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by René M. Stulz,

Ohio State University



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hen Malaysia imposed its restrictions on capital flows last year, the world financial community was stunned. Yet, for many years after World War II, such capital controls would have seemed quite normal. After the war, almost all countries had tight controls on currency conversion, which meant that outside investors could invest in foreign markets only if they could get access to often scarce foreign currencies. In addition, most countries also had explicit restrictions on foreign investment. Some countries prohibited their own citizens from buying foreign shares. In many cases, foreign investors were forbidden to buy local shares. And in countries where foreign investors were allowed to buy local shares, the shares often carried lower (or no) voting rights—and there were typically limits to the percentage of a firm's shares that could be owned by foreigners. In addition to these legal and regulatory constraints, there were also less formal deterrents to international investment. Besides political risks such as the possibility of expropriation, there were major obstacles to hedging foreign exchange rate risk as well as a near-total lack of coordination of accounting standards among countries.

Over the last 50 years, the legal and regulatory barriers to international investment have largely disappeared among developed economies. And, in the past decade, such barriers have fallen dramatically in many emerging markets. As a result of these changes, U.S. investors can now buy securities of companies in many foreign countries with almost no restrictions. Large U.S. corporations

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today raise funds in different financial markets throughout the world—sometimes in simultaneous offerings in onshore and offshore markets. Asian investors now worry about how the U.S. markets performed while they were asleep because they believe that the fate of their markets during the day depends on what happened in New York in the past twelve hours. And morning news shows in the U.S. routinely discuss the overnight returns of the Nikkei and Hang Seng indices in an effort to forecast the performance of U.S. markets.

Though economists and financial academics have generally welcomed this process of globalization and emphasized its benefits to investors and corporations, many policy makers have questioned whether the process has gone too far and whether controls on capital flows should be reinstated. In this paper, I attempt to evaluate how the globalization of capital markets is affecting the corporate cost of capital and equity values.

The remainder of the paper falls into four main sections. In the first I investigate how globalization affects the discount rate that investors use in valuing a given stream of equity cash flows. In so doing, I present a number of arguments for why globalization is reducing investors' required rate of return on stocks of companies in developed as well as developing economies.

In the second section, the focus shifts to a different, generally neglected perspective on the cost of capital. John D. Rockefeller said that the greatest challenge in his career was "to obtain enough capital to do all the business I wanted to and could do" (Chernow, *Titan* (Random House, 1998)). To understand this problem of raising capital, consider a firm with a large project that management must finance. Based on the cash flows that *management* expects the project to generate, the rate of return on the project exceeds the cost of equity capital dictated by the capital markets. However, the cash flows that matter when raising equity from outside investors are the cash flows that *investors* believe they will eventually receive from the firm in the form of dividends or capital gains. If capital markets expect the project to contribute less to the value of the firm than management does, the company will be forced to sell equity at a price below what management thinks it is worth. In management's view, being forced to

sell equity at a "discount" increases the effective cost of capital; and if the additional cost is large enough, management may forgo the project.

The difference between management's and investors' assessments of the project's value could exist for at least two reasons. First, management typically has more information about the profitability of a project than do investors, and it is often hard for management to communicate that information credibly. This problem is referred to by academics as the "information asymmetry" problem. Second, investors might be concerned that management will make poor use of the capital because its own objectives differ from those of investors. This shareholder-manager conflict is often called the "agency cost" problem.¹ As a result of these two problems, management might not be able to raise enough funds to launch the project. And even if the firm is able to raise the necessary funds, these two problems could make equity capital prohibitively expensive.

Because of these information and agency cost problems, a firm's cost of capital will depend critically on its corporate governance system. By corporate governance system, I mean not only the internal controls such as independent boards and effective incentive compensation plans, but also external elements such as legal protection for minority shareholders, sophisticated and activist institutional investors, and well-functioning takeover markets. My argument here, in brief, is that companies in national economies with more effective corporate governance are likely to raise capital on better terms because such firms are more likely to invest the capital wisely and to reinvest the firm's cash flows in ways that do not destroy shareholder wealth. Thus, in the second part of the paper, I maintain that globalization improves corporate governance and thereby lowers the cost of external financing by reducing information and agency costs.

The third section of the paper offers a brief review of the growing body of empirical evidence on the impact of globalization on the cost of capital. What evidence we have provides some, though by no means overwhelming, support for the above arguments—and I attempt to explain why the evidence is not more conclusive. The fourth and final section discusses the implications of the theory and evidence for corporate strategy and practice.

1. More precisely, it is called the "agency cost of managerial discretion" problem. For a detailed analysis of this problem, see my paper "Managerial

Discretion and Optimal Financing Policies," *Journal of Financial Economics* (1990), 3-26.

WHY GLOBALIZATION IS REDUCING THE COST OF CAPITAL: THE PORTFOLIO PERSPECTIVE

Consider a market that, for whatever reason, is isolated from the rest of the world. In this market, shares issued locally must be held by local investors, and local investors cannot diversify internationally. In such circumstances, because local investors have to bear more risk than if they were free to diversify their holdings across international markets, they will have required rates of return for holding local stocks that are higher than the rates required by well-diversified, global investors for holding the same stocks. As a consequence, the prices of local shares will be lower than if the local market were integrated with global markets.

A striking confirmation of this argument was provided by the Swiss firm Nestlé's decision, in November of 1988, to eliminate restrictions on foreign ownership on both classes of its shares. Until that time, Nestlé had two types of shares that differed only in ownership restrictions.² One type of shares, called *bearer shares*, was available to all investors, foreign as well as Swiss. A second type, *registered shares*, was available only to Swiss investors. Both registered and bearer shares had the same voting rights and the same dividends.

If restrictions on foreign ownership do not affect share values, one would expect the registered shares to sell for about the same amount as the unrestricted bearer shares. But the registered shares sold at a consistently large discount to the bearer shares. Indeed, the shares available only to Swiss investors were typically *only about half as valuable* as the shares available to foreign investors.

Then, on November 17, 1988, Nestlé announced that it was removing the restrictions on foreign ownership of its registered shares. During the week of the announcement, the price of the registered shares rose from SFr. 4,245 to 5,782, an increase of over 36%. And although the value of the bearer shares fell by about 25% (presumably because arbitrageurs were selling them while buying the registered shares), Nestlé's total market capitalization—the sum of the values of both classes of shares—increased by 10%.

The lesson from this example is that, where barriers to international investment segment a national capital market from global markets, the local investors bear all the risk of the economic activities in their economy. And, for bearing this risk, such investors require a higher risk *premium* that effectively reduces the value that local investors are willing to place on the stock relative to what a globally diversified investor would pay if given the chance.

The Local CAPM

To understand why investors in segmented markets are likely to require higher rates of return, consider the simple “mean-variance” model of investor behavior for which Harry Markowitz was awarded the Nobel Prize in 1990. Suppose that investors can invest only in their own countries and that, as the Markowitz model suggests, they care about only the expected return of their portfolio of assets and the variance of that return. Such investors will measure risk by the volatility of the return of their portfolio; and, as the volatility of their country's market portfolio increases, the risk premium required by investors for holding the market portfolio will increase along with it. For instance, assuming investors across countries have similar attitudes towards risk, a country where the variance of the market portfolio is twice what it is in another country will have twice the risk premium of the other country.

To estimate the cost of equity capital for a particular company operating in a segmented financial market, one could use the following “local” version of the capital asset pricing model (CAPM):

$$E(R_C) = R_f + \beta_H \times [E(R_H) - R_f],$$

where $E(R_C)$ is the required rate of return on the company's stock by local investors; R_f is the risk-free rate; β_H is the beta of the company's stock price in relation to the local or home-country market; and $E(R_H)$ is the expected return of the home country market portfolio. The cost of equity so calculated serves both as a discount rate for valuing the company's equity cash flows and, when adjusted for debt financing, as the “hurdle rate” for corporate

2. There were also differences in anonymity. Investors could buy bearer shares anonymously, whereas purchasers of registered shares had to register their shares with the company to obtain full ownership rights.

