The Impact of Global Equity Offerings

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ABSTRACT

This article examines the impact of U.S. firms issuing equity in multiple markets. We compare the stock price reactions to announcements of global equity offers to a control group of issues offered exclusively in the domestic U.S. market. All else equal, the adverse price reaction that typically accompanies equity issuance is reduced by 0.8 percent when some shares are sold abroad. The overall evidence suggests global offers are effective in expanding demand and reducing the price pressure effects associated with share issuance. The benefits of global offers appear to be associated with an increase in the number of foreign shareholders.

THE SEARCH FOR NEW CAPITAL MARKETS—and lower costs of capital—is an ongoing search for most firms. In recent years the number of U.S. firms issuing common equity in international markets has increased significantly. In 1985 U.S. firms raised $89 million through follow-on equity offers in foreign markets and this amount increased to $18,915 million in 1995—a greater than 200-fold increase in nominal terms. This paper focuses on follow-on global equity issues by U.S. firms and attempts to assess why firms, widely acknowledged to have access to broad and deep domestic capital markets, increasingly seek to raise equity abroad. The global equity offerings we examine involve a simultaneous sale of common equity at the same offer price in the U.S. market and one or more international markets. We examine the characteristics of the issuers and issues and investigate to what extent the wider distribution of shares affects the pricing and costs of these issues.

Our main line of inquiry examines whether the distribution of shares to multiple markets results in a higher offer price for equity shares than would be obtained had the shares been sold exclusively in the U.S. market (domes-

tic offers). Under perfect capital markets, firms face an infinitely elastic demand curve and the offer price for shares should be the same regardless of the market of issue. However, imperfections in the form of taxes (Kim and Stulz (1988)), government imposed investment restrictions ((Stulz and Wasserfallen (1995), Loderer and Jacobs (1995), and Eun and Janakiramanan (1986)), transactions costs (Amihud and Mendelson (1986)), and information costs (Merton (1987) and Welch (1992)) can inhibit the integration of domestic and international markets. The existence of such imperfections suggests that capital markets are characterized by downward sloping demand curves. Equity issues generally result in an increase in the supply of shares. With downward sloping demand, an increase in the supply of shares is accompanied by a decline in price, *ceteris paribus*. Hence, for global issues to result in a higher offer price than domestic issues requires that the increase in the supply of shares be accompanied by an expansion in the demand for shares.

Using a sample of offers from 1986 to 1995, we find, all else equal, that the negative stock price reaction that accompanies equity issues is reduced by 0.8 percent on average for global offers compared to domestic offers of similar size issued during the same time period. Additionally, we find no evidence that the more favorable price reaction for global offers is offset by higher underwriting spreads and expenses or by adverse price movements during the offering interval. Consequently, there is a net benefit to global issuance that is consistent with expanded demand for shares. This benefit is of sufficient magnitude to provide strong economic motivation for some U.S. firms to offer shares in multiple markets.

We attempt to identify the sources of the benefit by focusing in particular on two rationales that have been advanced for global equity issues. First, the development of international equity markets gives issuers access to an expanded pool of investors and issuers can target the sale of shares to markets where the demand for U.S. shares is strong. U.S. issuers may move shares abroad when poor U.S. market conditions limit the demand for shares in the domestic market. Second, global issues attempt to increase the "name recognition" of U.S. firms in international markets, and these transactions may be helpful in reducing the information costs of foreign investors in purchasing shares of U.S. firms (Merton (1987) and Welch (1992)).

Our findings indicate that global offers occur in periods of relatively strong U.S. market performance compared to foreign markets. Hence, the more favorable price reactions of global offers are not explained by issuers' attempts to "escape" poor domestic U.S. market conditions. In addition, we find that the announcement date price reaction is significantly more favorable for global issues the larger is the increase in the number of foreign shareholders. This is consistent with Merton's (1987) argument that an issuer's capital costs can be reduced by increasing the number of investors who know about the firm.

This paper is organized as follows. Section I describes the institutional features of a global equity offering and provides the motivation for our main test of the benefits of global offers. Section II describes the global and do-

mestic equity offers and examines empirically the price reaction of comparable global and domestic offers. In Section III we investigate the potential sources of benefits to global issuance. Section IV gives our interpretation of the results and conclusions.

I. Comparison of Global and Domestic Equity Offerings

A. *Institutional Features of a Global Offer*

We begin with a thumb nail sketch of a typical global offer. Global equity offerings by U.S. firms involve the simultaneous sale of common equity in the domestic U.S. market and one or more international markets.[1] Because the offers involve the sale of equity domestically, the offers must be registered with the Securities and Exchange Commission (SEC). Global issues are marketed through a syndicate of underwriters that is similar to the arrangement used for domestic equity issues. The main distinction is the inclusion of certain international underwriters in the syndicate, with an allocation of shares to be sold by them. In most instances, the syndicate manager for the international tranche is the international affiliate of the domestic book manager (e.g., Lehman Brothers, Inc. and Lehman Brothers International, Inc.) Offering prospectuses are prepared for both the domestic and international tranches. The international prospectus provides the same information as the U.S. prospectus and in addition, discloses any tax or legal restrictions that affect international investors (Solnik (1988)). Because by law the offer price must be the same for the domestic and international tranches, there is no ability to overtly price discriminate across markets. From the perspective of an investment banker, the procedure for bringing an issue to market is largely the same for a global and domestic offer. This suggests that any potential benefits associated with global issues are unlikely to arise from differences in the formal underwriting process.

In contrast to domestic offers, which often target a certain percentage of placement with individual retail clients, the initial placement of shares by international underwriters is largely targeted to institutions. However, the demand for U.S. equities by individual foreign investors is not unimportant. Often, as is the case for domestic offers, the shares placed with institutions represent the indirect holdings of individuals through trusts, pensions, or mutual funds. Second, a younger generation of European and Asian investors has shown great interest in acquiring shares in U.S. companies in recent years. Hence, the demand for global shares has grown in response to the demand of individual investors for U.S. securities.[2]

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[1] The issuance of equity abroad does not require a U.S. firm to list its stock in target foreign markets.

[2] See Lapper (1995) for the reasons behind the growth in global equity issuance.

B. Motivations for Global Issues

Aside from a global offer, a foreign investor can obtain shares in U.S. firms by directly purchasing them on a secondary exchange or through a domestic offer. If global offers provide an equivalent opportunity to acquire U.S. shares, these offers are not likely to enhance the demand for an issuer's shares. On the other hand, there could exist significant barriers to capital market integration and to the extent that global offers reduce the costs of acquiring U.S. shares, they could command a higher offer price. The literature in international finance identifies a number of market imperfections, such as taxes, transaction costs, and imperfect information, which impede market integration. Before turning to the empirical results, we briefly discuss what market imperfections might be operative in explaining the relative value that investors place on global offers.

