Resales of Offshore Securities into the United States: Evaluating the Overvaluation Risk to U.S. Investors

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ABSTRACT

Examining a sample of 701 offshore securities offerings under Regulation S of the Securities Act from 1993 to 1997, this Article tests whether foreign investors expect to resell Regulation S securities in the United States ahead of the U.S. secondary market reaction to news of the offering. The Article provides evidence from an event study that the secondary market reaction to a Regulation S offering is on average negative and statistically significant. Foreign investors able to resell into the United States before the secondary market reaction may act as conduits for issuers attempting to sell overvalued securities into the United States to the detriment of domestic investors. To the extent managers seek to benefit pre-offering shareholders, they will negotiate to give foreign investors as small an offering discount as possible. In contrast, where foreign investors are unable to resell prior to the secondary market negative reaction to news of the offering, foreign investors will demand a greater discount in compensation for the entire expected market reaction. Without such a discount, Regulation S offerings result in a transfer in value from foreign investors to U.S. investors; rational foreign investors will choose not to participate in such offerings. Controlling for other factors that may affect the offering discount, this Article furnishes evidence on the offering discount consistent with the hypothesis that foreign investors were in fact unable to engage in resales ahead of the U.S. secondary market reaction to a Regulation S offering.

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INTRODUCTION

Regulation S of the Securities Act of 1933 (the “Securities Act”) represents a policy choice to respect territorial boundaries: where a securities transaction affects parties within the United States, the U.S. securities regime should apply; where a transaction occurs wholly outside the United States, the securities regulatory regime of other countries should apply. Regulation S provides an exemption from the registration requirements of Section 5 of the Securities Act for those offerings occurring “outside the United States,” thus allowing a limited means for U.S. issuers selling abroad to avoid certain requirements of the U.S. securities regime. Proponents of Regulation S argue that the territorial approach promotes respect for the sovereignty of foreign jurisdictions and alleviates the risk of conflict with the requirements of foreign securities regulatory regimes.

With this policy choice, however, emerges a dilemma: how should

4. See 1988 Proposing Release, supra note 1, at *9 (“Principles of comity and reasonable expectations of participants in the global markets justify reliance on laws applicable in jurisdictions outside the United States to define disclosure requirements for transactions effected offshore.”).

A debate presently exists in the securities regulation literature on the merits of regulatory choice. Several commentators have argued that issuers should have some amount of choice in the securities regulatory regime governing transactions in the issuers’ securities regardless of the physical location of the issuer. See Stephen J. Choi & Andrew T. Guzman, Portable Reciprocity: Rethinking the International Reach of Securities Regulation, 71 S. CAL. L. REV. 903 (1998); Roberta Romano, Empowering Investors: A Market Approach to Securities Regulation, 107 YALE L.J. 2359 (1998). But see Merritt B. Fox, Securities Disclosure in a Globalizing Market: Who Should Regulate Whom, 95 MICH. L. REV. 2498 (1997) (arguing against regulatory choice and advocating instead that the home country of an issuer should regulate the disclosure regime for the issuer regardless of where investors are located or transactions take place).
regulators treat offshore offerings that result in resales of unregistered securities into the United States? The U.S. securities regime is transaction-focused. Once foreign investors possess investment intent and the offering has “come to rest abroad,” the investors are not treated as participating in the issuer’s distribution of the Regulation S securities. Foreign investors may then freely resell into the United States. Through resales, securities intended for foreign markets may make their way into the United States, thus providing issuers a means of avoiding the Securities Act’s registration requirements while indirectly placing their securities in U.S. markets. In the extreme case, foreign purchasers may engage in short sales of Regulation S securities into the United States immediately after making their purchase, thereby eliminating any investment risk to themselves and locking in whatever discount they receive from the issuer.

The SEC responded to this policy dilemma in 1998 by imposing additional limitations on Regulation S transactions (the “1998 Reforms”).


6. See Registration of Foreign Offerings by Domestic Issuers: Registration of Underwriters of Foreign Offerings as Broker-Dealer, Securities Act Release No. 33-4708, 29 Fed. Reg. 9828 (1964) (“[T]he Commission has not taken any action for failure to register securities of United States corporations distributed abroad to foreign nationals, even though use of jurisdictional means may be involved in the offering. It is assumed in these situations that the distribution is to be effected in a manner which will result in the securities coming to rest abroad.”).

