. Here again, they find that the cross-listing premium has not fallen over time for exchange listings in the United States. The authors also find evidence contrary to the loss of competitiveness hypothesis. If anything, firms that delist or deregister firms do so because they no longer require external financing or because they no longer have sizable growth opportunities. In contrast, those that remain continue to grow.

Piotroski and Srinivasan (2008) and Chaplinsky and Ramchand (2009) add to the literature in support of the bonding hypothesis. These studies determine that firm characteristics and not over-regulation explains the deregistering activity of firms since SOX. Chaplinsky and Ramchand find that their "true" sample of 48 voluntary delistings are low quality firms, namely firms with lower profitability, assets, and market capitalization, with poor pre-SOX stock price behavior, and lower analyst coverage. Piotroski and Srinivasan find similar results. Piotroski and Srinivasan also report that smaller firms that are less able to absorb the costs of listing and more-poorly governed firms are less likely to list in the United States given SOX. The former suggests that costs associated with SOX altered firms listing decisions away from the United States.

Together, both results highlight that SOX tends to increase the bonding-related benefits from listing. Finally, SOX appears to have altered the composition of firms listing in the United States. The remaining firms appear to be of high quality. The firms leaving or now listing in the United Kingdom instead of the United States are of lower quality, i.e., smaller and less profitable.

Also consistent with the bonding hypothesis, Hostak, Karaoglu, Lys, and Yang (2007) find that voluntarily delisting firms are typically firms with weaker governance. Consistent with the bonding hypothesis, these firms delist or deregister not to avoid the excessive costs of listing but to avoid the additional regulatory constraints imposed on them by SOX. Boubakri, Cosset, and Samet (2010) also show that since SOX, firms are more likely to choose capital raising listings in the United States (Level 3 and Rule 144a), and that the likelihood of choosing a Level 3 listing increases greatly for firms from weak disclosure regimes. The latter, in particular, is again consistent with the notion that SOX strengthened the bonding characteristics of listed ADR programs. Finally, Fernandes and Giannetti (2008) also find evidence that refutes the loss of competitiveness hypothesis because exchanges tend to attract more listings if they improve their level of investor protection.

SUMMARY AND CONCLUSIONS

This chapter outlines the internal and external stimuli characterizing international cross-listing behavior. Specifically, it presents the internal and external factors prompting firms to cross-list, informing them about where to cross-list, and for many in recent years, when to cross-delist. The behavior of firms is examined during the duration of their cross-listing stay. In this regard, the chapter limits the discussion to their investment and capital raising activity, the behavior of controlling insiders or managers who, at least for those listing on U.S. exchanges, subject themselves to the added scrutiny of the SEC, and what are often referred to as reputational intermediaries. Finally, the chapter presents evidence that examines how cross-listing abroad affects firm value.

In summary, internal factors largely govern the decision to cross-list and subsequently cross-delist. Typically, cross-listing firms are large firms that have sizable growth opportunities and a need for cheaper external financing. When these growth opportunities disappear, or when firms no longer require external financing, firms tend to cross-delist. For these firms, the costs associated with cross-listing are no longer warranted because the benefits no longer remain. Consequently, firm-level characteristics and not the costs associated with SOX typically explain cross-delisting behavior in recent years. In this regard, costs, as an external factor, only serve to explain why some firms refrain from cross-listing in the first instance and not why some subsequently cross-delist.

Proximity factors, whether economic, geographic, cultural, or industrial, largely explain where firms cross-list. For example, Canadian firms list predominantly in the United States. Moreover, firms also cross-list in countries where current economic or financial development is strong. Because such factors are cyclical and can occur in countries at different times, the attractiveness of cross-listing locations varies over time. As such, cross-listing waves exist. This largely explains why the United States has been the dominant host market for cross-listing firms in the last three decades.