B.1. Taxes

Taxes have been identified as an imperfection that could affect the relative value of securities sold in different markets (see Kim and Stulz (1988)). Typically, a U.S. issuer can assume that the shares designated for the foreign tranche accrue to foreign nationals and thus are not subject to U.S. withholding tax. However, foreign nationals can achieve the same exemption from U.S. withholding tax by completing a waiver form.[3] To the extent that the costs to establish one's identity are not large, this reduces the potential for withholding tax to significantly affect the demand for U.S. shares.

B.2. Government Restrictions on Ownership

Government restrictions on ownership of the type discussed in Stulz and Wasserfallen (1995) and Loderer and Jacobs (1995) also are not generally applicable to global equity offers. Since the inception of the market in the mid-1980s, investors in the United Kingdom, Canada, and Japan, the most frequent purchasers of global shares, have not been restricted in their ability to purchase U.S. shares.

B.3. Transaction Costs

All else equal, foreign investors will value the opportunity to purchase shares through a global issue more favorably the higher are their transaction costs in purchasing U.S. shares on a secondary exchange. For instance, in the case of U.S. institutional investors, Perold and Sirri (1997) find that the average transaction costs of trades involving foreign shares

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[3] International investors can accomplish the exemption from withholding by purchasing U.S. shares through a broker who can certify their identity as a foreign national. Relative to a global offer, the onus is on the foreign national to make clear his or her identity.

increase by 1.29 percent (one way). To the extent that a similar cost differential applies for foreign investors purchasing U.S. shares on a secondary exchange, transaction costs have the potential to result in a higher price for a global offer.

B.4. Information Costs

Merton (1987) develops a model where information costs are the basis for market segmentation. In his model, the market value of the firm is positively related to the number of investors who "know about" the firm because investors purchase only the securities of firms they know. Global issues can reduce information costs by promoting greater familiarity with a U.S. firm, its products, and management. Consistent with this, Parsons and Raviv (1985) and Benveniste and Spindt (1989) argue that the marketing and "roadshow" efforts accompanying a firm-commitment offer can potentially increase the offer price for an issue. From the perspective of international investors, a large information gap exists between their knowledge of the home country and the U.S. markets. Consider, for instance, the portfolio choices of a European fund manager. In 1991, a French institution could select its domestic portfolio holdings from 551 listed French companies, and a German institution could select from 665 listed German companies. However, if either institution wished to hold U.S. equities, there are 6,535 listed companies to choose among (Franks and Mayer (1997)). The strong "home-bias" documented for portfolio holdings is attributed in part to information costs (see French and Poterba (1991), Cooper and Kaplanis (1994), and Tesar and Werner (1995).) In this context, global offers can help investors improve portfolio diversification by identifying stocks of interest. Although information costs have the potential to explain higher prices for global shares, it is important to note that other mechanisms exist to reduce these costs and increase investor recognition. For example, foreign investors might learn of U.S. companies from advertising, in-country operations, and the cross-listing of stock on international exchanges.

B.5. Market Conditions

Studies of U.S. equity issues generally find that announcement date price reactions are more favorable the stronger recent stock market performance is (see, among others, Masulis and Korwar (1986), Asquith and Mullins (1986), Mikkelson and Partch (1986), Korajczyk, Lucas, and MacDonald (1990), Bayless and Chaplinsky (1996), and Choe, Masulis, and Nanda (1993).) Global offers could be valuable to issuers if there is weak demand for equity in the U.S. market and the sale of a given issue size in the domestic market necessitates a steeper drop in price. Because demand is likely to be positively related to the overall performance of the equity markets, one hypothesis is that issuers seek better prices abroad when the performance of the U.S. market is weak relative to foreign markets. On the other hand, because

global offers typically involve large sales of domestic shares (often considerably larger than the sale of foreign shares), issuers may use global offers more frequently when U.S. market performance is strong.

II. Empirical Tests of the Benefits of Global Offerings

A. The Data

The issue data for this study are obtained from Securities Data Corporation (SDC) from 1986, a point near the inception of the global equity market, through 1995. To determine if there are benefits to global issuance, we compare global issues with domestic issues that are sold exclusively in the U.S. market. For this analysis, we require financial statement data from PCPlus COMPUSTAT for the year before and the year of issue and stock return data from the Center for Research in Security Prices (CRSP) for one year prior to the issue (e.g., 250 days.) As a result, our sample contains 349 global issues and 459 domestic issues.[4] We focus on industrial issues to eliminate potential sources of noncomparability among industrial, financial, and utility firms. In particular, prior research establishes that announcement date price reactions for utilities (Asquith and Mullins (1986), and Masulis and Korwar (1986)) and banks (Polonchek, Slovin, and Sushka, (1989)) differ from those reported for industrials.

Table I provides information on the number and size of the global and domestic equity offers over time. Global offers increase in number from 7 in 1986 to a high of 77 offers in 1993. In all years after 1990, the proceeds raised through global offers exceed those of domestic offers. In 1995, $14.5 billion is raised by U.S. corporations via global offers, of which 21 percent or $3.0 billion is intended to be raised in non-U.S. markets. Thus, in our sample, 15.7 percent of all common equity raised by U.S. firms in 1995 occurs in markets outside the U.S. This evidence underscores the importance of the global equity markets to the capital-raising efforts of U.S. firms.

Also of note in Table I is the large discrepancy in average issue size between the samples. In all years, the average issue size of a global issue is larger than that of a domestic issue. In the first year of the sample, global issues average five times the size of domestic issues and this size differential declines (although not monotonically) to two in the last year of the sample. Hence there appears to be larger extremes in offer size between global and domestic issues in the early sample years.

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[4] To facilitate comparison across the tables, the global and domestic offers are required to have complete data for all of the variables used in Table II and the subsequent regression analysis in Table IV. We start with 438 global issues. We lose 53 issues due to stock return data (either for missing returns around the announcement date or during a 250 day interval prior to announcement) and 36 issues due to missing PCPlus COMPUSTAT data.

Table I

Global and Domestic Equity Issues: 1986–1995

Domestic issues are firm-commitment equity issues by industrial firms intended at the time of issue to be offered in the U.S. market. Global equity issues are firm-commitment equity issues by U.S. industrial firms intended at the time of issue to be offered in the U.S. and one or more foreign markets. *N* denotes the number of issues in a given year. Amounts are in millions of dollars. Total Proceeds is the total amount raised in a given year; Foreign Proceeds is the amount raised abroad in a global issue and in parentheses the percentage of foreign proceeds to the total amount raised in a global issue; and Average Proceeds is the average issue size in a given year. Data: Securities Data Corporation.

