

Valuation Effects of Seasoned Global Equity Offerings

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Abstract: This paper examines the shareholder wealth effects associated with global equity offerings made by foreign firms *after* their initial cross listing in the United States. We document that the market reaction to seasoned global equity offerings is economically and statistically insignificant. However, it is 1.5 percent larger than the market reaction to offerings made on local exchanges only. In addition, we find that the adverse market reaction to local equity offerings is mitigated as more capital is raised globally. Our findings support the hypothesis that global capital raising is associated with significant benefits.

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Introduction

During the last decade, world capital markets have become more integrated. A primary reason is the dramatic increase in the number of firms cross-listing their shares outside their domestic market. Firms may pursue a dual listing to reduce market segmentation and the attendant cost of capital, increase investor recognition, enhance liquidity and bond themselves to protect minority shareholders.¹ In addition, firms are increasingly using the cross-listing mechanism to conduct global equity offerings. In 1990, global equity issues by firms from developing countries accounted for only 8 percent of their total equity issuance. By 1994, developing economies had raised 78 percent of their total equity capital from global offerings. In 1994, over \$95 billion was raised in global equity offerings.²

The goal of this paper is to examine the impact of global equity offerings on shareholder wealth. We investigate if raising equity in the U.S. results in higher share prices than when equity is offered only in the domestic market. We focus on the most prevalent method for non-U.S. firms to raise capital in the United States: American Depositary Receipts.³ These are negotiable certificates of deposit on securities that trade in their home market and issued by an American depository bank. Prior empirical

¹ For theoretical justifications of dual listings in the presence of market segmentation, see Stapleton and Subrahmanyam (1977), Stulz (1981), Errunza and Losq (1985), Eun and Janakiraman (1986) and Alexander et al. (1987). Errunza and Miller (2000) discuss the impact of ADR's on cost of capital. Merton (1987) provides a model of investor recognition and Amihud and Mendelson (1986) show how increased liquidity can reduce expected returns for a firm. Coffee (1999) and Stulz (1999) discuss the ADR bonding argument.

² See *International Capital Markets* published by the IMF (1995).

research examining the market reaction to dual listings focuses on the effects of the firm's *first* cross-listing (e.g., Alexander et al (1988), Foerster and Karolyi (1999) and Miller (1999)).⁴ In general, these studies document a positive reaction surrounding the announcement (or listing) date. Since many firms' initial cross-listings include a global equity offering, measuring the impact of a firm's initial dual-listing is a joint hypothesis of the effects of market segmentation and global capital raising. Our analysis differs from these existing studies by examining firms that raise new equity capital *after* their initial listing in the United States. This distinction is important because international asset pricing theory predicts that after cross-listing, the firm is integrated with the U.S. market. By examining subsequent capital issues, we abstract from the stock price reaction resulting from market integration and focus on the price impact of capital raising Depositary Receipt (DR) programs.

We are motivated by several strands of literature that suggest that global equity offerings may be perceived differently by the market than pure local offerings. The literature on market segmentation suggests that direct and indirect barriers can create restrictions to capital flow, which restrict the free flow of capital from foreign to domestic markets and thereby affect the pricing of domestic securities. In this view, the global issue circumvents the imperfections in the local market and should result in a higher share price.

³ In recent years, the DR market has been transformed from primarily a investor-relations tool to one of the most important instruments in international corporate finance. For example, from 1990 to the end of 1994, over \$47 billion of new capital was raised via the DR market.

⁴ See Karolyi (1998) for a summary of the evidence on wealth effects of international dual listings.

In addition, recent research suggests that non-U.S. firms choose an initial cross-listing in the U.S. because of future capital raising needs. Lins, Strickland and Zenner (1999) find that non-U.S. firms increasingly access international capital markets following the initial U.S. listing. Reese and Weisbach (2002) also find that firms significantly increase the number of equity offerings following a listing in the United States. Both these studies find that access to external capital through global equity offerings is most enhanced for firms located in countries where minority shareholder protection is weakest and information asymmetry is the greatest. Pagano, Roell, and Zechner (2002) find that firms cross-listing in the U.S. pursue a strategy of rapid expansion fueled by high leverage before the listing and large equity issues after the listing. All these studies argue that non-U.S. firms seek U.S. listing to enhance access to external capital markets to fund growth opportunities. In this view, global capital raising in the U.S. is indicative of better growth prospects relative to pure domestic firms and therefore they may suffer less from the adverse stock price reaction associated with equity offerings.