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investments. So, for example, when a firm considers whether to take on a project, the present value of the project for its shareholders is estimated by discounting the expected cash flows from the project at the CAPM-determined required rate of return.

Now consider what happens to the cost of capital when this country decides to open up its markets to foreign investors. To do that, let's take the real economic activities of the country as given; in other words, if a country has invested in the production of widgets, we assume that the expected value and the variance of the profits from producing widgets are not affected by globalization.³ By keeping the degree of globalization in markets for goods and services unchanged, we can focus just on the impact of *financial* globalization.

When a country opens up its capital market to foreign investors and lets its own residents invest abroad, the residents of the country no longer have to bear all the risks associated with the economic activities of the country. They can be shared with foreign investors who, by investing in the country, bear some of these risks. In exchange, domestic investors bear foreign risks by buying foreign securities. For both groups of investors, the benefit from bearing foreign as well as domestic risks is that some of these risks offset each other through the process of diversification. By investing in many countries with economic cycles or events that are partly offsetting, investors can reduce the risk of their portfolios substantially without reducing their expected return. For example, although studies of international diversification differ as to the extent of these benefits, most conclude that exchanging a portfolio of U.S. stocks for an internationally diversified portfolio will reduce the standard deviation of the returns by at least 20%.⁴

To see the effect of diversification on investors when countries liberalize their capital markets, it is useful to consider an example. Assume there are a large number of countries integrated into world markets, that each country represents

a very small fraction of the total global market, that the return on each national market portfolio has the same expected value and variance of return, and that the return on the market portfolio in each country is completely uncorrelated with the return of the market portfolio in every other country. Once the markets in all countries become open to each other, all investors (who, again, care only about the expected return and variance of their portfolios) are assumed to hold the world market portfolio to take full advantage of the benefits from diversification.

With this set of assumptions, the expected return on an investor's portfolio remains the same regardless of how his wealth is invested across countries. At the same time, the variance of the return falls with each additional country added to the portfolio. In the extreme case where the number of countries is very large, the variance of the return approaches zero, and the world market portfolio has no risk and hence no risk premium. In such a case, all stocks in all countries would be priced as if investors required only the risk free rate of return.

Of course, it is unrealistic to think that all risks could be completely diversifiable internationally. In particular, business cycles, as we saw once again during the Asian crisis,⁵ have a tendency to cross country boundaries. It is also obviously a gross exaggeration to think that *all* publicly traded companies would have access to global capital markets. This would likely be true only for the largest and most visible firms—or at most those included in a major national index of stocks.

But if the above example is clearly unrealistic, it nevertheless serves to illustrate an important point: If investors truly care only about the expected return and the variance of their portfolios, they will respond to new opportunities for global diversification by creating portfolios that promise either a lower volatility for the same expected return or a higher expected return for the same

3. In fact, globalization is likely to change real economic activities—and improve efficiency—by encouraging economies that have been previously segmented from global markets to focus increasingly on their areas of comparative advantage. For an article that shows how globalization allows countries to specialize more and undertake riskier projects because individuals in a country can diversify risks by investing abroad, see Maurice Obstfeld, "Risk-taking, Global Diversification, and Growth," *American Economic Review* 84 (1994), 1310-1329.

4. For a recent estimate of the benefits from diversification, see Giorgio DeSantis and Bruno Gerard, "International Asset Pricing and Portfolio Diversification with Time-varying Risk," *Journal of Finance* 52 (1997), 1881-1913.

5. Some observers have expressed concern that correlations increase during crises. For example, correlations seemed to increase during the recent Asian crisis, and then to fall afterward. More generally, there is a concern that the progressive integration of global economic activity is leading to greater synchronization of global economic cycles and rising correlations during bear markets. In a forthcoming paper, Geert Bekaert and Campbell Harvey find that when countries open their capital markets, they experience a small increase in their home market's correlation with global markets, but not sufficiently large to change our general argument about the impact of globalization on the cost of capital. (See Bekaert and Harvey, "Foreign Speculators and Emerging Markets," *Journal of Finance*, forthcoming.)

volatility. And this means that risk premiums and the cost of capital can be expected to fall not only in previously segmented markets, but in long-integrated markets as well. As one would expect, the largest reductions in cost of capital resulting from globalization will be experienced by companies in liberalizing economies that are gaining access to the global markets for the first time. (Recall, again, the dramatic effect of Nestlé's decision to open its registered shares to foreign investors.) But companies in integrated economies like the U.S. are also benefiting from increasing capital flows from investors in once isolated markets because this allows the firms' risks to be shared by a much larger pool of investors with different risk exposures and hence different appetites for bearing the risks of these companies. Indeed, I would argue that globalization's effect on the cost of capital over the past decade or so is a significant contributor to the current level of U.S. stock prices.

The Global CAPM

Besides falling risk premiums in all integrated (or integrating) capital markets, the above example has a second major implication for the corporate cost of capital. As already noted, if global diversification of equity portfolios minimizes volatility and risk premiums, then investors in all countries have incentives to hold the same global portfolio that includes the equities of companies all over the world. For this reason, it is useful to think of the equity markets that are integrated with each other as forming essentially one worldwide market portfolio. And for all companies that are large or visible enough to be traded in such a global equity market, the proper risk measure, or beta, would be computed in relation not to the home-country portfolio, but to the world market portfolio. That is, in integrated markets, investors with globally diversified portfolios will measure the risk of individual stocks by how they contribute to the volatility *not* of their home-country portfolios, but to the volatility of the global portfolio. For example, a U.S. investor—and, for that matter, a Japanese or a Swiss investor—considering the purchase of IBM shares will evaluate the beta of IBM not in relation to the S&P 500, but rather in

relation to a global index like the Morgan-Stanley World (MSCI) Index.

In sum, the CAPM holds for all integrated markets together rather than on a country-by-country basis. Therefore, in calculating the cost of capital for a given firm, we should use a global CAPM like the following:

$$E(R_G) = R_f + \beta_G \times [E(R_G) - R_f],$$

where R_G denotes the required expected return on a stock when markets are global; R_f is still the local country risk-free rate, β_G is the global beta of the company in question; and R_G denotes the return of the global market portfolio (again, like the MSCI World Index).

Presented in this context, the global CAPM is especially useful in showing the two distinct effects of global diversification on the cost of capital. Besides reducing market risk premiums for both home countries and for the world equity market as a whole, gaining access to global markets also effectively reduces the betas of most companies. More precisely, globalization reduces the beta of all companies whose profits and values are more strongly correlated with their local economies than with the global economy. For example, returning to the case of Nestlé, when the company eliminated the Swiss ownership requirements on its registered shares in 1988, the company had a Swiss beta of 0.9, but a global beta of only 0.6. And even if we assume the global market risk premium was equal to (instead of lower than) the Swiss market premium, that reduction in beta alone translated into a 150 basis-point reduction of Nestlé's cost of equity capital.⁶

But, as suggested earlier, it is not only companies from once-segmented markets like Nestlé that are benefiting from globalization. Although the reduction in cost of capital is likely to be greatest for large companies based in small countries with limited capital markets, the fall in the global risk premium means that even firms in well-established financial markets like the U.S. and U.K. are benefiting from the global diversification of investors' portfolios. This is a benefit that increases the value of all firms whose cost of capital is determined in global markets.

6. For the details of this calculation, see my 1995 article in this journal, "Globalization and the Cost of Capital: The Case of Nestlé," *Journal of Applied Corporate Finance*, Vol. 8 No. 3 (Fall 1995).