	Domestic issues (N = 459)			Global issues (N = 349)			
Year	*N*	Total Proceeds	Average Proceeds	*N*	Total Proceeds	Average Proceeds	Foreign Proceeds
1986	61	2,681	44	7	1,574	224	346 (22)
1987	42	3,454	82	17	1,846	108	498 (27)
1988	22	1,359	62	10	1,886	189	490 (26)
1989	29	1,268	44	10	619	62	142 (23)
1990	27	1,538	57	16	1,484	93	356 (24)
1991	59	3,969	67	60	12,566	209	2,513 (20)
1992	63	3,339	53	49	10,428	213	1,981 (19)
1993	62	4,037	65	77	16,118	209	3,385 (21)
1994	50	3,313	66	47	8,685	185	1,824 (21)
1995	44	4,900	111	56	14,514	259	3,048 (21)
Average	46	2,986	65	35	6,972	199	1,604 (23)

Over the sample the proportion of the issue expected to be raised abroad (foreign proceeds) ranges annually between 19 and 27 percent. For individual issues this percentage ranges from a minimum of 10 percent to a maximum of 92 percent. The percentage raised abroad is the initial allocation of shares reserved for sale by international underwriters. Typically, the underwriting contract does not require that a certain number of shares be sold abroad, but rather leaves that to the discretion of the book manager and syndicate members. If international placement becomes difficult due to changes in local economic or political conditions, the actual number of international

shares sold can differ from the initial allocation. Nonetheless, the expected foreign proceeds is the best ex ante estimate of the demand in foreign markets at the time of filing.[5]

B. Characteristics of Global and Domestic Issuers and Issues

In Table II we compare the issuer (Panel A) and issue and market characteristics (Panel B) of the global and domestic offers. Prior studies by Kim and Stulz (1988) and Marr, Trimble, and Varma (1991) of Euro-bond and Euro-equity issues find evidence consistent with international issuers being high-quality firms. Based on medians, global issuers have more than three times the assets and the market value of equity of domestic issuers. The median global issue size (SIZE) is almost three times larger ($118 million) than the median domestic issue size ($42 million). However, as a proportion of the issuer's market value of equity, global offers are smaller (13 percent) than domestic offers (15 percent). Also consistent with high quality, global issuers have higher mean q-ratios and lower stock price volatility. Less supportive of quality is the finding that global issuers exhibit significantly lower return on assets, although this could be due to the greater maturity of their investment opportunities. There are no significant differences in dividend yields or betas between the groups. Global issuers have somewhat higher leverage ratios than domestic issuers, but exhibit relatively modest leverage.

The total number of domestic and international exchanges on which the issuer is listed, #EXCH, averages 1.3 for global issuers versus 1.2 for domestic issuers. Separating the two types of exchanges reveals that only six percent of the global issuers and two percent of the domestic issuers are listed on an international exchange.[6] This is consistent with Foerster and Karolyi's (1999b) finding that the majority of foreign firms making equity issues in the U.S., the reverse of this study, are unlisted. To a large extent, firms appear to view listing and issuance as separate events. Global issuers also report significantly higher ratios of foreign income to sales (FIS) than domestic issuers. These findings point to global issuers having more recognition among foreign investors.

The findings in Panel A of Table II suggest that the global issuers differ from domestic issuers largely in terms of scale and to a degree quality: they are large firms with lower risk, whose offerings involve a smaller percentage of firm value.

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[5] The *Agreement between Syndicates* coordinates the activities of the syndicates and allows for an agreed-upon number of shares to be moved from the domestic and international markets. The final allocation is not reported publicly. We thank James Miller at Merrill Lynch for pointing this out.

[6] Stapleton and Subramanyam (1977), Lohr (1986), and Alexander, Eun, and Janakiramanan (1987, 1988), suggest stock listings enhance the liquidity of an issuer's stock. Conversely, the lack of local markets can subject foreign investors to higher transaction costs in trading U.S. shares.

*C. Announcement Date Price Reactions to Global
and Domestic Equity Offerings*

Panel B of Table II reports market-related characteristics of the issue such as the pre-issue stock price and market performance. Studies of equity issues document increases in stock price and the overall level of equity markets prior to a stock offer. Global equity offers exhibit the same tendency. The cumulative return for the firm from day -60 to day -2 relative to the announcement date (%ΔPRICE) averages 22.6 percent (median = 17.3 percent) for global issuers versus 22.0 percent (median = 18.4 percent) for domestic issuers, a difference that is not significant. The cumulative return on the S&P 500 Stock Index from day -60 to day -2 relative to the announcement date (%ΔUSMKT) is also included to account for domestic market conditions, but this variable does not differ significantly between the global and domestic offers (medians = 3.4 percent vs. 3.3 percent.)[7]

In addition, we consider how global equity issuance is related to the performance of the target international markets. The NEXIS database and the prospectuses of global offers are searched for the identity of the target international markets and for information on the motivation to issue abroad. Few issuers indicate why they are seeking to sell shares abroad, let alone give the names of intended foreign markets.[8] In the few instances where information is provided, firms disclose a general intention to sell the shares in Europe, Canada, and Japan. Given our inability to precisely identify the foreign markets, we use the Morgan Stanley Europe-Asia-Far East (EAFE) index as a benchmark for comparison to the U.S. market. These data are obtained from Datastream, Inc. The cumulative return on the EAFE Stock Index from day -60 to day -2 (%ΔFORMKT) averages 5.0 percent for domestic issues and 2.9 percent for global issues.

Panel B examines the price reaction to the announcement of the issue. CAR($-1,+1$) is the cumulative average abnormal return from day -1 to day $+1$, where day 0 represents the announcement or registration date of the offer. Abnormal returns are computed using net of market returns, that is, the return on stock i minus the return on the market (CRSP equal-weighted index) for day t. We also compute abnormal returns relative to a size-adjusted index, SCAR($-1,+1$). For each firm in our sample, we compute size deciles based on the market value of equity of all firms available on CRSP two months prior to the announcement date. The closest decile match is then used in place of the market index to compute abnormal returns. The decile return is computed as the simple average return of all firms within a decile.[9]

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[7] We also examine the U.S. market runup using the CRSP Value-Weighted Index and the NYSE Index. These results and those that follow are not sensitive to the choice of the U.S. market index.

[8] If a rationale is given, it is almost always to enhance liquidity or to broaden the shareholder base.

[9] The SCAR($-1,+1$) adjusts the benchmark of performance for size within the domestic and global group, but size-adjusted returns do not resolve the lack of comparability in size across the groups.