Finally, while the empirical evidence on the stock price effects of non-U.S. firms placing equity outside their domestic market is sparse, the existing studies all suggest differential effects for capital raised beyond a firm's local market. Foerster and Korolyi (2000) document the long-run performance of global equity offerings. They document that firms issuing global offerings under perform local market benchmarks by 8% to 15% over the three years following issuance. Kang, Kim, Park and Stulz (1995) report positive and significant abnormal returns to the announcement of offshore warrant bond

issues of Japanese firms. This stands in contrast to the significant negative stock price reaction for U.S. equity-linked issues. Chaplinsky and Ramchand (2000) also report a negative response around announcement for U.S. firms raising capital abroad. However, they find the response is less negative for these offshore issues than for comparable domestic issues. Further, Gande (1996) and Miller (1999) report positive announcement returns for public equity issues of DRs. Since their sample includes capital raising initial dual listings, it is a joint test of the stock price effects of equity issuance as well as international market segmentation. Nonetheless, they find a positive stock price reaction to public equity offerings in the U.S. by foreign firms.

Our analysis also adds to the literature that examines non-U.S. firms raising equity capital in their respective domestic markets. While the existing literature, (e.g. Smith, 1986) has shown that domestic public equity issues in the U.S. are accompanied by a negative stock price reaction, the available evidence for non-U.S. markets is mixed.⁶ For example, Kato and Schallheim (1992) and Kang and Stulz (1996) report insignificant negative average abnormal returns for public equity issues in Japan.⁷ De Jong and Veld (1998) report significant negative abnormal returns for Dutch equity issues that are announced together with the annual company results and positive abnormal returns for equity issues announced with the news of a completed acquisition. They also report evidence that Dutch firms issue equity after a period of positive abnormal returns. In a study of the French domestic equity market, Gajewski and Ginglinger (1998) find that

⁶ This result is often explained by the adverse selection hypothesis of Myers and Majluf (1984) which suggests that managers maximize wealth of existing shareholders, and only issue securities when they are not undervalued by the market.

⁷ One potential explanation is that if managers maximize the wealth of long-term fixed-fraction shareholders (Admati and Pfleiderer, 1994), the issuance of equity would not convey any information regarding managerial views on whether the firm's equity is overpriced. Kang and Stulz (1996) also show that the

French public equity offerings are accompanied by a negative stock price reaction, yet unit offerings have no abnormal returns. Overall, the domestic evidence seems to differ across countries.

The results of our investigation of foreign firms conducting public equity offerings in the U.S. can be summarized as follows. First, we find the market reaction to seasoned equity offerings is economically and statistically insignificant. This result stands in sharp contrast to the positive returns found when a global equity offering accompanies the firm's first cross-listing in the United States. Therefore, the impact on shareholder value of seasoned equity offerings and initial cross-listing appears to be quite different. Second, we compare stock price reactions for our global sample to a control sample of firms that issued equity in local market prior to their first cross-listing. We document that the stock price reaction for the global offerings is 1.5 percent larger than the market reaction to local-only offerings. Finally, we find that adverse stock price reaction to equity offerings is mitigated as more capital is raised globally. Overall, our findings support the hypothesis that global capital raising in the U.S. is associated with significant benefits.

The remainder of the paper is organized as follows: Section 1 provides an overview of the DR market. Section 2 describes the dataset and broad characteristics of our sample. Section 3 reports the stock price response to seasoned equity offerings at the aggregate level. Section 4 presents multivariate tests of the effects of global equity offerings. Section 5 concludes the paper.

stock price reaction may be a function of Japanese corporate control arrangements. These include cross-holdings, the existence of Keiretsu, and the role of banks in Japanese markets.