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GLOBALIZATION REDUCES CAPITAL COSTS BY IMPROVING CORPORATE GOVERNANCE

The above arguments for why globalization reduces the discount rate of investors are compelling, but they do not capture the whole impact of globalization on the cost of capital. To understand why, let's focus on a company that has to raise equity to finance a new investment. In many ways, the ability of firms to raise equity from the public is a paradox. In an equity issue, the firm receives cash from outside investors without a contractual agreement to give anything back. For equity financing to be possible, shareholders must expect to receive sufficient cash flows to provide them with an expected return comparable to what they would expect to earn on other investments of the same risk. But, as discussed in the introduction, managers face difficulties in convincing shareholders that they will receive such cash flows. This is because managers (1) have information that shareholders do not have about the firm's investments and (2) have incentives both to issue equity when they feel their stock is overvalued and to take projects that do not necessarily increase shareholder value.

Because of these information and incentive problems, a firm may have good projects but be unable to finance them because its managers cannot convince shareholders that the projects are value-adding. Though we focus first on companies where shareholders are widely dispersed and managers are "in power," many of the issues that we discuss are the same if there is a large, controlling shareholder instead. We address the latter case toward the end of this section.

Consider a firm whose management believes it has valuable projects. In other words, if management could convince investors that the projected cash flows will materialize—and eventually accrue to them in the form of higher dividends or capital gains—the shareholders would benefit from the firm's investment in these projects. Managers will often have difficulty convincing investors that such projects have value because managers can benefit from corporate investments even if they fail to earn the cost of capital. Managers tend to benefit—in the form of higher salaries, increased social standing,

and so forth—when the firm simply gets bigger, which often leads them to invest even in unprofitable projects rather than pay out larger dividends or buy back stock.

Management will be less able to pursue its own goals at the expense of shareholders when there is effective monitoring. By "monitoring" I mean all the processes whereby boards of directors and other interested parties examine the actions and policies of management and use the outcome of their examination to influence management's actions and policies. When necessary, boards of directors, active shareholders, and potential bidders can all take actions to reverse managerial decisions or even replace management. And, as managers increasingly come to understand that decisions that hurt shareholders affect their own tenure and compensation, managerial decisions are more likely to be value-increasing.

But monitoring, of course, is itself a costly activity and does not provide a complete solution for corporate governance. For one thing, because monitoring is costly, it is much more likely to take place after poor performance. If the firm loses money, for example, investors will often devote significant resources to figure out what is happening. But it is much harder for outsiders to figure out that managers did not take actions that would have made a successful firm even more successful. It is especially in these situations that incentives are likely to play a key role: they can lead managers to maximize shareholder wealth even when no monitoring takes place.

In sum, the extent to which management finds it in its own interest to maximize shareholder wealth depends critically on the firm's corporate governance system. If the firm's corporate governance system makes it possible for management to be monitored efficiently—particularly when it also has strong incentives to increase value—the firm's stock price will be higher and management will find it easier to raise funds.

Let's now consider in more detail how investor monitoring of management takes place and how it is likely to be affected by globalization.⁷ We consider in turn each of six important mechanisms used to monitor management:

7. For a recent review of the literature on corporate governance, see Andrei Shleifer and Robert Vishny, "A Survey of Corporate Governance," *Journal of Finance* 52 (1997), 737-784.

(1) The Board of Directors. In principle, a firm's board of directors is the most direct mechanism for monitoring management. Managers report to the board and the board can fire management. Board members have a duty to be informed about what management is doing. One problem with this arrangement, however, is that when the firm has diffuse shareholders, managers generally determine the composition of the board. This clearly limits the board's ability to discipline management if it becomes necessary.

Having a board that lacks credibility may not be a problem for a company that does not need outside capital. But if the firm wants to raise funds in the capital markets, it becomes an important issue because a weak board is less likely to discipline managers—or replace them if necessary—when performance proves inadequate. For this reason, unless management has a strong track record and clear incentives to increase value, investors are likely to expect lower cash flows from companies with weak boards.

This has important implications for firms from segmented economies attempting to raise capital in *global* markets. For such firms to succeed, investors in these markets must have confidence that the use of the funds they provide will be monitored. As we are now seeing in countries like Japan and Korea—and as saw in the early 1990s in the U.S.—this demand for monitoring is leading to more active boards that are increasingly independent of management.

(2) The Capital Markets. To sell securities, managers hire investment bankers who play a key *certification* role by risking their reputations in marketing the securities to their investor clients. When raising capital in global markets, companies from less developed markets gain access to a broader range of investment banks. And provided such companies have the right qualifications and good prospects, they can choose to issue securities with banks that have stronger reputations or more specialized knowledge about the firms' industries than their local bankers. Because such investment banks are in a better position to evaluate the firms' prospects, while also having more reputational capital at risk, securing the help of such banks conveys positive information to the markets about the companies themselves.

(3) The Legal System. The legal system plays two roles.⁸ First, it limits the ability of management to expropriate resources from investors. In legal systems with few protections for (minority) shareholders, managers can almost literally steal corporate assets with something close to impunity. But, as the legal system improves, shareholders have greater recourse and the deterrents to managerial self-dealing and fraud become more effective. Second, the legal system provides a mechanism for investors to monitor management and exercise their rights. When shareholders discover management policies or actions that hurt them, they can use the legal system to force management to change those policies and, in some cases, receive compensation for lost value.

With globalization of financial markets, companies based in countries with little protection of minority shareholders that raise funds and list in countries with stronger protection expose themselves to legal actions from investors in these countries. As a result, minority shareholders in such firms end up with better legal protection than they had before.

(4) Active Shareholders. Small shareholders have little incentive to monitor management. Monitoring, as we have seen, is expensive. And since these shareholders have a small stake, even if their monitoring efforts would lead to a value-increasing improvement in management's policies, the benefits to these investors would likely be small relative to the costs incurred. Large shareholders benefit much more from their own monitoring efforts. As a result, companies with large shareholders, all else equal, are likely to be monitored more closely than firms with only small shareholders.

Globalization makes it possible for investors from other countries to take large stakes in a firm and monitor management. As suggested earlier, there is a potential problem with large shareholders: namely, their tendency to use their influence to obtain benefits from management that do not accrue to the other shareholders. But since the large shareholders produced by globalization are foreigners and thus presumably "outsiders," they are much more likely to perform the arm's-length monitoring that ends up increasing firm value and benefiting minority stockholders.

8. See Shleifer and Vishny (1997).

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(5) The Market for Corporate Control. When internal governance systems fail, the market for corporate control—that is, takeovers, LBOs, and the like—makes it possible to remove management if it does not maximize shareholder wealth. Moreover, even in the absence of a takeover bid, the mere possibility of takeover has a disciplinary effect on management since it knows that if the firm performs poorly, it could become a takeover target.

Of course, takeovers are effectively, if not legally, prohibited in many national economies. But provided there is some possibility for investors to remove underperforming managers, opening up a capital market to foreign investors immediately creates a much larger pool of investors that can compete for control of firms within that market. This leads to greater competition for control among investors, which benefits existing shareholders directly. Moreover, even if takeovers are currently prohibited, the opening of capital markets to foreign investors tends to create a set of economic forces that exert pressure for opening up the market for corporate control.

(6) Disclosure. Public disclosure of information by firms is required by laws and regulations. But most larger companies would disclose information even if they were not required to do so. Failure to provide adequate information would make it very expensive, if not impossible, to raise funds from the public capital markets. In that case, the firm would have to resort to banks and other financial intermediaries—a capital-raising process in which private disclosure takes the place of public disclosure.