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Table II

Selected Characteristics of Global and Domestic Equity Offerings

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For each variable, the first row gives means and the second row gives medians. The values reported are averages for year of issue ($t = 0$) and year -1. ASSETS is total assets in millions of dollars; MVEQ is market value of equity in millions of dollars; SIZE is issue size in millions of dollar, SIZE/MVEQ is issue size divided by the market value of equity; ROA is pretax operating income divided by total assets; Q-RATIO is (Long term debt + debt in current liabilities + liquidating value of preferred stock + Market value of equity)/Total assets; DIV_YLD is the annual dividends paid/year-end stock price; LEVERAGE is (Long term debt + debt in current liabilities)/market value of equity; COVERAGE is pretax operating income before depreciation/ interest expense; BETA is the Scholes and Williams (five lead/lag) beta coefficient for the issuer's stock estimated using net of market returns from day -250 to day -50 relative to the filing date; VOLATILITY is the standard deviation of daily stock returns from day -300 to day -50 for firms with a minimum of 50 days returns; #EXCH is the number of domestic and foreign exchanges on which the issuer's stock is listed; FIS is the ratio of the firm's foreign income to sales; %ΔPRICE is percentage stock price change from day -60 to day -2 relative to the announcement date 0; %ΔUSMKT is percentage change in the S&P 500 Stock Index from day -60 to day -2; %ΔFORMKT is percentage change in the Morgan Stanley EAFE Index from day -60 to day -2; CAR($-1,+1$) is the cumulative market adjusted abnormal return, where day 0 is the announcement of the issue; and SCAR($-1,+1$) is the cumulative size adjusted abnormal return, where day 0 is the announcement of the issue calculated using size deciles of all firms on CRSP. The last column gives p-value for t-test of the difference in means (first row) and p-value from the Wilcoxon signed rank test (second row).

Variable	Domestic Offers ($N = 459$)	Global Offers ($N = 349$)	p-value
	Panel A: Financial Characteristics of Issuers		
ASSETS ($)	1,331	3,988	<0.01
	261	813	<0.01
MVEQ ($)	735	1,946	<0.01
	266	915	<0.01
SIZE ($)	65	199	<0.01
	42	118	<0.01
SIZE/MVEQ (%)	17.3	16.2	0.14
	15.2	13.1	0.04
ROA (%)	15.0	11.1	<0.01
	14.1	12.0	<0.01
Q-RATIO	2.1	3.1	0.01
	1.3	1.3	0.44
DIV_YLD (%)	0.8	0.9	0.29
	0.0	0.01	0.09
BETA	1.3	1.2	0.78
	1.3	1.2	0.30
VOLATILITY (%)	0.09	0.07	0.03
	0.1	0.05	0.02
LEVERAGE (%)	22.3	25.7	0.05
	18.4	20.5	0.15
COVERAGE	18.1	12.1	0.11
	6.3	5.2	0.05
#EXCH	1.2	1.3	0.07
	1.0	1.0	<0.01
FIS (%)	0.3	1.6	0.05
	0.0	0.0	0.34

Table 2—*Continued*

Variable	Domestic Offers (N = 459)	Global Offers (N = 349)	p-value
Panel B: Market Conditions and Announcement Date Price Reactions			
%ΔPRICE	22.0	22.6	0.74
	18.4	17.3	0.45
%ΔUSMKT	3.8	4.2	0.37
	3.3	3.4	0.19
%ΔFORMKT	5.0	2.9	<0.01
	3.1	2.2	0.03
CAR(−1,+1)	−2.4	−2.2	0.49
	−2.1	−2.1	0.42
SCAR(−1,+1)	−2.2	−1.9	0.36
	−1.9	−1.9	0.30

The cumulative market adjusted abnormal return, CAR(−1,+1), averages −2.2 percent for global issues and −2.4 percent for domestic issues over the sample period 1986 to 1995. Similarly, the size-adjusted abnormal return SCAR(−1,+1) averages −1.9 percent for global issues versus −2.2 percent for domestic issues. Although in each instance the returns are less negative for global issues, the differences are not significant.

As noted earlier, global issuers are several times larger in terms of their mean and median assets and market capitalization than domestic issuers. The range of firm and issue sizes is also noteworthy. For example, global issuers range from $16 million to $217 billion in assets compared to domestic issuers, which range from $3 million to $217 billion.[10] Issue size ranges from $9 million to $2.7 billion for the global offers compared to $3 million to $1 billion for domestic issuers. The distribution of issue sizes is such that more than 50 percent of the global issues exceed $100 million, whereas 50 percent of the domestic issues are less than $42 million. In addition, Table I indicates that more than half the global issues are issued during or after 1993. By comparison, the median issue year for the domestic group is 1991. For the domestic issues, the mean and median issue size increase over the sample period but this is not the case for the global issues. In fact some of the largest global issues are made in 1986, the first year of the sample. As a result, the proportion of the large global issues is higher in 1986 than it is in 1995, whereas the reverse is true for domestic issues. Specifically, 42 percent of the global issues in 1986 exceed $200 million compared to 39 percent of such issues in 1995, whereas 5 percent of the domestic issues in 1986 exceed $200 million compared to 16 percent in 1995. The highlighted differences above are likely to affect the CAR(−1,+1) and thus the distribution of issue sizes over time must be controlled before meaningful comparison can occur between the groups.

[10] General Motors is the largest firm with $217 billion in assets. GM made both a domestic and global issue during our sample period.

The noncomparability of the issues between the groups is in essence a manifestation of selection bias. A comparison of global and domestic issues should involve issuers that have the opportunity to issue in either the domestic or global market and rationally choose to issue in one market or the other. It should not be a comparison of global issuers that have the choice and exercise it versus firms that do not have the choice and hence issue only in the domestic market. The global issuer group is a nonrandom sample of all issuers for which the choice is *observable*. However, it is more difficult to identify the firms among the domestic issuers that could make a global offer but choose otherwise.

To address this problem, we form control samples where each global issue is matched with a domestic issue in time, and by issue size or firm size. The formation of control groups assumes, *ceteris paribus*, that domestic issuers are more likely to have the option to decide their market of issue if they are similar in size and issue under comparable market conditions to global issuers. This belief is supported by a probit analysis (not reported) that indicates that the probability of a global issue is significantly positively related to issue size and firm size, and increases over the sample period.[11] To obtain the closest possible match, the pool of domestic issues from which the match is chosen is the same for each global issue (i.e., our domestic control sample is chosen with replacement). We form several control samples of domestic issues below (CS1, CS2, CS3, and CS4) that are then used in comparison to the overall sample of 349 global issues.

(1) CS1: For each global issue, we consider the 10 closest domestic issues matched in terms of issue size. From these, we choose the domestic issue that is closest to the announcement date of the global issue.