1. Overview of the Depositary Receipt Mechanism

Public equity offerings conducted by foreign firms in the U.S. using DRs are known as Level III depositary receipts.⁸ These DRs trade on the NASDAQ, AMEX, or the NYSE. The issuer registers the offering under the 1933 Securities Act and reports under the 1934 Exchange Act. The company must meet full SEC disclosure requirements, comply with U.S. GAAP, report quarterly and meet the listing requirements of the relevant U.S. exchange. Firms using a Level III offering are required to complete Form 20-F, which is similar to a 10-K report. As of year-end 1997, there were 457 DR programs listed on the NYSE, AMEX and NASDAQ. From 1990 to 1997, over \$67 billion was raised via Level III Depositary Receipts.

2. The Sample and Firm Characteristics

The sample consists of 78 offerings from firms domiciled outside the United States that announced a public capital raising DR Program over the period from 1981 to 1996. The issues raise capital in the U.S. and in some cases also place a fraction in the domestic market. To be included in the sample, the firm must already have DRs trading in the United States. That is, we examine firms that raise new equity capital *subsequent* to their initial listing in the United States. To compare if these global issues benefit shareholders, we also compile a sample of pure domestic public equity offerings. Local offerings are defined as public equity offerings placed only in the local market that are conducted by firms that did not have an exchange traded ADR at the time of the issue. These are post-IPOs but prior to the firm's first ADR issue and are chosen so as to

correspond to countries and time periods of our sample of global issues.⁹ The samples are constructed from information supplied by the Bank of New York as well as Securities Data Company. A firm must have an identifiable announcement to be included in the sample. In addition, return data on the underlying stock is required starting 125 days before the announcement date and ending at least 25 days after the listing date. Return data for each stock as well as the corresponding national market indexes are compiled from the *Datastream International* database. Daily closing price and dividend data are used to compute daily total returns for each underlying security while index returns and exchange rates are taken directly from *Datastream*.

Announcement dates are collected from the Lexis/Nexis database. The search algorithm uses key words found in a preliminary sample of announcements. These include terms for the instrument such as *Depositary*, *ADR(s)*, and *SEC*. The text and headlines of the Lexis/Nexis articles are searched using the company name and these key words. The earliest press release in English is taken as the announcement date. To account for potential time zone differences, a three day window around the announcement date is examined throughout the analysis.

Panel A of Table 1 provides summary characteristics of the global sample. Of the 78 announcements, 12 are for firms located in Asia, 52 are for firms located in Europe, and the remaining 14 are for firms located in Latin America. Table 1 also shows that the

⁸ Foreign firms can also privately place DRs. For a complete description of the 144a market, see Chaplinsky and Ramchand (1998)

⁹ Procuring the 45 local-only offerings required hand checking over a thousand issues in the SDC and cross-checking with Lexis-Nexis, as many issues classified as local by SDC actually have a non-domestic component. In addition, unlike the U.S., there is little local-only public capital raising in many markets. For example, of the 36 Mexican firms with level 2 or 3 ADRs, only 3 had issued in the local market prior to the ADR offering. To further insure the maximum sample, we obtained data from Reese and Weisbach (2002) which confirmed the unique nature of these markets. For example, during the time-period 1998-1999, there

number of issues increases through time. The most recent five year period (1991-1996) accounted for 63 of the 78 offerings. This pattern of sample firms is consistent with the population of foreign equity offerings in the United States. According to the Bank of New York, of the 769 DR offerings made in the U.S. from 1990 through 1997, only 69 were made during the 1990 to 1992 period. The mean (median) issue size is 773 (230) million U.S. dollars. Finally, Table 1 shows that the mean (median) time from the firm's first cross-listing in the U.S. to the sample global offering is 3.36 (1.87) years.

Panel B shows that the comparison sample of local equity offerings includes 45 issues, with 17 made by firms located in Asia, 17 by firms located in Europe, and 11 for firms located in Latin America. Similar to the global issues, the number of pure domestic issues is increasing in time. Panel B also reports that the mean (median) issue size is 151 (32) USD million, which is substantially smaller than the size of the global issues.