When a firm raises funds from public markets, it must not only provide extensive disclosure at the time of issuance, but also commit to furnish information on an ongoing basis (at least through the term of the financing). The more information a company provides initially—and the stronger its commitment to provide continuing disclosure—the less costly it is for investors to monitor management and, hence, the more favorable the other terms and conditions of the financing.

One problem here, however, is that it is difficult for firms in countries with minimal disclosure requirements to commit themselves to ongoing disclosure. The choice of a stricter regulatory environment

(say, the U.S., which means oversight by the SEC) is one way for companies to commit to continuous disclosure. Another is listing on an exchange (like the NYSE or Nasdaq) with extensive disclosure requirements. Thanks to globalization, companies can commit to higher disclosure standards simply by seeking additional listings on exchanges that have higher standards than their local market.

Of course, those firms that feel they are getting a higher stock price by maintaining their ability to conceal poor performance (say, by means of the “smoothing” allowed by the “reserve accounting” popular outside the U.S. and U.K.) are unlikely to volunteer to meet SEC requirements. But since this logic implies that firms with the best prospects are the ones most likely to choose to list on stricter exchanges, the mere announcement that a company intends to list on such an exchange tends to be interpreted by the market as good news.⁹

Why Globalization Increases Monitoring For All Companies

In this analysis, then, globalization increases the monitoring of management and thereby reduces information and agency costs. As a result, globalization reduces the costs of external finance for companies *in addition to* reducing the expected rate of return required by investors. This reduction in the costs of external finance resulting from improved corporate governance can be viewed as a decrease in the cost of capital in the following sense: it can turn value-reducing projects—projects that might otherwise have been abandoned because of the high cost of funding them—into value-adding projects. It does so by increasing investors’ estimates of the cash flows they will receive from the companies they invest in. The strengthening of corporate governance systems associated with globalization raises the probability that management will work harder and make more value-increasing decisions for its investors while having fewer opportunities to pursue goals that are not in investors’ interests.

Yet, based on our analysis, one might conclude that globalization increases the monitoring of management only for those firms that decide to participate in the global capital markets. But this is not the

9. For two articles that develop theoretical models where firms reveal their good prospects by listing abroad, see Salvatore Cantale, “The Choice of a Foreign Market as a Signal,” working Paper, Tulane University, 1998; and O. Fuerst, “A

Theoretical Analysis of the Investor Protection Regulations: Argument for Global Listing of Stocks,” working Paper, Yale School of Management, 1998.

case: Once a company has a choice between participating and not participating in global capital markets, the choice not to participate may reveal important information about the value of that firm.

To see this, let's go back to the issue of disclosure. Firms that want to participate in global markets must meet disclosure standards that allow them to compete for funds in these markets. But if a firm is large enough to access global markets and chooses not to do so mainly to avoid complying with stricter disclosure requirements, investors are likely to conclude that management prefers less disclosure because it allows them to conceal poor performance—or at least a failure to maximize value. Thus, companies that stay local and continue to meet only local disclosure requirements may be “signaling” their investors that they are worth less than previously thought. And, in this fashion, globalization can be seen as exerting pressure for better performance and greater transparency on all firms large enough to raise capital in global markets.

The Special Case of Large Shareholder-Controlled Firms

Our discussion has focused thus far on the case of publicly traded companies with highly fragmented ownership where management is in control. This is an apt characterization of most large, public firms in the U.S. and the U.K. But, in the case of even the largest “quoted” companies in most other countries, there tend to be large shareholders—such as banks, other corporations, and founding families—with controlling interests.¹⁰ As noted earlier, although such shareholders presumably have strong incentives to monitor management, they also have incentives, along with the power, to force management to take actions that benefit themselves at the expense of other shareholders and other investors. The working of such incentives can be seen clearly in recent accounts of South Korean chaebols (and also in the case study of Union Bank of Switzerland by Claudio Loderer later in this issue).

This ability of controlling shareholders to appropriate value from other investors creates a problem for firms in raising capital. For instance, outside investors who buy equity in a firm controlled by a

large shareholder will discount the price they are willing to pay to reflect the fact that the firm's profits might be siphoned off to companies controlled by the large shareholder. This discount might be large enough that the firm cannot “afford” to raise new funds.

To avoid this problem, minority shareholders have to be protected. In addition to monitoring management, minority shareholders need a way to monitor the large shareholder. They can do so using all of the mechanisms discussed above except the board of directors—since the large shareholder will effectively control the board. By listing on exchanges with high standards for protecting minority shareholders, a firm expresses its commitment to respect the rights of these shareholders. In cases where the local exchange does not offer much protection for minority shareholders, globalization enables companies to seek listings on foreign exchanges that provide such protection. Such listings increase firm value both by ensuring that the firm's policies are more likely to increase shareholder wealth and by allowing the firm to raise funds on more favorable terms.

Globalization and Transactions Costs

Thus far, we have ignored the costs of buying and selling securities. Globalization is reducing these costs for many firms, and such cost reductions increase firm value both directly and indirectly. In 1986, Yakov Amihud and Haim Mendelson published the first of several academic studies to show that the size of the bid-ask spread affects the market's required rate of return on securities.¹¹ The reasoning is that if investors have to pay more to transact a security, they have to be compensated with a greater expected return *before* transaction costs to offset these costs.

With globalization, one expects the bid-ask spread on securities to decrease for several reasons. For one thing, the pool of potential investors increases significantly. Second, directly related to our analysis of governance, the greater disclosure by firms associated with globalization reduces opportunities for insider trading. This means that market makers and investors without access to inside information worry less about being taken advantage of

10. See Rafael LaPorta, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert W. Vishny, “Corporate Ownership around the World,” *Journal of Finance* 54 (April, 1999) 471-517.

11. Yakov Amihud and Haim Mendelson, “Asset Pricing and the Bid-ask Spread,” *Journal of Financial Economics* 17 (1986), 223-249.

Once a company has a choice between participating and not participating in global capital markets, the choice not to participate may reveal important information about the value of that firm.

WHEN GLOBALIZATION UNDERMINES GOVERNANCE: THE CASE OF JAPAN

Globalization does not necessarily increase the monitoring of management, at least in the short run. The reason for this is that the opening of capital markets can disrupt existing relationships within a country that once contributed to the monitoring of management or large shareholders. Take the case of Japan. In the Japanese economy, monitoring until recently took place primarily through banks, and through the networks of firms called *keiretsu* that are often organized around a bank. Japanese banks held equity stakes in their customers and played a much larger role than U.S. banks both in the financing and governance of corporate borrowers. As a result, Japan was said to have a bank-centered, "relationship-based" governance system, as contrasted with the "market-based" systems of the U.S. and U.K., with hostile takeovers as one of their central features.

Before 1980, Japanese firms were prevented by both formal and informal restrictions from raising debt in public markets—a policy that benefited Japanese banks. And, as virtually a monopoly supplier of (debt) funds to Japanese firms, the banks' ability to monitor management came in large part from their ability to threaten to withhold funds. But globalization, by enabling Japanese firms to raise funds outside of Japan

(which in turn caused restrictions on Japanese public debt markets to be eased), had a dramatic impact on Japanese corporate governance by loosening the corporate ties to banks.¹⁵

To the extent our theory is correct, foreign investors should begin to exert a monitoring effect on Japanese firms. In particular, a growing pool of active institutional shareholders and potential bidders should begin to emerge. But such effects, as the Japanese experience of the '90s suggests, do not happen overnight. And the continuing presence of large corporate shareholders (as distinguished from the banks) in Japanese firms, and other impediments to a well-functioning corporate control market, have made the expected monitoring benefits of globalization slow in coming.