(2) CS2: For each global issue we consider the three closest domestic issues matched in relative issue size (issue size/market value of equity). Of these, we pick the one that is closest to the announcement date of the global issue.

CS3 and CS4 are created in an analogous manner except that the order of the match is reversed—we first find the closest matches in offer time, and then pick the closest in issue size (CS3) or relative size (CS4). Because the resulting samples differ in composition, the control samples are an important check on robustness.

The first control sample results in the best match to the global sample in both size and offer time. The mean issue size for CS1 is $156 million compared to $65 million for the full sample of 459 domestic issues. Consequently, the mean issue size is now more in line with the $199 million for

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[11] The variables used in the probit analysis to estimate the probability of global issuance are variables shown in Table II to differ between the groups. In addition to the above findings, the probability of a global offer is also negatively related to the return on assets and positively related to the number of foreign exchanges that the issuer is listed on. The model predicts global versus domestic issuance correctly in 74 percent of the cases.

global issues. The median issue size of \$118 million matches that of global issues. Also, paralleling the global sample, 50 percent of the domestic issues in CS1 are issued during or after 1993. Hence the size and time distribution is more comparable between the samples.

Table III, Panel A, provides a univariate analysis of the CAR(−1,+1) and SCAR(−1,+1) across the global and domestic offers. For all of the control groups, global issues are accompanied by significantly less adverse price reactions at announcement. The results suggest that global issues are associated with price reactions that are on average 0.8 percent less adverse compared to issues sold exclusively on the domestic market. The reported results for CS1 to CS4 are representative of other control samples that are formulated using firm size (assets and market value of equity) and market-to-book ratios in lieu of absolute and relative issue size.

Panel B of Table III explores further the price reactions for subsets based on issue size and time. The price reactions for global offers are around −2 percent in all time periods and across all size groups. When the samples are split at the median issue size of \$118 million, the CAR(−1,+1) and SCAR (−1,+1) for global issues, although less negative than domestic issues for all size groups, are significantly less negative for the large offers. The only subset for which domestic issues have less adverse price reactions is for the early subperiod, 1986 to 1990, but the difference is not significant. Any perceived lack of benefit from global offers appears to stem from the unusually favorable price reactions of the domestic offers in the early years.[12] In the period 1991 to 1995, global offers have significantly less negative CAR(−1,+1) and SCAR(−1,+1) than domestic issues.

To ensure that the price advantage of global offers is not due to firm quality, market conditions, or other factors, we perform pooled cross-sectional regressions of the CAR(−1,+1) in Table IV. In all cases the dependent variable is the cumulative abnormal return CAR (−1,+1).[13] The base case regression includes the following variables: GLOBAL, SIZE, SIZE/MVEQ, LEVERAGE, *Q*-RATIO, DIV_YLD, VOLATILITY, %ΔPRICE, %ΔUSMKT, and YEAR. Many of these variables have previously appeared in the equity issue literature cited earlier. GLOBAL is a dummy variable that equals one for a global issue and is zero otherwise. The variable YEAR is an index variable that equals the last two digits of the issue year and is intended to control for cross-sectional differences in time.[14]

As a starting point, we report the base-case regression using the full sample of offers in column (1). The focus of our analysis is the coefficient of the global dummy. Consistent with the univariate results in Panel B of Table II,

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[12] Further investigation of the price reactions in the early period shows that 40 percent of domestic issues (23 out of 58) in 1986 to 1990 have nonnegative CAR(−1,+1) compared to 28 percent for global issues. Nine of the domestic issues have CAR(−1,+1) greater than 2.5 percent compared to five global issues.

[13] The results are qualitatively similar when CAR(−1,+1) is replaced by SCAR(−1,+1).

[14] If Scholes and Williams' (1977) betas (using a five day lead/lag structure) are substituted for VOLATILITY we find similar results.

<div align="center">

Table III

Price Reactions to Announcement of Global Versus Control Samples of Domestic Issues

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For each variable, the first row gives means and the second row gives medians. CAR$(-1,+1)$ is the cumulative market adjusted abnormal return, where day 0 is the announcement of the issue; SCAR$(-1,+1)$ is the cumulative size adjusted abnormal return calculated using size deciles of all firms on CRSP. The last column gives the p-value for a t-test of the difference in means (first row) and the p-value of the Wilcoxon signed rank test (second row.) The control samples are formed in the following way: CS1: For each global issue, the 10 closest domestic issues are identified in terms of issue size. From these, the domestic issue is chosen with the closest announcement date to the global issue. CS2: For each global issue, the three closest domestic issues are identified in terms of relative issue size (issue size/market value of equity). From these, the domestic issue is chosen with the closest announcement date to the global issue. CS3: For each global issue, the closest domestic issue(s) is identified in event time. From these, we choose the domestic issue that is closest in issue size to the global issue. CS4: The procedure in CS3 is repeated using relative issue size in place of the absolute issue size.

	Domestic Issues (%)	Global Issues (%)	p-value
Panel A: Price Reactions for Matched Control Samples			
	CAR$(-1,+1)$		
CS1: issue size, time	−3.1	−2.2	0.01
	−2.4	−2.1	0.04
CS2: relative size, time	−3.0	−2.2	0.02
	−2.9	−2.1	0.02
CS3: time, issue size	−3.0	−2.2	0.01
	−2.5	−2.1	0.01
CS4: time, relative size	−3.2	−2.2	<0.01
	−3.1	−2.1	<0.01
	SCAR$(-1,+1)$		
CS1: issue size, time	−2.9	−1.9	<0.01
	−2.1	−1.9	0.01
CS2: relative size, time	−2.7	−1.9	0.02
	−2.7	−1.9	0.02
CS3: time, issue size	−2.7	−1.9	0.01
	−2.3	−1.9	0.02
CS4: time, relative size	−2.8	−1.9	0.01
	−2.5	−1.9	0.01
Panel B: Price Reactions by Median Issue Size and Time			
CS1: issue size, time	CAR$(-1,+1)$		
Issues below median issue size of $118 million	−3.1	−2.3	0.14
	−3.2	−2.2	0.04
Issues above median issue size of $118 million	−3.0	−2.0	0.05
	−2.1	−2.0	0.28
Issues made during 1986–1990	−1.1	−1.9	0.29
	−0.4	−2.1	0.10
Issues made during 1991–1995	−3.5	−2.2	<0.01
	−3.0	−2.1	0.01
	SCAR$(-1,+1)$		
Issues below median issue size of $118 million	−2.9	−2.0	0.10
	−3.1	−2.0	0.02
Issues above median issue size of $118 million	−2.8	−1.7	<0.01
	−1.9	−1.8	<0.01
Issues made during 1986-1990	−1.0	−1.9	0.29
	−0.8	−1.9	0.12
Issues made during 1991-1995	−3.2	−1.8	<0.01
	−3.0	−1.9	<0.01