Finally, the chapter examines the behavior of firms once they cross-list. Although firms and their shareholders largely realize the expected gains from listing, these gains are not necessarily realized in every host market. First, at least in the United States, cross-listing is associated with greater access to external financing, reduced financing constraints, and greater investment. This is not necessarily the case for firms cross-listing in London. Firms cross-listing in the United Kingdom use more external financing post-listing, but the value of the capital raised is dwarfed in comparison to the amount of capital raised by firms cross-listing in the United States.

Second, with some exceptions, controlling insiders typically bond to greater value-maximizing behavior once they cross-list. Recent work suggests that even absent legal bonding, market forces are sufficient to better align the interests of controlling insiders/managers with minority shareholders. The managers of firms with a need for external finance tend to refrain from self-serving behavior. The market tends to penalize those who do not.

Finally, the chapter examines whether cross-listing affects firm value. General disagreement exists on several fronts. First, Doidge et al. (2009a) suggest that the valuation gains from cross-listing in the United States are permanent. Using a sample of Canadian firms cross-listed in the United States, King and Segal (2009) show that these permanent valuation gains accrue to dual-class share firms, irrespective of whether they expand their shareholder base, and to single-class share firms, who attract and maintain their shareholder base. In contrast, Gozzi et al. (2009) and Sarkissian and Schill (2009b) suggest that the valuation gains are short-lived. Second, Doidge et al. (2009a) suggest that only U.S. cross-listings and not cross-listings in the U.K. result in a cross-listing premium. Bianconi and Tan (2009) disagree and suggest that cross-listing in both countries tends to result in a cross-listing premium for cross-listing firms.

DISCUSSION QUESTIONS

1. From the perspective of a controlling shareholder or manager, what are the costs and benefits from cross-listing abroad?
2. From the perspective of the firm, what are the costs and benefits from cross-listing abroad?
3. Are the valuation gains from cross-listing abroad permanent? What might a firm do in an attempt to make these gains permanent?
4. Does cross-listing serve to better align the interests of controlling and minority shareholders as predicted by the legal bonding hypothesis? Explain why or why not.

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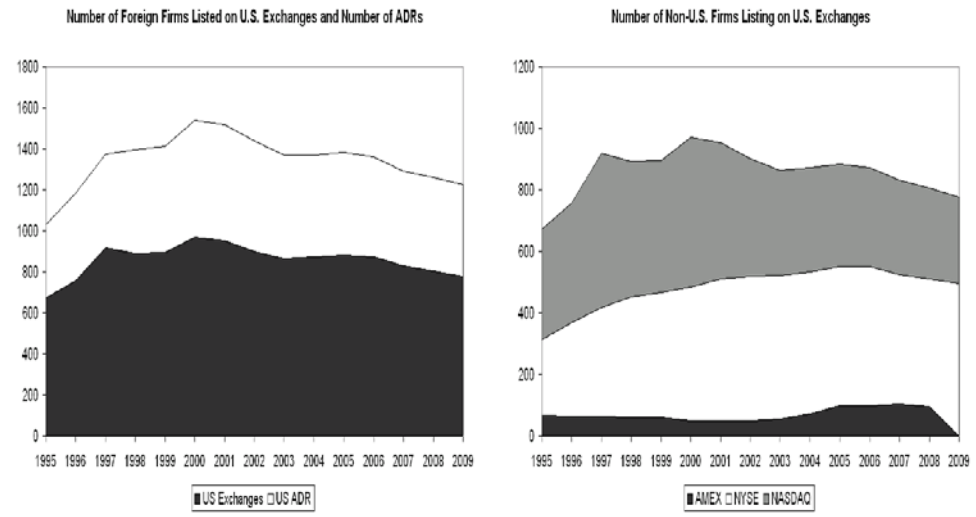
Figure 12.1 International Cross-Listings in the United States and the United Kingdom

This figure reports the number of firms cross-listed on international exchanges. The top row shows the total number of foreign firms cross-listed on U.S. exchanges, the total number of firms listed as ADRs, and the total number of foreign listings by stock exchange listing. The bottom row displays the number of Level 1 over the counter, global depositary receipts, and foreign listings on the London Stock Exchange. The sources of information include the Bank of New York, Citibank, Deutsche Bank, Nasdaq, NYSE, OTC Bulletin Board, London Stock Exchange, and World Federation of Stock Exchanges.