In sum, globalization appears to have created a corporate governance vacuum in Japan—at least in the short run—by failing to substitute the monitoring power of the market for the monitoring power of banks. Nevertheless, recent developments suggest that capital markets are beginning to assume a monitoring role,¹⁶ and that many Japanese companies are adopting important elements of Western-style corporate governance with greater attention to management incentives and stock prices.

by insiders when they trade. And to the extent such assurances increase the number of investors and market makers willing to transact in a firm's securities, this leads to greater liquidity and a lower bid-ask spread.¹² In support of this proposition, a 1997 study by Katherine Smith and George Sofianos shows that firms that list abroad experience an increase in volume even in their home market, which is consistent with the argument that

globalization leads to greater liquidity and hence a lower cost of capital.¹³

Third, globalization means greater competition in market-making and investment banking services. Companies that enter the global capital markets have access to investment banks that can compete for their business and hence lower prices. These firms can also choose to list on exchanges that are more efficient, thereby reducing the cost of transacting their securities.¹⁴

12. For evidence of the link between disclosure and the cost of capital—more specifically, that U.S. firms with limited analyst following that disclose more have a lower cost of capital—see Christine Botosan, "Disclosure Level and the Cost of Equity Capital," *The Accounting Review* 72 (1997), 323-349.

13. See Katherine Smith and George Sofianos, "The Impact of a NYSE Listing on the Global Trading of non-US Stocks," working paper 97-02, New York Stock Exchange, 1997.

14. Although one might think that the U.S. has not benefited from global competition in financial services, this has not been the case. Over the last 30 years or so, the largely unregulated offshore markets have put pressure on U.S. financial service companies and played a key role in limiting their regulatory burden. To understand the importance of the offshore markets, think of the omnipresence of LIBOR in the financial industry. No U.S. institution that is active in financial markets

can ignore this interest rate. While it is a dollar rate, it is not determined in the U.S. but rather in London (since it stands for the London Interbank Offer Rate). Another telling example of this offshore pressure occurred just after the LTCM crisis. The popular clamor for greater regulation of domestic hedge funds led to great concern that more regulation would drive these funds offshore.

15. See Jun-Koo Kang, Yong-Cheol Kim, K. Park, and René M. Stulz, "An Analysis of the Wealth Effects of Japanese Offshore Dollar-denominated Convertible and Warrant Bond Issues," *Journal of Financial and Quantitative Analysis* 30 (1995), 257-270.

16. Consider, for example, the recent dramatic restructuring of Nissan, brought about by pressure from its largest foreign shareholder, Renault. For an account, see Tim Burt, "Nissan Jobs to Go in \$9 bn Restructuring," *Financial Times*, October 19, 1999, p. 1.

Besides reducing transactions costs, the greater liquidity resulting from globalization has an indirect impact on the monitoring of management. First, with greater liquidity, the market for a firm's equity becomes more efficient in the sense that it more quickly and accurately reflects information about the firm. This makes the firm's stock price more informative and hence more useful in monitoring management. Second, greater liquidity makes it easier for active investors to accumulate positions in a stock and to sell these positions as well.

EMPIRICAL EVIDENCE ON THE IMPACT OF GLOBALIZATION ON THE COST OF CAPITAL

Having discussed the theory of how globalization should affect the cost of capital, let's now examine the empirical evidence. We will do this in four steps: First, I review recent studies of the explanatory power of the global CAPM. Second, I discuss the problems with using traditional methods of estimating the risk premium with time-series data in order to evaluate the impact of globalization on the cost of capital. Third, I discuss indirect approaches to assessing the effect of capital market liberalization on the cost of capital. Fourth and last, I offer a number of suggestions why the measured impact of globalization—though typically statistically significant—is not greater than the studies report.

Globalization and the Capital Asset Pricing Model

Tests of the CAPM in an international setting have been conducted in two ways. First, there have been tests of the global CAPM using country portfolios, and these tests have been remarkably supportive of the model. For example, a classic study by Campbell Harvey published in 1991 uses almost 20 years of historical returns of 17 different countries to assess the explanatory power of the global CAPM.¹⁷ As noted earlier, the global CAPM predicts that the risk premium in each country should be roughly equivalent to the risk premium on the world market portfolio multiplied by the beta of the country portfolio relative to the world market portfolio.

Harvey's study reports that, from February 1970 to May 1989, the average monthly return of the Morgan Stanley Capital International world index in excess of the 30-day bill was 0.553%, or 6.6% on an annualized basis. This number provides an estimate of the risk premium on the world market portfolio over that period.

Harvey's study provides support for the global CAPM in the following sense: Of the 17 countries in his sample, 14 had average excess returns that were statistically indistinguishable from the average returns predicted by the global CAPM. For example, he obtains an estimate of the global beta for Germany of 0.70. And, according to the global CAPM, the risk premium for Germany is its global beta (0.70) multiplied by the risk premium on the world market portfolio of 0.55% per month, or 0.39% per month. The average monthly excess return of the market portfolio of Germany over the sample period was 0.5%, which is not statistically different from the predicted return of 0.39%.

Nevertheless, there were three countries for which the model provided a poor "fit": Japan, Norway, and Austria. For example, the global beta of Japan over the sample period was 1.42, implying a risk premium of 0.78% (1.42×0.55) per month. But the average excess return in Japan was a much higher 1.34% per month (clearly a statistically significant difference). The reason for the failure of the model in this case was the very large positive returns of Japanese stocks in the 1980s, which had the effect of overstating the Japanese risk premium (a problem that we take up in the next section).¹⁸

In a study published in 1992, K.C. Chan, Andrew Karolyi, and I tested a different prediction of the global CAPM: namely, to the extent that national capital markets are integrated, significant changes in the volatility of major components of the global portfolio should affect the risk premiums of other markets in the portfolio. In support of this proposition, we found that changes in the variance of both the Japanese stock market and the Morgan Stanley Europe, Asia and Far East Index were directly correlated with changes in the risk premium of U.S. stocks. Our findings suggest, for example, that a sharp drop in the volatility of the Japanese market

17. Campbell R. Harvey, "The World Price of Covariance Risk," *Journal of Finance* 46 (1991), 111-158.

18. Our discussion focuses on Table VI of Harvey (1991). He also implements his model allowing betas to change over time, and this leads to a smaller but still statistically significant mistake for Japan.

More recent support for the global CAPM was provided by DeSantis and Gerard (1997), cited earlier. Using different methods from Harvey, this study calculated monthly returns from January 1970 to December 1994 for eight large countries, and also reached conclusions that were supportive of the world CAPM.

can be expected to reduce the risk premium in the U.S. and, indeed, in all integrated economies.¹⁹

The studies on the world CAPM discussed so far focus on equity markets that are reasonably well-integrated with the global equity market. But what about countries whose markets are not part of the global markets? As suggested earlier, for securities priced in a closed market, the local CAPM should hold. But once that security begins to trade in a relatively open market, the global CAPM becomes the relevant pricing model.

One important study focuses directly on this transition. In an article published in 1995, Geert Bekaert and Campbell Harvey examine the pricing of equity in emerging markets.²⁰ They begin by noting that, for such markets, globalization is not a linear development. Most countries do not steadily become more integrated with world markets, but instead proceed in fits and starts—and in some cases, as the recent imposition of Malaysian capital controls suggests, they take major steps backward. As Bekaert and Harvey hypothesize in their study, when a country becomes more integrated with the world market, its cost of capital should depend more on its beta in relation to world markets; but when, like Malaysia, it takes steps that make its markets less integrated, its cost of capital should depend more on local market volatility. And their study provides considerable statistical support for this argument.