Table IV

**Cross-sectional Regressions of Price Reactions
to Equity Issue Announcements**

Dependent variable is the cumulative market-adjusted abnormal return, CAR(−1,+1). GLOBAL is a dummy variable equal to one if the issue is a global issue and zero otherwise; FOR_PROCEEDS is the proportion of a global issue that is raised abroad; SIZE is issue size in millions of dollars; SIZE/MVEQ is issue size/market value of equity; MVEQ is the market value of equity; LEVERAGE is (Long term debt + debt in current liabilities)/market value of equity; Q-RATIO is (long term debt + debt in current liabilities + liquidating value of preferred stock + market value of equity)/total assets; VOLATILITY is the standard deviation of daily stock returns from day −300 to day −50 for firms with a minimum of 50 days returns; ΔPRICE is the percentage change in stock price from day −60 to −2; %ΔUSMKT is the percentage change in S&P 500 index from day −60 to −2; DIV_YLD is the annual dividends paid/year-end stock price; YEAR is equal to the last two digits of the year of issue; FIS is the ratio of foreign income to sales; #FEXCH is the number of foreign exchanges that the issuer's stock is listed on; and %ΔFORMKT is the percentage change in EAFE index from day −60 to −2. p-values (in parentheses) are computed using heteroskedasticity corrected standard errors.

	Full Sample	Matched Sample CS1: issue size, time		
Variables	(1)	(2)	(3)	(4)
Constant	0.034 (0.28)	−0.059 (0.22)	−0.070 (0.19)	−0.075 (0.18)
GLOBAL	0.004 (0.14)	0.008 (0.01)	0.008 (0.01)	
%FOR_PROCEEDS				0.034 (<0.01)
SIZE	−1.99e−11 (0.07)	−2.02e−11 (0.05)	−1.90e−11 (0.05)	−1.7E-11 (0.06)
SIZE/MVEQ	−0.029 (0.05)	−0.093 (<0.01)	−0.091 (<0.01)	−0.090 (<0.01)
LEVERAGE	0.006 (0.17)	0.020 (<0.01)	0.020 (<0.01)	0.020 (<0.01)
Q-RATIO	0.001 (<0.01)	0.001 (<0.01)	0.001 (<0.01)	0.001 (<0.01)
VOLATILITY	−3.532 (0.09)	2.402 (0.19)	2.582 (0.17)	2.537 (0.18)
%ΔPRICE	−0.028 (<0.01)	−0.034 (<0.01)	−0.035 (<0.01)	−0.035 (<0.01)
%ΔUSMKT	0.102 (<0.01)	0.128 (<0.01)	0.116 (<0.01)	0.118 (<0.01)
DIV_YLD	0.0003 (0.33)	−0.001 (0.18)	−0.001 (0.23)	−0.001 (0.21)
YEAR	−0.001 (0.21)	0.001 (0.29)	0.001 (0.26)	0.001 (0.24)
FIS			0.005 (0.17)	0.005 (0.31)
#FEXCH			−0.008 (0.17)	−0.009 (0.15)
%ΔFORMKT			0.023 (0.13)	0.021 (0.15)
Adj. R^2	0.034	0.068	0.066	0.064
N	808	698	698	698

the coefficient of GLOBAL is positive but is not significant. This suggests that in the absence of further control for sample differences, global issues do not have significantly less adverse price reactions than domestic offers. In columns (2) and (3), we report regressions using the matched control samples of domestic and global offers. Because the results are equivalent for all control samples, we report the results for CS1 only. In column (2), the coefficient of the global dummy increases in magnitude to 0.8 percent and significance (p-value = 0.01). Relative to column (1), the R^2 of the regression also improves markedly despite the decrease in observations. In column (3),

we augment the base-case control variables with foreign income to sales (FIS), the number of foreign exchanges upon which an issuer is listed (#FEXCH), and the runup in the EAFE index prior to issue (%ΔFOR_MKT.) Because the positive coefficient for GLOBAL could arguably be attributed to issuers' enjoying greater visibility abroad or to favorable foreign market conditions, the inclusion of these variables reduces the chance that the global dummy proxies for these effects. When these variables are included in column (3), none is significant but the coefficient of GLOBAL remains positive and significant.[15] The 0.8 percent coefficient estimate of GLOBAL is consistent in magnitude with the univariate results in Table III and implies an increase in value of some $7.3 million over domestic market issuance for the median global issuer.[16]

If global offers are motivated to reduce price pressure effects, issuers with inelastic demand in the domestic market will suffer a larger price decrease from issuance, all else equal, than issuers with elastic demand. Consequently, firms with less elastic demand could be motivated to move a larger percentage of the offer abroad to mitigate the larger anticipated price decline from issuance. In column (4), the global dummy is replaced by the proportion of the offer that is issued abroad, %FOR_PROCEEDS. For domestic issues, %FOR_PROCEEDS takes on a value of zero. For global issues, it ranges from 10 percent to 92 percent and averages 23 percent. The coefficient estimate for %FOR_PROCEEDS is 0.034 and is statistically significant. The coefficient implies that global offers experience price reactions that are 0.8 percent lower on average ($0.034 * 0.23$) than domestic offers and is consistent with the other specifications. Hence, larger benefits are associated with offers that have a greater proportion of the issue raised abroad.

The matched samples control for the noncomparability of the global and domestic offers, but they do so at the expense of reducing the number of domestic issues used in the analysis. Consequently, we employ (but do not report) Heckman's (1979) two-stage procedure (see also Greene (1990) and Maddala (1983)) to adjust for the selection bias in the global sample. The advantage of this procedure is that we can use the full sample of 459 domestic issues and control for the differences in the distribution of issue sizes over time. In the first stage, a probit model is estimated of the probability of global issue relative to domestic issue. We then regress the CAR$(-1,+1)$ on the same set of regression variables used above except that the global dummy is replaced by the predicted probability of global issuance. Using the pre-

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[15] To determine if the positive announcement effect for GLOBAL could be due to contaminating events, we search the NEXIS database but do not find evidence of contaminating events. In addition, we include the use of proceeds code from SDC in the regression, but the variable is not significant.

[16] Because our control samples are formed with replacement, the regression residuals are not independent. This could lead to potential biases in the test statistics. We also examine control samples that excluded all of the domestic offers that fell below the smallest observed global offer. This alternative way to control for size differences also yields a positive and significant coefficient for the global dummy.

dicted probability in place of the global dummy, we find that global issues are accompanied by a price reaction that is significantly less adverse compared to domestic issuers by 0.8 percent (*p*-value = <0.01).