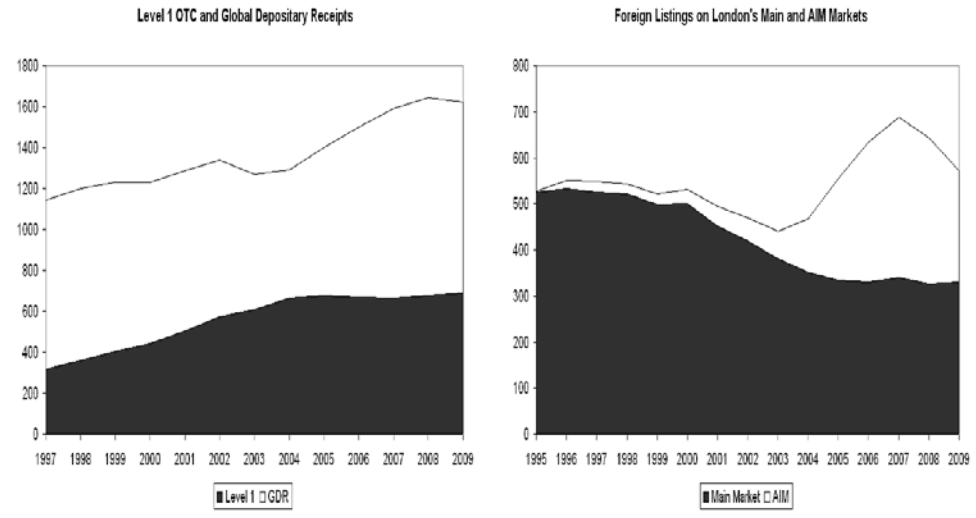
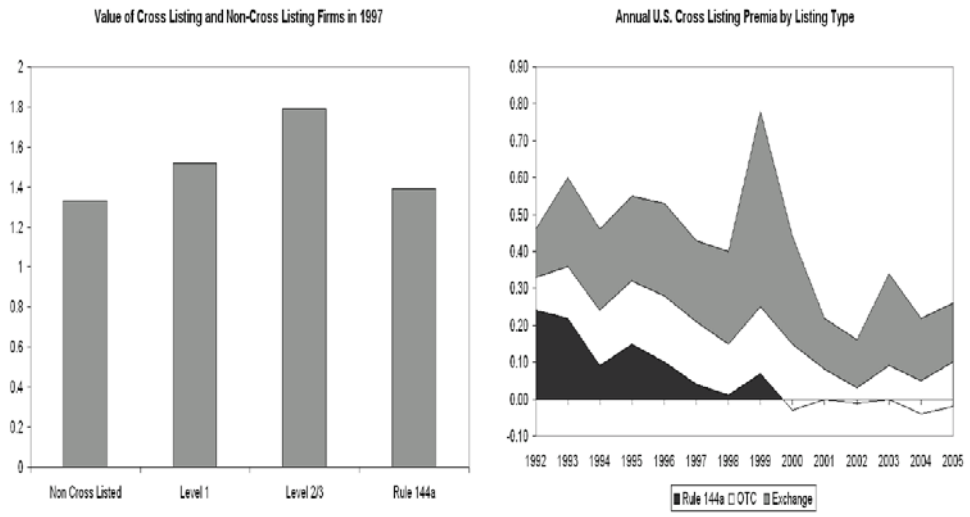
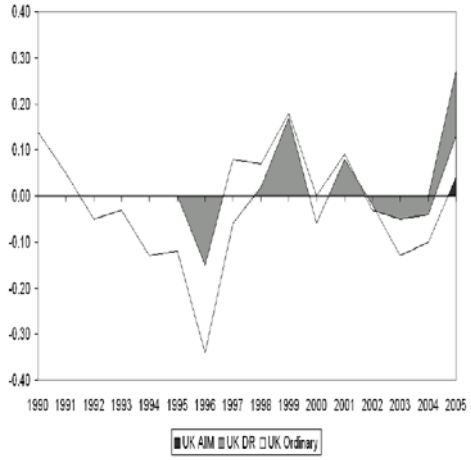