3. Stock Price Response to a Capital Raising DR Program

An event-study procedure is used to measure changes in share value around the announcement of a firm's DR equity offering. To measure abnormal returns, we use a two factor market model using a local and U.S. market factor. As a proxy for the local market return, we use a market capitalization-weighted index for each country from *Datastream*. To proxy for U.S. market returns, we use the S&P500 index. Abnormal returns are then averaged across firms to form the average abnormal return. Both local currency returns and returns converted to U.S. dollars are reported. Similar results are obtained if we use just the single local market factor to estimate abnormal returns. Tests

were no domestic-only seasoned equity issues by Mexican corporations (only 6 issues by Mexican holding

of significance are conducted using standardized abnormal returns following Patell (1976).

Panel A of Table 2 presents U.S. dollar average abnormal returns surrounding the announcement of global and local equity issues. Consistent with the U.S. evidence on U.S. domestic equity offerings, our sample of foreign firms issuing pure domestic issues experience a significant adverse price reaction of -1.67 percent over day -1 to $+1$. Prior research on the market's reaction to the announcement of a domestic public equity offering by U.S. firms includes Asquith and Mullins (1986), Masulis and Korwar (1986) and Mikkelson and Partch (1986). These studies find the reaction is negative 3 percent on average.

However, our sample of DR equity offerings does not experience this adverse market response upon announcement. The day -1 to $+1$ average abnormal return for the global sample is an insignificant -0.11 percent. This suggests that the market *does not* view the average global equity issue as a negative event. This evidence stands in sharp contrast to the market reaction for U.S. firms raising equity capital. However, it does support the U.S. evidence of Chaplinsky and Ramchand (2000) that global issues mitigate the adverse price reactions of equity offerings.

It is also interesting to compare these results with the findings of previous research that measured the stock price impact of global offerings accompanying a firm's first cross-listing. For example, Miller (1999) documents a positive and significant 3.23% reaction to firms conducting public equity offerings in conjunction with their initial cross-listing. Thus, public equity offerings in conjunction with first cross-listing and subsequent capital raising appear to have quite different impacts on shareholder value.

companies). During this same time period, there were 22 global seasoned corporate issues.

Indeed, in the former case, the highly significant positive effect of market integration seems to dominate the negative effect of capital raising.

4. Cross-sectional Differences in the Stock Price Reaction

While the evidence presented in the previous section suggests that raising capital in the U.S. mitigates some of the local market adverse reaction, it is important to note that the global and local issues differ in many respects (e.g., offer size). Therefore, we perform a multivariate analysis of the three-day abnormal returns controlling for firm and issue characteristics. Next, we investigate the possible sources of the benefit to issuing equity globally. Results are reported in returns converted to U.S. dollars as well as local currency denominated returns. Tests of significance are conducted using heteroskedastic corrected standard errors (White 1980).

4.1 Self-Selection Issues

A potential concern with our sample is self-selection. Suppose, for example, that firms choose to raise capital in the U.S. based on the expected benefit, and that this expected benefit is not randomly distributed in the population of firms. Then, simple tests of differences may give biased results. For example, suppose that

$$Y = \beta x + \delta C + \epsilon,$$

where C is the indicator variable that takes on the value one if the firm raises capital in the US. Since firms decide whether to cross list based on various factors, we can model this decision as

$$\begin{aligned} C^* &= \gamma' w + u \\ C &= 1 \quad \text{if } C^* > 0, \quad 0 \text{ otherwise} \end{aligned}$$

If the typical firm selects to cross list because of some expected benefit in Y , then OLS estimates of δ will not correctly measure the effect of U.S. capital raising. This problem of self-selection is often handled empirically with a treatment effect model (see *e.g.*, Greene 1990).