C.1. Announcement Date versus Offer Date Price

The finding of a more favorable price reaction for global offers would imply higher offer prices for global issues only if the announcement date price is an accurate indicator of the price an issuer will receive on the offer date. This could be reversed, for instance, if global issues experience larger price declines during the period between the announcement and the offer date. To check this we compute the cumulative abnormal market adjusted return from day +2 relative to the announcement date to day −2 relative to the offer date. The average return during the offering interval is −0.4 percent (median = −1 percent) for global offers versus −0.9 percent (median = −0.6 percent) for domestic offers (CS1 control sample.) The difference is not significant.

C.2. Direct Costs of Issue

Another important consideration from an issuer's point of view is whether the pricing advantage of a global issue is offset by larger direct issue costs, which are typically comprised of the gross spread and the expenses of the offering.[17] Direct issue costs relate to an underwriter's effort in preparing two prospectuses, or in organizing the road show. Although there are other costs relevant to a global issue, such as country-specific licensing fees, capital requirements, and other compliance costs, direct issue costs are likely to represent a significant portion of the costs of making a global offer. The average gross spread for global issues is 4.1 percent (median = 4.0 percent) compared to 4.2 percent (median = 4.3 percent) for domestic issues. Expenses as a proportion of offer size average 0.44 percent for global issues and 1.2 percent for domestic issues. None of these differences is significant. However, because there are well-documented economies of scale for issuance and global issues are so much larger, a comparison of the direct costs is best done using regression. We estimate regressions (not reported) using gross spread as the dependent variable and issue size and issuer risk characteristics as independent variables (see Smith (1977), Hansen (1986), Lee et al. (1996), Booth and Smith (1986)). All else held constant, the gross spread does not differ significantly between the groups. Consequently, the evidence suggests that direct issue costs are not higher on average for global issues.

In sum, the findings suggest that, *ceteris paribus*, the price reactions to equity issue announcements are less negative (1) for global offers, (2) the larger is the percentage of shares issued abroad, and (3) the greater is the

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[17] We measure gross spread (or underwriting discount) as the sum of management fees, underwriting fees, and the selling concession as a percentage of the offer price.

probability of global issue. Moreover, there is no evidence to suggest that the price advantage of global issues is dissipated by adverse price movements during the offering interval or through higher direct issue costs.

III. Sources of Benefits to Global Offers

The previous results document a fairly substantial benefit to global issuance. In this section, we investigate the extent to which market conditions and imperfect information can account for the positive effects associated with global offers.

A. *Market Conditions*

If global offers are motivated to escape poor domestic market conditions, we should find that global offers occur in periods of poor U.S. market performance relative to foreign stock markets. To examine the effects of relative market performance from an issuer's perspective, we compute a ratio of the cumulative returns on the S&P 500 (%ΔUSMKT) relative to the EAFE index (%ΔFORMKT) over the two months prior to the announcement date for each offer. Based on medians, this ratio is 0.26 for the global offers and is 0.13 for the domestic offers. The difference in the ratios is statistically significant and suggests that global offers generally occur under conditions of comparatively strong U.S. market performance relative to domestic offers.

We also examine the extent to which the volume of foreign capital raising is linked to relative market performance. Similar to the methodology in Bayless and Chaplinsky (1996), we identify the months of the highest and lowest foreign equity issue volume. %ΔUSMKT and %ΔFORMKT are computed for selected groups (i.e., quintiles, quartiles, and deciles) of the highest and lowest volume months. For example, in the top 20 percent of months, roughly 30.0 percent of the total foreign proceeds of $14 billion is issued compared to 7.5 percent in the bottom 20 percent of months. The average return on the %ΔUSMKT is 4.9 percent in the high volume months and 4.3 percent in the low volume months. The corresponding values for the EAFE index are 2.7 percent and 2.9 percent respectively. In both high and low volume periods, the U.S. market return exceeds the foreign market return but the differences are not significant. Overall, the results show that the movement of U.S. shares abroad does not occur under conditions of poor domestic market performance, and thus global issues do not appear motivated by issuers' attempts to escape the U.S. market.

B. *Recognition Hypothesis*

According to Merton (1987), opportunities to increase investor recognition are valuable to firms because investors only purchase shares of firms that they "know." Hence, one way global offers can enhance value is by increasing the number of shareholders who become familiar with the firm ("recognition hypothesis"). A similar implication can be drawn using Welch's (1992) "cas-

cade" theory. Welch (1992) builds a model that explains why underwriters might issue in segmented markets where investors possess less information and are unlikely to communicate with one another. Under conditions of greater information asymmetry, investors make their purchase decisions based less on their own information and more on the actions of other investors. In this situation, investors in segmented markets exact less of a penalty for being uninformed and underprice less. In the current context, Welch's argument implies that global issues with shares targeted for foreign and presumably segmented markets are likely to be associated with smaller declines in price.

One measure of investor recognition that has been used in previous studies is the change in Merton's λ. λ is the inverse of the increase in the number of shareholders weighted by the relative risk adjusted value of the firm vis-à-vis the market (Kadlec and McConnell (1994) and Foerster and Karoyli (1999a.)) Because the market of issuance is unknown, we use the percentage increase in the number of shareholders (%ΔHOLDERS) as a proxy for λ.[18] The number of shareholders is collected from COMPUSTAT for the nearest year-end before and after the issue.[19] %ΔHOLDERS averages 59 percent for the global issues. To estimate the number of shareholders gained in foreign markets, %ΔHOLDERS is multiplied by the proportion of proceeds raised abroad, %FOR_PROCEEDS. This variable is denoted as %ΔFOR_SHRS. For example, if 20 percent of the issue is sold abroad and there is a 59 percent increase in the overall shareholder base, we attribute 11.8 percent (0.20 $\times$ 0.59) of the increase in the shareholder base to foreign shareholders. If Merton's theory is applicable, the price reactions to global offers should be positively related to this increase.

In Table V we report the CAR$(-1,+1)$ for quartiles based on the percentage increase in the number of shareholders and foreign shareholders. For %ΔHOLDERS, the CAR$(-1,+1)$ increases from -2.8 percent to -2.2 percent for offers experiencing the smallest and largest increase in the shareholder base. Similarly for %ΔFOR_SHRS, the CAR$(-1,+1)$ increases from -2.8 percent to -1.9 percent for offers experiencing the smallest and largest increases in the foreign shareholder base. Although these results appear to show there are gains associated with increasing the shareholder base and in particular the number of foreign shareholders, none of the differences in the CAR$(-1,+1)$ across the quartiles is significant.