Figure 12.2 Cross-Listing Premia in Calendar Time

This figure displays the value of cross-listed firms relative to non-cross-listed firms in calendar time. The top row displays the value of foreign firms cross-listing in the United States relative to non-cross-listing firms in 1997 and from 1992 to 2005, respectively. The bottom row displays the value of foreign firms cross-listing in the United Kingdom relative to non-cross-listing firms, and the value of exchange traded non-U.S. firms to U.S. firms from 1989 to 2006. All data are sourced from Doidge, Karolyi, and Stulz (2004, 2009a) and Fresard and Salva (2010).



Annual U.K. Cross Listing Premia by Listing Type



Annual U.S. Foreign Firm Discount

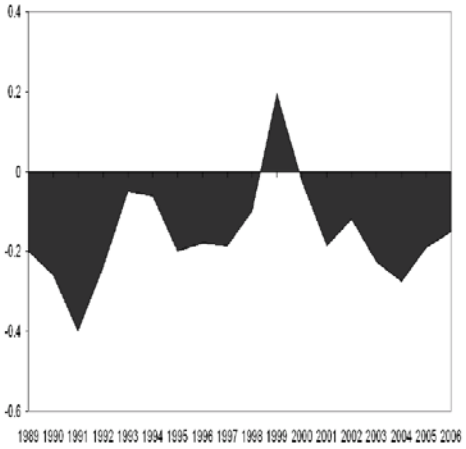


Figure 12.3 Cross-Listing Premia in Event Time

This figure displays the value of cross-listed firms relative to non-cross listed firms in event time. It displays the value of foreign firms cross-listing in the United States relative to non-cross-listing firms, and the value of foreign firms cross-listing in the United Kingdom relative to non-cross-listing firms. All data are taken from Doidge, Karolyi, and Stulz (2009a).

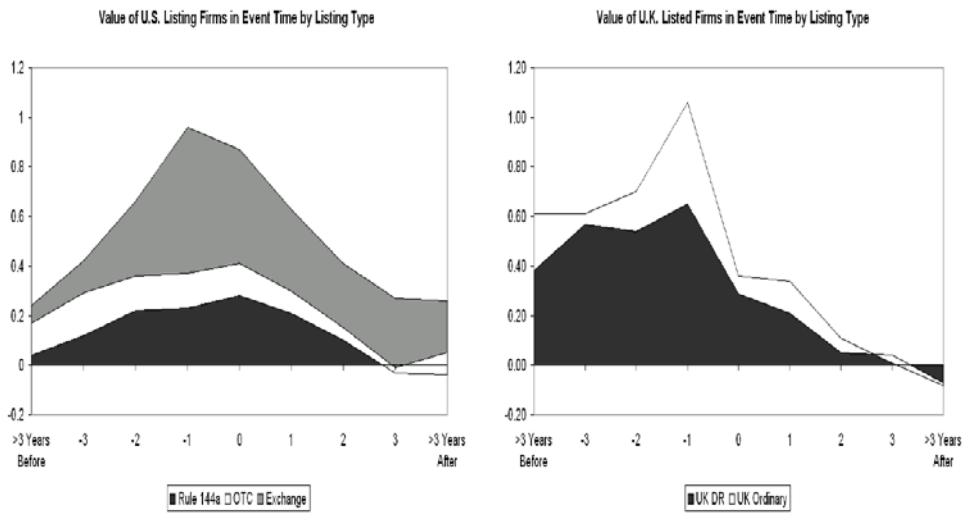


Figure 12.4 International Cross-Delisting Behavior

This figure reports the number of foreign new listings and delistings in the United States and the United Kingdom. All information is sourced from the Bank of New York, Citibank, Deutsche Bank, Nasdaq, NYSE, OTC Bulletin Board, London Stock Exchange, and World Federation of Stock Exchanges.