To mitigate this potential issue, we apply a self-selection model that controls for this bias. In the first stage probit model, we include variables that should be related to the decision to issue in the U.S. **For example, Reese and Weisbach (2002) show that the decision to raise equity in the U.S. is determined by characteristics of the firm's country of domicile. They find that the country's legal environment, Gross National Product, and development of its accounting standards all are important in explaining the incidents of global capital raising. In addition to these country level variables, we include firm size and the volatility of the firm's stock price over the -125 to -25 day time-period as additional determinants of the cross-listing decision. We expect larger firms would be more likely to raise capital globally and firms with more volatile stock prices to raise capital locally. We obtain consistent estimates via full Maximum Likelihood estimation.**¹⁰

Since many of the firm and issue characteristics reported in Table 1 differ across the global and local equity issue samples, we also include various control variables that have been shown to be important in explaining the stock price reaction to equity offerings. To control for the amount of capital raised, we use *OFFERSIZE*, the size of the equity offering deflated by the market value of equity. *EMG* is a dummy variable to that takes on the value one if the firm is located in an emerging market as defined by the

¹⁰ A Heckman (1979) two-step estimation procedure produces similar results.

International Finance Corporation.¹¹ We also include a indicator variable (UPGRADE) that takes on the value one if the firm had previously issued an OTC or private placement ADR in the United States, since Miller (1999) shows that upgraded ADR programs have positive stock price effects. Finally, all regressions include year and industry dummies (not reported) to further ensure that firm or market conditions are not driving the price differences.

4.2 Results

To test if global offerings experience a more favorable market reaction than local offerings, we examine the test variable GLOBAL, which takes on the value one if the issue raises capital in the United States. Model 1 of Table 3 reports the results for U.S. dollar returns. We find that after controlling for firm and issue characteristics as well as the self selection decision, the coefficient on GLOBAL is positive and significant (0.0246, p-value=0.04). The findings support the univariate results in Table 2 that global offerings reduce the adverse stock price effects of public equity offerings.

In addition, the probit selection equation of Model 1 shows many of the variables have the expected sign and are significant. For example, firm size is an important determinant of the decision to issue globally, with large firms more likely to issue outside their home market. Also consistent with Reese and Weisbach (2002), we find the home country GNP is negatively related to the decision to issue globally. However, the legal and accounting variables are generally not significant.

¹¹ Since previous studies have documented stronger effects for ADRs from Latin American companies, we also replaced the EMG indicator variable with one for Latin American ADRs. The variable did not affect the significance of the GLOBAL test variable.

As a robustness check, Model 2 reports the analysis in local currency returns. Again, the coefficient on the GLOBAL is correctly signed and significant (0.0251, p-value=0.02). In addition, in results not reported, we reran models 1 and 2 without the selection bias adjustment and obtained similar results, indicating self-selection is not driving our findings. Overall, the results in Table 3 suggest raising capital globally rather than locally mitigates the negative stock price reaction of seasoned equity offerings.

To further examine the source of the benefits to global offerings, we next examine if the proportion of equity raised in the U.S. affects the market response. We expect the fraction of equity issued outside the local market to be positively related to the market response for two reasons. First, firms facing more downward sloping demand curves in the home market may issue more equity abroad to mitigate price pressure effects. Second, the proportion of equity issued abroad is likely to be associated with the attraction of new shareholders, which also should be associated with positive stock price effects (Merton 1987). To test this, we used the variable *FOR PROCEEDS*, which is the amount of the global issue that is offered to U.S. investors divided by the total size of the offering.¹² We follow Chaplinsky and Ramchand (2000) and set *FOR PROCEEDS* to zero for local only issues. Model 1 of Table 4 reports the coefficient on *FOR PROCEEDS* is positive and significant (0.02499, p-value=0.01). Model 2 shows this finding holds for local currency denominated returns as well.¹³ The results are consistent with the hypothesis that the larger proportion of capital that is raised abroad, the larger the benefits are to issuing equity globally. It also supports the U.S. results of Chaplinsky and Ramchand (2000).

¹² Similar results are found if we use the total dollar proceeds raised in the U.S.

5. Conclusion

Over the last decade, foreign firms have increasingly turned to the U.S. to raise new equity capital. Using a sample of global equity offerings made by foreign firms in the U.S., we examine how these issues impact shareholder wealth. We find that the market reaction to these seasoned offerings is negative but insignificant, a result that stands in sharp contrast to both the domestic U.S. offerings and the capital raising initial cross-listings in the United States. Second, we compare the global stock price reactions to a control sample of firms that issued in the local market before their first cross-listing. We document that the stock price reaction for the global offerings is 1.5 percent larger than the market reaction to local-only offerings and is positively related to the amount that is raised outside the local market. Our findings support the hypothesis that global capital raising is associated with significant benefits.