In Table VI we report regressions of the CAR$(-1,+1)$ for the global issues. In column (1), the coefficient of %ΔHOLDERS is positively related to the CAR$(-1,+1)$ and is significant at the seven percent level. In column (2), the coefficient of %ΔFOR_SHRS increases in magnitude (0.012 vs. 0.002) and significance (five percent vs. seven percent). Both regressions indicate that the less adverse price reactions for global offers are associated in part with

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[18] Prior tests examining recognition assume that the change in the number of shareholders represents new holders. Because we do not know the identity of existing and prior shareholders, we are unable to refine this estimate further.

[19] Because of data missing for this variable, the sample drops to 289 global issues.

Table V

Tests of the Recognition Hypothesis

Announcement date price reactions, CAR(−1,+1), by quartiles of global offers based on percentage increase in the number of shareholders (%ΔHOLDERS) and the percentage increase in number of foreign shareholders (%ΔFOR_SHRS).

	CAR (−1,+1) (%)	
	%ΔHOLDERS	%ΔFOR_SHRS
1st Quartile smallest increase	−2.8	−2.8
2nd Quartile	−1.7	−2.2
3rd Quartile	−2.5	−2.4
4th Quartile largest increase	−2.2	−1.9

the establishment of a larger shareholder base. The regression results also suggest, consistent with Merton (1987), that the price advantage of global offers is more strongly associated with increases in the number of foreign shareholders.

A further implication of the recognition hypothesis is that the benefits of global issuance should decline as firms become better known or markets become more integrated ("attenuation hypothesis"). We investigate this issue by focusing on a subset of global issues made by firms that issue more than once on international markets. In total, we find 128 issues made by 54 firms that make more than one global issue. The attenuation hypothesis suggests that the beneficial price impact of these issues should be largest for the first global issue compared to subsequent global issues.

The average CAR(−1,+1) when these firms issue for the first time is −1.4 percent compared to an average of −2.3 percent for subsequent issues. First time global issues are accompanied on average by a 48 percent increase in %ΔHOLDERS versus 35 percent for subsequent issues and a 10 percent increase in %ΔFOR_SHRS versus 8 percent for subsequent issues. Although the direction of the price reactions supports the attenuation hypothesis, the difference in the CAR(−1,+1) is not statistically significant. As a further check, we conduct regressions of the CAR(−1,+1) for the subsample of firms with multiple global issues and include a dummy variable equal to one for a first time global issue and zero for subsequent issues (not reported). Consistent with attenuation, the coefficient of the first time dummy is positive but is not significant.

IV. Conclusions

Our focus is to document the price impact of equity issues made by U.S. firms that involve the wider distribution of shares to multiple markets. The empirical results indicate that the adverse stock price reaction that accom-

Table VI

Regression Analysis of the Global Offerings and the Percentage Increase in the Number of Shareholders and Foreign Shareholders

Dependent variable is the cumulative market-adjusted abnormal return, CAR$(-1,+1)$. %ΔHOLDERS is the percentage increase in the number of shareholders after the issue; %FOR_PROCEEDS is the proportion of a global issue that is raised abroad; %ΔFOR_SHRS is %ΔHOLDERS times %FOR_PROCEEDS; SIZE is issue size in millions of dollars; SIZE/MVEQ is issue size/market value of equity; LEVERAGE is (Long term debt + debt in current liabilities)/market value of equity; Q-RATIO is (long term debt + debt in current liabilities + liquidating value of preferred stock + market value of equity)/total assets; VOLATILITY is the standard deviation of daily stock returns from day -300 to day -50 for firms with a minimum of 50 days returns; %ΔPRICE is the percentage change in stock price from day -60 to -2; %ΔUSMKT is the percentage change in S&P 500 index from day -60 to -2; %ΔFORMKT is the percentage change in EAFE index from day -60 to -2; DIV_YLD is the annual dividends paid/year-end stock price; #FEXCH is the number of foreign exchanges on which the issuer's stock is listed; FIS is the ratio of foreign income to sales; and YEAR is equal to the last two digits of the year of issue. p-values (in parentheses) are computed using heteroskedasticity-corrected standard errors.

Variable	Coefficient	Coefficient
Constant	-0.109 (0.21)	-0.114 (0.21)
%ΔHOLDERS	0.002 (0.07)	
%ΔFOR_SHRS		0.012 (0.05)
%FOR_PROCEEDS		-0.002 (0.48)
SIZE	$-4.53e{-}11$ ($<$0.01)	$-4.53e{-}11$ ($<$0.01)
SIZE/MVEQ	-0.011 (0.40)	-0.012 (0.39)
LEVERAGE	-0.002 (0.42)	-0.001 (0.43)
Q-RATIO	0.001 ($<$0.01)	0.001 ($<$0.01)
VOLATILITY	-4.168 (0.19)	-4.068 (0.20)
%ΔPRICE	-0.066 ($<$0.01)	-0.066 ($<$0.01)
%ΔUSMKT	0.150 (0.02)	0.152 (0.02)
%ΔFORMKT	-0.043 (0.13)	-0.046 (0.12)
DIV_YLD	-0.0004 (0.44)	-0.0003 (0.45)
#FEXCH	-0.003 (0.41)	-0.003 (0.40)
FIS	0.146 (0.08)	0.150 (0.12)
YEAR	0.001 (0.22)	0.001 (0.22)
Adj. R^2	0.100	0.095

panies equity issues is reduced by approximately 0.8 percent for global equity issues compared to domestic issues of similar size that are issued at approximately the same time. All else equal, the results indicate that global issues receive a higher offer price relative to domestic issues. The higher offer prices commanded by global issues are not offset by higher direct issue costs or by adverse price movements during the offering interval. In examining the source of these benefits, we find that global issues with the greatest gains in the number of foreign shareholders experience the most favorable price reactions.

Another way to judge the importance of new innovations such as global equity offers is to examine how they affect corporate practice. In 1986 to 1988, 60 percent of all issues in excess of $300 million are raised through global issues and this increases to 89 percent in 1992 to 1995. In 1986 to 1988, the single largest global offer is $1,192 million compared to $1,006 million in the domestic market. In 1992 to 1995, the largest global offer is $4,145 million compared to $638 million in the domestic market. If the sample is separated into an early and late period and the regression analysis in Table IV is redone for each subperiod, we find that the benefits of global issue are stronger in the late period. These results suggest there is an ongoing benefit to global issuance. This result is consistent with Foerster and Karolyi's (1999a) finding that the benefits of stock listing by foreign firms in the United States have increased in recent years. Thus, our evidence is consistent with a view of capital markets that are not completely integrated even for U.S. firms with the greatest access to capital markets.

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