To see the implications of Bekaert and Harvey's study, let's look at the case of Chile. From 1976 to 1992, the annual average return in dollars on Chilean stocks was a very high 37%, but the standard deviation, at 40%, was also very large. In the conventional method of applying the (local) CAPM, this historical data would be used to predict future expected returns, and so a number like 37% would end up serving as an estimate of Chile's current cost of capital. Now, if Chile was still a completely closed market, one might have been justified in estimating its risk premium in this fashion. But, given the

present extent of Chile's integration with world markets, 37% is clearly a gross overstatement of the country's *current* expected return. The global beta of Chile, reflecting its relatively low correlation with world markets, is generally no higher than 0.50. And, using a global CAPM, the excess expected return (in dollars) for Chile, assuming a risk-free dollar rate of 6% and a world market risk premium of 6.6%, would be less than 10% ($6\% + (0.5 \times 6.6\%)$) instead of its historical average of 37%. The key insight here is that, if Chile's cost of capital was once anywhere close to 37%, then the integration of world markets must be bringing about a dramatic reduction in the cost of capital. And these results for Chile are representative of emerging markets in general, since these countries also tend to have high standard deviations and low betas.²¹

But what evidence do we have that annual expected returns in Chile, and in other emerging markets, are now in fact closer to 10% than to 30%? Perhaps the most suggestive piece of evidence are the higher stock returns achieved by most of these nations in the 1980s and 1990s, at least prior to the Asian crisis. Such large positive returns, as I will argue in the next section, are consistent with falling risk premiums. Also furnishing evidence of smaller risk premiums is another study by Bekaert and Harvey that shows that the dividend yields of emerging market equities fall as their markets become more integrated with world markets.²²

In sum, there is a dramatic difference in estimates of the risk premium that use historical estimates versus those that assume the global CAPM. And the results of Bekaert and Harvey's study, as well as the other evidence just cited, suggest that the global CAPM now provides a more reliable guide to pricing emerging-market stocks than the local CAPM. But if the global CAPM does a good job of explaining the risk premiums of *country* portfolios, it fares less well when applied to specific portfolios of stocks within countries. However, this should not be taken

19. K.C. Chan, G. Andrew Karolyi, and René M. Stulz, "Global Financial Markets and the Risk Premium on U.S. Equity," *Journal of Financial Economics* 32 (1992), 137-167.

20. Geert Bekaert and Campbell Harvey, "Time-varying Market Risk Premiums," *Journal of Finance* 50 (1995), 403-444.

21. In my working paper referenced in the first footnote of this article, I derive a condition that must be met for a country to experience a reduction in investors' required rate of return as a result of becoming integrated with world markets. The condition can be stated fairly simply: the variance of the small country market portfolio must exceed its covariance with the world market portfolio. This condition will always be met when the small country market portfolio is much more volatile than the world market portfolio. When I tested this condition on 37 different

using weekly returns countries over a 10-year period from 1988 to 1998, all 37 countries—even the U.S. and the U.K.—satisfied this condition. But, not surprisingly, some countries appear to gain much more from risk-sharing than others. Argentina is the country that over that sample period seems to gain the most from risk-sharing because of its combination of high volatility and low correlation with the world market portfolio. Interestingly, in our list of countries, the country that benefits the most from risk-sharing after Argentina is China, where the stock index is composed of the Chinese shares available to foreign investors.

22. However, Bekaert and Harvey interpret their results as consistent with a fairly modest reduction in costs of capital, less than 200 basis points. See Geert Bekaert and Campbell Harvey, "Foreign Speculators and Emerging Markets," *Journal of Finance*, forthcoming.

as a criticism of the global CAPM *per se*, the problems that arise when applying the global CAPM to individual companies outside the U.S. are fundamentally the same as those that researchers have found when testing the local U.S. CAPM on U.S. companies. That is, the pronounced tendency of both smaller U.S. firms and those with high book-to-market ratios to produce higher-than-expected returns also shows up clearly in studies of companies outside the U.S.²³

And just as these shortcomings do not rule out use of the CAPM for U.S. stocks, they should not deter us from applying the global CAPM. The fact that countries that are integrated with world markets have risk premiums that depend on their covariances with the world market portfolio suggests that the global CAPM offers the most promising approach to estimating cost of capital—at least as a first approximation. Adjustments can then be made in cases where there are likely to be problems—say, in the case of small firms and those with market-to-book ratios well below 1.0.

Time-Series Evidence

The traditional approach to evaluating a market's risk premium is to compute its average excess return over a long period of time. For instance, it is common in the U.S. to use past excess returns on the U.S. stock market since the 1920s. The argument for proceeding this way is the presumption that the future is likely to be similar to the past. One has to use long periods of time because the stock market is volatile. Over shorter periods of time, one might conclude that the risk premium is either negative (if the market fell during the period), or extremely high (if the market increased dramatically). For instance, if you were using rolling 20-year periods to estimate the risk premium, you would conclude that the risk premium increased recently. From 1976 to 1995, the estimate of the risk premium for the U.S. using the Ibbotson data is 7.31%; but from 1978 to 1997 it is 9.36%!

A market's capitalization is the present value of the cash flow shareholders expect to receive from the securities traded in that market, where the discount rate is computed using the risk premium of the market. This implies that even if the cash flows

expected by shareholders remain unchanged, when the risk premium falls, stock prices and market capitalizations will increase to reflect the reduction in investors' discount rates. And this means that there will be a negative relation between changes in the risk premium and changes in equity values.

Because of this negative relation between the risk premium and stock prices, the use of past returns to estimate the risk premium is a reliable approach only if one believes that the risk premium is relatively stable over time. In this case, the longer the period over which one estimates the risk premium, the better the estimate one obtains. Unfortunately, the variance of stock returns is high enough that, *even* when one uses fairly long periods of time, one reaches very different conclusions about the size of the risk premium depending on the estimation period chosen. For instance, the U.S. risk premium estimated over the last 70 years—about 8% (when using arithmetic averaging)—is substantially higher than the U.S. risk premium estimated over the last 200 years—about 4%.

There is little reason to believe that the risk premium is stable over long periods of time. From our discussion in the previous section, we know that there are good reasons for the risk premium to be related to the variance of returns—and this variance clearly changes over time. And, as we have seen, the market portfolio also changes over time. As markets become more integrated when barriers to international investment fall, more countries become part of the world market portfolio. And, as the world market portfolio includes more countries, its variance will continue to fall because of the benefits of international diversification.

In sum, the lack of stability in the risk premium means that the time-series averaging method for estimating cost of capital will not capture the effect of globalization on the cost of capital. Globalization has been taking place over the last 40 years; and if our theory about the impact of globalization on the cost of capital is right, the cost of capital should have been falling over that period. But, to those who ignore the impact of globalization on the cost of capital, the higher stock prices and returns associated with the past 40 years will mistakenly suggest that risk premiums have increased.

23. For a study that shows that a world CAPM understates the expected returns of small firms across countries, see Robert Korajczyk and Claude Viallet, "An Empirical Investigation of International Asset Pricing," *Review of Financial Studies*

2, 1989, 553-585. For a study that shows that value stocks earn a premium across countries and makes the case for a world value factor, see Eugene Fama and Kenneth French, *Journal of Finance* (1998).

To those who ignore the impact of globalization on the cost of capital, the higher stock prices and returns associated with the past 40 years will mistakenly suggest that risk premiums have increased.

Event-Study Approaches

Rather than assessing the impact of globalization on the cost of capital by estimating the mean excess return on the market, one could take a more direct approach: namely, investigate the effect of particular globalization “events” on the equity capitalization of firms and countries. By “events” I mean announcements of market openings or other forms of liberalization. If equity markets incorporate information efficiently, one would expect events that lead investors to believe that an equity market will be more open to foreign investors—and that investors in a country will be better able to invest abroad—to have an immediate impact on equity values in that country.