¹³ We also examined if the time between the firms first ADR and the global issue affects returns. In our sample, the time-between offerings does not help explain the stock price reaction.

REFERENCES

- Admati, A.R., and P. Pfleiderer, 1994, Robust financial contracting and the role of Venture Capitalists, *Journal of Finance*, 49, 371-402.
- Alexander, G., Eun C., Janakiramanan, S., 1987, Asset pricing and dual listing on foreign capital markets: A note, *Journal of Finance*, 42, 151-158.
- Alexander, G., Eun C., Janakiramanan, S., 1988, International listings and stock returns: some empirical evidence. *Journal of Financial and Quantitative Analysis* 23, 135-151.
- Amihud, Y., Mendelson H., 1986, Asset pricing and the bid-ask spread, *Journal of Financial Economics* 17, 223-249.
- Asquith P. and D. Mullins 1986, Equity issues and offering dilution, *Journal of Financial Economics* 15, 61-89.
- Chaplinsky, S. and L. Ramchand, 2000, The rationale for global equity offerings, *The Journal of Finance* 55, 2667-2789.
- Chaplinsky, S. and L. Ramchand, 1998, The Rule 144a Debt Market: Success or Failure?, University of Virginia working paper.
- Coffee, J., 1999, The future as history: The prospects for global convergence in corporate governance and its implications, *Northwestern University Law Review*, 641-708
- De jong, Abe and Chris Veld, 1998, “ Incremental capital structure decisions of Dutch companies”, Working Paper, Tilburg University, May 1998.
- Errunza, V. and E. Losq, 1985, International asset pricing under mild segmentation: Theory and test, *Journal of Finance* 40, 105-124.

- Errunza, V. and D. Miller, 2000, Market segmentation and the cost of capital in international equity markets, *Journal of Financial and Quantitative Analysis* 35, 577-600.
- Eun, C., Janakiramanan, S., 1986, A model of international asset pricing with a constraint on the foreign equity ownership, *Journal of Finance* 41, 897-914.
- Foerster, Stephen R. and G. Andrew Karolyi, 1999, The effects of market segmentation and investor recognition on asset prices: Evidence from foreign stocks listing in the U.S. *Journal of Finance*, 54 981-1013.
- Foerster, Stephen R. and G. Andrew Karolyi, 2000, The long run performance of global equity offerings, *Journal of Financial and Quantitative Analysis* 35, Number 4, 499-528.
- Gande, A., 1996, Raising international capital through ADRs: Evidence from emerging markets, Stern School of Business working paper.
- Gajewski, J., and E. Ginglinger, 1998, The information content of equity issues in France, Working Paper, University of Grenoble.
- International Monetary Fund, 1998, International Capital Markets: Developments, Prospects, and Key Policy Issues, *World Economic and Financial Surveys*
- Kang, J. K., Y. C. Kim, K. J. Park and R. M. Stulz, 1995, An analysis of the wealth effects of Japanese offshore Dollar denominated convertible and warrant bond issues, *Journal of Financial and Quantitative Analysis* 30, 257-270.
- Kang, J. K. and R. M. Stulz, 1996, How different is Japanese corporate finance? An investigation of new security issues, *Review of Financial Studies* 9, 109-139.
- Karolyi, G. A., 1998, Why do companies list their shares abroad? A survey of the evidence and its managerial implications, Richard Ivey School of Business working paper, forthcoming NYU Salomon Center Monograph Series.

