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Cost of capital effects and changes in growth expectations around U.S. cross-listings ☆

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ABSTRACT

This paper examines whether cross-listing in the U.S. reduces firms' costs of capital. We estimate cost of capital effects implied by market prices and analyst forecasts, which accounts for changes in growth expectations around cross-listings. Firms with cross-listings on U.S. exchanges experience a decrease in their cost of capital between 70 and 120 basis points. These effects are sustained and exist after the Sarbanes-Oxley Act. We find smaller reductions for cross-listings in the over-the-counter market and for exchange-listings from countries with stronger legal institutions. For exchange-traded cross-listings, the cost of capital reduction accounts for over half of the increase in firm value, whereas for other types of cross-listings the valuation effects are primarily attributable to contemporaneous revisions in growth expectations.

1. Introduction

There is mounting evidence that countries' institutional frameworks play an important role for access to finance and equity valuations (e.g., La Porta, Lopez-de-Silanes, Shleifer, and Vishny, 1997, 2002). In light of this evidence, cross-listing in the U.S. has been suggested as a way for firms from countries with poor institutions to overcome these shortcomings (Coffee, 1999; Stulz, 1999). Consistent with this notion, several studies show that cross-listings have significant effects on firms' market values, using either event study returns (e.g., Foerster and Karolyi, 1999; Miller, 1999; Lee, 2004) or comparisons with firms that are not cross-listed (e.g., Doidge, 2004; Doidge, Karolyi, and Stulz, 2004, 2009). This evidence suggests that U.S. cross-listings offer substantial benefits. However, the sources of these benefits are not yet well

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understood (e.g., Leuz, 2003; Doidge, Karolyi, and Stulz, 2004).

One important question is whether and to what extent cross-listing in the U.S. affects firms' costs of capital. The bonding argument suggests that a U.S. cross-listing strengthens the protection of outside investors (e.g., Coffee, 1999; Stulz, 1999), which in turn makes it easier for the firm to raise external finance (e.g., Reese and Weisbach, 2002; Benos and Weisbach, 2004; Doidge, Karolyi, and Stulz, 2004). Moreover, listings on Nasdaq, NYSE, or Amex require foreign firms to comply with U.S. Securities and Exchange Commission (SEC) disclosure rules, which typically imply a substantial increase in disclosure and could manifest in a lower cost of capital (e.g., Verrecchia, 2001; Lambert, Leuz, and Verrecchia, 2007). In addition, cross-listing can improve investor recognition and enlarge a firm's investor base, increase liquidity, and overcome market segmentation, all of which could reduce the cost of capital (e.g., Merton, 1987; Karolyi, 1998; Foerster and Karolyi, 1999; Karolyi and Stulz, 2003).

A potential concern about the documented valuation effects of U.S. cross-listings is that they merely reflect concurrent changes in firms' growth opportunities that do not stem from cross-listing per se. That is, firms can seek cross-listings when they experience an expansion in their growth opportunities, but the decision is unrelated to bonding and the growth expansion does not reflect a reduction in the cost of capital due to cross-listing. Moreover, Foerster and Karolyi (1999, 2000), Miller (1999), and Sarkissian and Schill (2009) provide evidence of return underperformance after cross-listing in the U.S., which raises the question of whether the documented valuation benefits are in fact sustained in the long run. Similarly, the debate about delistings from U.S. exchanges and the costs of the Sarbanes-Oxley Act (SOX) questions the existence of sizeable cross-listing benefits, such as a reduction in the cost of capital (Hostak, Karaoglu, Lys, and Yang, 2007; Zingales, 2007). Thus, it is still an open and topical question whether U.S. cross-listings persistently reduce the cost of capital.

To shed light on these issues and the mechanism by which cross-listings affect firms' valuations, we analyze ex ante estimates of firms' costs of equity capital implied by market prices and analyst forecasts. This approach explicitly accounts for changes in the market's growth expectations around cross-listings. It also allows us to gauge the magnitude of both cash flow (or growth) effects and cost of capital effects on firms' valuations.

Our analysis is based on a large panel of more than 40,000 firm-year observations from 45 countries over the period from 1990 to 2005. We collect a comprehensive sample of 1,097 U.S. cross-listings and classify them into exchange listings, over-the-counter (OTC) listings, and private placements, accounting for the different regulatory consequences the firms face. For an exchange listing, firms have to register with the SEC and file Form 20-F, which requires extensive disclosures and a reconciliation of foreign financial statements to U.S. generally accepted accounting principles (GAAP). In addition, firms are subject to SEC oversight and bear the threat of U.S. securities litigation. Cross-listings in the OTC market do not require a 20-F filing, but a registration statement using Form F-6 and home-country disclosures to the SEC. They are also subject to Rule 10b-5 and the Foreign Corrupt Practices Act, under which most SEC enforcement actions as well as private class action suits are brought (Karpoff, Lee, and Martin, 2008). Private placements under Rule 144A do not require SEC registration or any additional (public) disclosures. Given these regulatory consequences, we hypothesize that, if cross-listings reduce firms' costs of capital, the effects are strongest for exchange listings, and it is not clear that private placements should experience any reduction.

Consistent with this hypothesis, we find strong evidence that cross-listings on U.S. exchanges (Amex, Nasdaq, and NYSE) significantly reduce the cost of equity capital and that the effects are larger than for the other types of cross-listings. We obtain these results from cross-sectional regressions including firm-fixed effects as well as from difference-in-differences analyses of changes in the cost of capital, mitigating concerns about omitted variables, and selection on unobservable characteristics. Most regressions suggest an average reduction in the cost of capital between 70 and 120 basis points, which is economically significant, but not too large to be implausible. We also find evidence that cross-listings in the OTC markets reduce the cost of capital. The estimated effect is smaller—on average, between 30 and 70 basis points—and not as robust as the effects for exchange listings. U.S. private placements exhibit insignificant changes and, in some of our analyses, an increase in the cost of capital. This result is consistent with the findings in Miller (1999) and Doidge, Karolyi, and Stulz (2004, 2009) as they also show opposite or insignificant valuation effects for private placements. One possible explanation for the elevated cost of capital is that private placements entail private communication with a small group of institutional investors, which could exacerbate information asymmetries among traders.

The rank order of the cost of capital effects (from exchange listings to private placements) suggests that the regulatory consequences of U.S. cross-listings play an important role, which is consistent with the bonding hypothesis. Further corroborating this notion, we find that the reduction in the cost of capital for exchange listings is larger for firms from countries with weaker disclosure regulation and weaker protection against self-dealing by corporate insiders. We show that the cost of capital effects are sustained for many years after the cross-listing and that they are still present after the passage of SOX. In contrast, we do not find significant cost of capital effects for cross-listings on the London Stock Exchange. Both of these findings are consistent with recent evidence in Doidge, Karolyi, and Stulz (2009).

We conduct extensive robustness checks to validate our findings. We use four different implied cost of capital models and obtain very similar results for each of them as well as aggregating (and weighting) the estimates from the four models. We also gauge the sensitivity of our findings with respect to key model assumptions, in particular those about long-run growth. One potential