In a recent study, Peter Henry ran a series of statistical tests designed to measure the stock market impact of capital market liberalizations in 12 countries.²⁴ In his first test, he considers the impact of liberalization during a period that starts four months before the announcement and ends three months after the announcement. Over that period, stock returns are higher by 4.6% per month on average, for a total cumulative abnormal return of 36.8%. He then proceeds to investigate whether this impact of globalization still holds when he controls for several variables that influence stock returns, in particular macroeconomic variables. When he does so, the impact of liberalization falls somewhat, to about 30%, but the impact is still statistically as well as economically significant. His evidence therefore suggests that liberalization increases shareholder wealth substantially.

What does an increase in stock prices of 30% imply for the cost of capital? Because the value of equity is the present value of cash flows expected to accrue to the shareholders, we can use the following experiment to produce an estimate of the impact of globalization on the cost of capital for the countries in Henry’s sample. Let’s begin with a simple valuation model known as the Gordon dividend growth model. This model assumes that cash flows to shareholders consist solely of expected future dividends and that dividends are expected to grow at a constant growth rate. The model then uses the following perpetuity formula to value the future dividends as follows:

$$V = d/(r - g)$$

where V is the value of equity, d is the dividend payment at the end of the period, r is the cost of capital, and g is the growth rate of dividends.

If we assume that d and g are given (and let’s set d equal to \$1 and g to 5%), we can “back out” the impact of liberalization on the cost of capital from the price change by using the following formula:

$$\text{Price after} - \text{Price before} = [d/r_{\text{After}} - g] - [d/r_{\text{Before}} - g] \quad (1)$$

From Henry’s study, we have the price change in percentage terms (again, 30%), which we define as Δ . We can then use Δ to solve the above equation to obtain:

$$r_{\text{After}} = (1/1 + \Delta) \times r_{\text{Before}} + (\Delta/1 + \Delta) \times g \quad (2)$$

Using this equation to estimate the impact on the cost of capital, we find that if the cost of capital before liberalization was, say, 20%, the 30% increase in equity capitalization reported by Henry would be consistent with a new cost of capital of 16.5%.

But this estimate of the reduction in cost of capital obtained from Henry’s study should be used with some caution. First, although we keep the growth rate of dividends constant as liberalization takes place, one would expect liberalization to lead to faster growth in corporate profits, a higher growth rate of dividends, and hence a lower estimate of the change in the cost of capital. Second, to the extent that countries liberalize after (and in part because) their stock market has done well, Henry’s estimate could overstate the gains from liberalization. Third, Henry does not include all liberalization events, which might understate the total impact of liberalization. But if each of these effects is potentially important, it is not clear that they together produce any obvious bias in the estimated effect on the cost of capital.²⁵

The Case of ADRs. If none of the firms in a country has access to international capital markets, the initiation of an ADR program by a single company in that country can be construed as evidence of liberalization of the capital market of that country. Nevertheless, one would expect the primary effect of

24. Peter B. Henry, “Stock Market Liberalization, Economic Reform, and Emerging Market Prices,” *Journal of Finance*, forthcoming.

25. The forthcoming study by Bekaert and Harvey, cited in note 22, also shows that liberalization leads to a significant decrease in the cost of capital—but one that is considerably smaller than that found by Henry.

initiating an ADR program to be on the cost of capital of the company that undertakes such a program. As a result, there has been a large number of studies that investigate the stock-price impact on individual firms of ADR introductions.²⁶

Based on our earlier analysis, we would expect that a firm that succeeds in having its equity valued at the global market cost of capital rather than the cost of capital of a segmented market would typically experience a substantial increase in value. As an example, suppose that the risk premium of the country is 10%, the company has a beta with respect to the country market portfolio of 1.0, the dividend growth rate is 4%, and the risk free rate is 5%. Suppose further that the firm has a world beta of 0.5 and that the risk premium on the world market portfolio is only 6%. In this case, if the firm suddenly (and unexpectedly) gained access to the world markets, the global CAPM predicts that its value will increase by 57%.

Contrary to this example, empirical studies have not found evidence of large increases in firm value by focusing on a narrow window around the announcement of the ADR program or the listing of the ADRs. Two recent studies—one by Stephen Foerster and Andrew Karolyi published in 1999, and another by Darius Miller in 1998²⁷—investigate both the return around the announcement of an ADR program and the return around the day when the actual listing takes place. Both studies find positive returns around the announcement date *and* around the listing date. However, the returns are small. For example, in examining 153 ADR listings on the Nasdaq, AMEX, and NYSE from 1976 to 1992, Foerster and Karolyi (1999) find an abnormal return of 1.2% during the week of listing. And, for the 45 listings for which they also have an announcement date, they find an insignificant positive abnormal return of 0.2% on the day of announcement. In Miller's study, the average announcement abnormal return for 53 ADRs listed on NYSE or Nasdaq from 1985 to 1995 is 2.63%.

Miller's study also distinguishes between firms from emerging markets and firms from developed

markets. To the extent that emerging markets have more barriers to international investment than developed markets, one would expect a greater abnormal return for firms from emerging markets. Confirming this expectation, Miller finds that the abnormal return of firms from emerging markets is almost twice the abnormal return of firms from developed markets.

Both Foerster and Karolyi (1999) and a study by Vihang Errunza and Darius Miller (1998) estimate returns before the initiation of an ADR program and afterwards.²⁸ Strikingly, Foerster and Karolyi find that firms that list experience an unexpected increase in their stock price of 19% for the year before the listing; but this increase is followed by a decrease of 14% in the year after listing. Before rushing to interpret such results, however, it is useful to keep in mind that the significantly negative returns after listings have also been documented for U.S. firms going public on U.S. exchanges or listing on the NYSE after having traded on Nasdaq. This suggests that the negative returns after ADR listings reported by Foerster and Karolyi may have little to do with the fact that the listing is an ADR listing but much to do with the fact that firms tend to list (or go public) following exceptional performance.²⁹

At the level of individual companies, it is also possible to conduct an analysis that directly compares the valuation of firms in a given country that have ADR programs with the values of those that do not. For example, a 1996 study by Denis Logue and Anat Sundaram examines changes in price-to-book, price-to-cash earnings, and price-to-earnings ratios around the month in which the firms list. The study finds that each of these three ratios increases for firms that list ADRs relative to a control group of comparable firms. Such increases in valuation ratios are all consistent with a decrease in the cost of capital.

The evidence discussed so far in this section focuses on non-U.S. firms gaining access to the global markets. But this is not the whole story. There is also evidence that U.S. companies benefit from using the global markets. Offshore markets—notably the Euro-dollar market—are playing a large and growing role in the financing of many large U.S.

26. For a review of these studies, see G. Andrew Karolyi, "Why Do Companies List Shares Abroad? A Survey of the Evidence and its Managerial Implications," *Journal of Applied Corporate Finance*, Vol. 11 No. 3 (Fall 1998).

27. Stephen R. Foerster and G. Andrew Karolyi, "The Effects of Market Segmentation and Investor Recognition on Asset Prices: Evidence from Foreign Stocks Listing in the U.S.," *Journal of Finance* 54 (June 1999); and Darius Miller, "The Market Reaction to International Cross-listings: Evidence from Depositary Receipts," *Journal of Financial Economics* 51 (1999).

28. Vihang R. Errunza and Darius P. Miller, "Market Segmentation and the Cost of Capital in International Equity Markets," unpublished working paper, Texas A&M University, College Station, TX. (1998)

29. See Bala G. Dharan and David Ikenberry, "The Long-run Negative Drift of Post-listing Stock Returns," *Journal of Finance* 50, 1995, 1547-1574.

firms. My own study (with Yong-Cheol Kim) of the stock market reaction to offshore debt financings by U.S. companies reports significant positive returns, in contrast to the small negative reaction to announcements of U.S. domestic debt offerings.³⁰ And recent studies of U.S. firms that issue equity in global markets also report evidence of a more favorable stock market reaction—one that is consistent with a lower cost of capital.³¹

Why Is the Decrease in the Cost of Capital Not Larger?