- Kato K. and J. Schallheim, 1992, Public and private placements of seasoned equity issues in Japan, Unpublished paper, University of Utah.
- Lins, K., D. Strickland, and M. Zenner, 1999, Do non-U.S. firms issue stock on U.S. equity markets to relax capital constraints?, working paper, University of North Carolina.
- Masulis R. and A. Korwar, 1986, Seasoned equity offerings: An empirical investigation, *Journal of Financial Economics* 15, 91-118.
- Merton, R., 1987, Presidential address: A simple model of capital market equilibrium with incomplete information, *Journal of Finance* 42, 483-510.
- Mikkleson W. and M. Partch ,1986, Valuation effects of security offerings and the issuance process, *Journal of Financial Economics* 15, 31-60.
- Miller, D., 1999, The market reaction to international cross-listings: Evidence from depositary receipts, forthcoming, *Journal of Financial Economics* 51, 103-123.
- Myers, S., and N. Majluf, 1984, Corporate financing and investment decisions when firms have information that investors do not have, *Journal of Financial Economics*, 13, 187-221.
- Pagano, M., A. Roell, and J. Zechner, 2002, The Geography of Equity Listings: Why do European Companies List Abroad?, working paper, University of Salerno.
- Patell, James M., 1976, Corporate forecasts of earnings per share and stock price behavior: Empirical tests, *Journal of Accounting Research*, 14(2), 246-274.

- Reese, W., and M. Weisbach, 2002, Protection of Minority Shareholder Interests, Cross-listings in the United States, and Subsequent Equity Offerings, *Journal of Financial Economics*, forthcoming.
- Smith, C., 1986, Investment banking and the capital acquisition process, *Journal Of Financial Economics* 15, 3-29.
- Stapleton R. and M. Subrahmanyam, 1977, Market imperfections, capital market equilibrium and corporation finance, *Journal Of Finance* 32, 307-319.
- Stulz, R., 1981, On the effects of barriers to international investment, *Journal of Finance* 36, 923-34.
- Stulz, Rene M., 1999, Globalization of equity markets and the cost of capital, unpublished working paper, New York Stock Exchange.
- White, Halbert, 1980, A Heteroskedasticity-Consistent Covariance Matrix Estimator and a Direct Test for Heteroskedasticity, *Econometrica* 48, 817-838.

Table 1
Sample Characteristics for Global and Local Equity Offerings

All seasoned offerings of Depositary Receipts were included that met the following criteria: (1) The issue was the firm's second or later capital raising Depositary Receipt offering in the United States; (2) the issue is a public equity offering; (3) announcement date and daily return data for the pre and post announcement period is available for each company. Local offerings are defined as public equity offerings placed only in the local market that are conducted by firms that did not have an exchange traded ADR at the time of the issue. Sample statistics are obtained from *Securities Data Company*, *Lexis-Nexis*, and *Datastream*.

Panel A: Capital Raising ADR offerings (N=78)

Issuer Region	Years of Issue		Issue Size (\$mills)		
Asia	12	1981-1985	4	Mean	773
Europe	52	1986-1990	11	Median	230
Latin America	14	1991-1995	48		
		1996	15		
Time from Initial Cross-listing (years)					
Mean	3.36				
Median	1.87				

Panel B: Local Equity Offerings (N=45)

Issuer Region	Years of Issue		Issue Size (\$mills)		
Asia	17	1981-1985	3	Mean	151
Europe	17	1986-1990	4	Median	32
Latin America	11	1991-1995	20		
		1996-1997	18		

Table 2**Average Abnormal Returns of Global Equity versus Local Offerings**

Abnormal returns are market model adjusted using parameters estimated over a 100 day prelisting period, from day -125 to -26 relative to the announcement date. A national stock market index in each country is used as a proxy for the market portfolio. The sample period is 1981 to 1996. *, ** and *** indicate significance of the *t*-statistic at the 0.1, 0.05 and 0.01 levels, respectively. The percentage of firms with nonnegative abnormal returns are given, with †, †† and ††† indicating significance of the signed rank test at the 0.1, 0.05 and 0.01 levels, respectively.