Although we now have considerable evidence that globalization reduces the cost of capital, the decrease in the cost of capital observed when a country liberalizes its markets or when a firm enters the global capital markets is less than one would expect. I offer a few reasons why the existing studies may not be capturing the full effect of globalization.

Because the studies just cited all investigate how stock prices react to globalization, this immediately suggests a reason why they might find smaller effects than expected. If financial markets are efficient, we expect them to incorporate information in prices very quickly, if not “instantaneously.” Thus, when a country liberalizes or a firm accesses global capital markets, it is possible that the market has already anticipated this event to some degree. In the extreme case where the market knows that a firm will undertake an ADR program, the impact of that program on shareholder wealth on the date of listing will be negligible. The same holds for the liberalization of a country. For this reason, event studies of globalization have a fundamental problem. If globalization is so advantageous that it becomes largely predictable, event studies will never be able to detect its impact. To be sure, the country studies do report finding some effect. But to be able to gauge the full impact of globalization on the cost of capital from an event study, one has to have some idea of the extent to which the liberalization is anticipated—and this, of course, is very difficult to determine.

Market anticipation is not the only reason why the existing studies are likely to underestimate the

benefits of globalization. The studies effectively make the assumption that a country liberalizes or a firm accesses global capital markets in such a way that they are immediately and completely integrated in world markets. But this, of course, is rarely the case. It is a well-established finding that investors are not as well-diversified internationally as the theory suggests they should be.³² For example in 1996, U.S. investors held 90% of the value of their stock portfolio in U.S. stocks, even though U.S. stocks represented less than half of the world market capitalization of stocks. And such a home bias exists in all foreign countries for which statistics on ownership are available.

There are several explanations that have been offered for the existence of the home bias. One focuses on the fact that, although many laws and regulations limiting foreign portfolio investment have disappeared, there are still many restrictions and additional costs faced by investors investing abroad. Information asymmetries between domestic and foreign investors, the existence of different consumption baskets, political risk, and behavioral biases can all lead to a preference for domestic assets. Political risk, for example, can make information asymmetry a major deterrent to foreign investors. The informational advantage of home country investors will depend on the disclosure and regulatory environment of a country, with weaker regimes providing a greater advantage for local investors.

As a consequence, when some countries liberalize, few foreign investors may choose to invest because the institutional “infrastructure” in such countries may be inadequate. If a country liberalizes, but markets do not expect investors to take advantage of the liberalization, then liberalization will not affect the cost of capital. If a firm starts an ADR program but foreign investors do not buy the ADRs, most of the benefits of the program will fail to materialize. In support of this view, Foerster and Karolyi (1999) show that while many ADR programs significantly expand the shareholder base, many others do not—and the extent to which an ADR program broadens the shareholder base is a crucial determinant of whether the ADR program is associated with an increase in stock price.

30. Yong-Cheol Kim and René Stulz, “The Eurobond Market and Corporate Financial Policy: A Test of the Clientele Hypothesis,” *Journal of Financial Economics* 46 (1997).

31. See Susan Chaplinsky and Latha Ramchand, “The Impact of Global Equity Offerings,” forthcoming in *Journal of Finance*, which shows that the average

negative market reaction (of slightly more than 2%) to the announcement of equity offerings is reduced by about one third in global offerings.

32. For these numbers, see Linda Tesar and Ingrid Werner, “The Internationalization of Securities Markets Since the 1987 Crash,” *Brookings-Wharton Papers on Financial Services*, 1998, 281-372.

GLOBALIZATION, CORPORATE PRACTICE, AND CORPORATE STRATEGY

What are the lessons from the globalization of securities markets for corporations? This paper makes three important points for international financial managers:

1. International financial markets are progressively becoming one huge, integrated, global capital market, which in turn is contributing to higher stock prices in developed as well as developing economies. As a consequence of the globalization of equity markets, large companies everywhere can raise capital from foreign as well as local investors. Having a global shareholder base means having a lower cost of capital and hence a greater equity value.

Shareholders benefit from globalization for two main reasons:

■ First, the risks of equity are shared among more investors with different portfolio exposures and hence a different “appetite” for bearing certain risks. With the resulting global diversification of investor portfolios, companies with access to global markets experience a reduction in market risk premiums and hence a lower cost of capital. And a lower cost of capital means a higher stock price for a given level of cash flows or earnings.

■ Second, when firms in countries with less-developed capital markets raise capital in the public markets of countries (like the U.S.) with highly developed markets, they get more than lower-cost capital; they also import at least aspects of the corporate governance systems that prevail in those markets. For companies accustomed to less-developed markets, raising capital overseas means that more sophisticated investors, institutions, and technologies will participate in monitoring their performance and management. And, in a virtuous cycle, more effective monitoring will increase investor confidence in companies’ future profitability and so improve the terms on which such firms raise capital.

This process of globalization of equity markets continues to proceed vigorously, both at the level of national governments and capital markets and within individual companies. With the growth of the Internet, moreover, the limits to further globalization of equity markets are primarily political rather than economic

or technological. Shareholders can now trade a firm’s shares wherever they are, provided country governments do not prevent them from so doing.

2. Market risk premiums are not stable, and long-run past returns do not provide a reliable guide when estimating current premiums. The reduction in the cost of equity capital brought about by globalization is hard to detect when one focuses on historical data. The reason for this is that the global diversification of investor portfolios and the resulting expansion in the shareholder base (of all companies with access to global markets) has the effect of increasing equity values as it decreases the global risk premium and cost of capital. For this reason, one who uses historical returns on equity as a basis for estimating future required returns could easily conclude that the cost of equity capital has increased when in fact it has fallen. For example, using U.S. stock returns over just the last 20 years would yield estimates for the U.S. market risk premium as high as 10%—estimates that make it very hard indeed to explain the current level of U.S. stock prices. A better approach is likely to be one that computes a risk premium that is consistent with current equity valuations and reasonable growth estimates for earnings.³³

3. In measuring the risk of individual firms and projects, use the global (not the local) CAPM. In global markets, the risk of a firm’s equity depends on how the stock contributes to the volatility not of the home market portfolio, but of the world market portfolio. For companies with access to global capital markets whose profitability is tied more closely to the local than to the global economy, use of the local CAPM will overstate the cost of capital because risks that are not diversifiable within a national economy can be diversified by holding a global portfolio. Thus, to reflect the new reality of a globally determined cost of capital, all companies with access to global markets (even those in the U.S.) should consider using a global CAPM that views a company as part of the global portfolio of stocks.

Another common problem in calculating cost of capital is the tendency of managers evaluating overseas investments to add an extra risk premium—over and above the premium in the CAPM—to account for the special risks associated with foreign projects. Such an approach is hard to justify.

³³ See Aswath Damodaran, “Estimating Equity Risk Premiums,” Stern School of Business working paper.

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If the extra risk premium is used to compensate for country risks, then it must be demonstrated that those risks are not diversifiable and that shareholders charge a risk premium to bear those risks. In a world where the firm has a global shareholder base, it makes little sense to think that shareholders will require a higher risk premium simply because the firm invests abroad. There are, to be sure, large country-specific risks in world markets; and man-

agement may well want to hedge such risks to avoid default or reduce costs associated with financial distress. But such risks should not be viewed as increasing the cost of capital for a project. Country-specific risks may reduce the expected cash flows of a project; but as globalization progresses, a firm's shareholders care less about where the expected cash flows come from, and focus simply on how big they are—and how they affect a global portfolio.

■ RENÉ STULZ

holds the Everett D. Reese Chair of Banking and Monetary Economics at The Ohio State University, and is a Research Associate of the NBER. He is also Editor of the *Journal of Finance*.

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