	Local Issues	Global Issues	Difference
Panel A. Abnormal Returns in USD			
-25 to -2	-0.01761	-0.01182	-0.00579
-1 to +1	-0.01674 ^{**} ††	-0.00107	-0.01567 ^{**}
+2 to +25	-0.0177	-0.00206	-0.01564
Panel B. Abnormal Returns in Local Currency			
-25 to -2	-0.0082	-0.01313	0.00493
-1 to +1	-0.01753 ^{**} ††	-0.00142	-0.01611 ^{**}
+2 to +25	-0.01038	-0.00184	-0.00854

Table 3
Regressions of three-day abnormal returns on firm and issue characteristics, selection bias corrected

Abnormal returns are obtained using parameters estimated over a 100 day prelisting period, from day -125 to -26 relative to the announcement date. A two-factor model is employed using the Datastream local market index in each country as well as the S&P500 index. The sample period is 1981 to 1997. GLOBAL is an indicator variable that equals one if part of the equity offering was conducted in the United States. MV is the market value of equity in U.S. dollars. OFFERSIZE is the size of the equity offering deflated by the market value of equity (MV). EMG is an indicator variable that equals one if the firm is located in an emerging market. UPGRADE is an indicator variable that equals one if the firm had previously listed in the U.S. using the OTC or 144a market. Year and Industry controls are included but not reported. In the first stage probit model, variables are taken from LLSV (1998). LN(GNP) is the log of gross national product. FL, GL and SL are indicator variables that take on the value one if country of domicile is of the French, German or Scandinavian legal origin. ACCT is a measure of the countries accounting standards. STD is the standard deviation of daily stock price returns in the -125 to -26 time period. *, ** and *** indicate significance of the *t*-statistic at the 0.1, 0.05 and 0.01 levels, respectively. P-values are in parenthesis. Robust standard errors are used (White 1980).

Variable	Model 1 Probit	Model 1 USD Returns	Model 2 Probit	Model 2 Local Currency Returns
GLOBAL		0.0246** (0.04)		0.0251** (0.02)
OFFERSIZE		-0.0029 (0.80)		-0.0033 (0.78)
EMG		-0.0039 (0.66)		-0.0022 (0.81)
UPGRADE		-0.0074 (0.49)		-0.0076 (0.48)
INTERCEPT		-0.028** (0.03)		-0.029** (0.02)
LN(MV)	0.6831*** (0.00)		0.6824*** (0.00)	
LN(GNP)	-1.1449*** (0.00)		-1.1445*** (0.00)	
FL	-0.3243 (0.62)		-0.3187 (0.62)	
GL	-0.4638 (0.55)		-0.4566 (0.56)	
SL	1.7854** (0.02)		1.7866** (0.02)	
ACCT	-0.0251 (0.44)		-0.0252 (0.43)	
STD	-9.6888 (0.21)		-9.7817 (0.22)	
INTERCEPT	7.6673** (0.02)		7.6689** (0.02)	
Adj R-sq		0.051		0.054
Pseudo R-sq	0.47		0.47	

Table 4
The Impact of Foreign Proceeds on the Stock Price Reaction

Abnormal returns are obtained using parameters estimated over a 100 day prelisting period, from day -125 to -26 relative to the announcement date. A two-factor model is employed using the Datastream local market index in each country as well as the S&P500 index. The sample period is 1981 to 1997. FOR PROCEEDS is the proportion of the global issue that is offered outside the local market. MV is the market value of equity in U.S. dollars. OFFERSIZE is the size of the equity offering deflated by the market value of equity (MV). EMG is an indicator variable that equals one if the firm is located in an emerging market. UPGRADE is an indicator variable that equals one if the firm had previously listed in the U.S. using the OTC or 144a market. Year and Industry controls are included but not reported. *, ** and *** indicate significance of the *t*-statistic at the 0.1, 0.05 and 0.01 levels, respectively. P-values are in parenthesis. Robust standard errors are used (White 1980).

Variable	Model 1 USD Returns	Model 2 Foreign Currency Returns
FOR PROCEEDS	0.02499*** (0.01)	0.02609*** (0.01)
OFFERSIZE	-0.0004 (0.99)	-0.0003 (0.97)
EMG	-0.0018 (0.84)	-0.0037 (0.71)
UPGRADE	-0.011 (0.37)	-0.0114 (0.35)
INTERCEPT	-0.0283** (0.04)	-0.0290** (0.03)
Adj. R ²	0.07	0.081
N	123	123