7. See 1988 Proposing Release, supra note 1, at *10 (“After the foreign distribution has been completed and the marketing efforts have terminated, routine secondary trading may begin as a matter of course. The periodic reporting requirements of the Exchange Act would protect investors in the U.S. market by assuring that information concerning the issuer would be available.”). See also Sara Hanks, Direct Regulation S Offerings and the SEC’s “Problematic Practices” Release, 2 STAN. J. L. BUS. & FIN. 303, 321 (1996) (“The restricted period [of the Original Regulation S] raises a presumption against availability of Section 4(1) during its running, which presumption is reversed on the fortieth day.”). Foreign investors, for example, may use Section 4(1)’s exemption for transactions “not involving an issuer, underwriter, or dealer.” 15 U.S.C. § 77d(1) (1994).

8. In a well-publicized case, the SEC issued a cease-and-desist order against GFL Ultra Ltd., a British Virgin Islands investment company. See In re GFL Ultra Fund Ltd., Securities Act Release No. 7423, [1997 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,949 at 89,752 (June 18, 1997). GFL Ultra engaged in several purchases of securities sold overseas through Regulation S typically at a discount of 15 to 20 percent of the U.S. secondary market price. Rather than wait until the expiration of the 40-day restricted period under Regulation S, GFL Ultra immediately engaged in short sales of securities of the issuer inside the United States. At the end of the 40-day restricted period, GFL Ultra then used its Regulation S securities to cover its short position. GFL Ultra, therefore, was able to guarantee a profit from its large discount in the U.S. secondary market price without any risk to itself through its short-sale technique. See id. at 89,753 & n.5 (reporting that the total profit to GFL Ultra was greater than $840,000).

Under the 1998 Reforms, all domestic issuers and distributors taking part in a Regulation S equity offering must comply with certification,10 legending,11 and stop-transfer12 restrictions during the one-year “distribution compliance period” following a Regulation S offering.13 Once issued, Regulation S securities are also considered “restricted”;14 foreign investors may not resell such securities into the United States without meeting the registration requirements under Section 5 of the Securities Act or one of its exemptions. For example, foreign investors may avail themselves of Rule 144’s resale exemption if they fulfill its requirements, including meeting a one-year holding period before commencing resales into the United States.15

The benefit of the SEC’s 1998 Reforms to Regulation S turns on the actual harm done to U.S. investors from the resale of unregistered securities into the United States.16 This Article focuses on one particular harm: the
resale of overvalued securities. For example, U.S. issuers may use foreign investors as conduits to sell unregistered securities quickly to unsuspecting purchasers in the United States when the market overvalues the securities to the benefit of both foreign investors and the issuer.\textsuperscript{17} Once the market learns of the overvaluation and the market price falls, U.S. purchasers experience negative returns.

Crucial to the ability of issuers and foreign investors to gain at the expense of U.S. investors from the resale of overvalued securities is the U.S. secondary market reaction to information regarding the offering prior to the commencement of resales. Where the U.S. secondary market receives news of the offshore offering prior to resales, the market price may react negatively to such news. The market, for example, may take information on a Regulation S offering as a signal that managers believe the market price is overvalued.\textsuperscript{18} To the extent that market is correct in its reaction and eliminates the overvaluation, foreign investors receive no gain from the resale of securities into the U.S. securities market. Foreign investors will then demand a greater offering discount from the issuer in compensation for the expected reduced resale price the foreign investors will receive upon resales into the United States.\textsuperscript{19}

This Article examines how the market reacts to information of a Regulation S offering and whether issuers are able to utilize Regulation S to engage indirectly in the sale of overvalued securities to U.S. investors before the U.S. market learns of the offering. This Article provides evidence that, even under the original Regulation S, foreign investors were unable to resell before the U.S. markets learned of the offering. Therefore, although Regulation S offerings are sold at a discount, much of that discount

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\textsuperscript{17} I address the range of harms that Regulation S may pose to investors more fully in Stephen J. Choi, \textit{The Unfounded Fear of Regulation S: Empirical Evidence on Offshore Securities Offerings} (forthcoming Duke Law Journal, 2000). For example, managers may use a Regulation S offering to engage in self-dealing, selling securities at a large discount to entities in which the managers own an equity interest.

\textsuperscript{18} \textit{See infra} text accompany notes 24-29 (discussing the signaling effect from a Regulation S offering).

\textsuperscript{19} The offering discount is defined throughout the article in relation to the U.S. secondary market price for the issuer's common stock at the start of the Regulation S offering. The offering discount may be expressed as: Offering Discount = U.S. Secondary Market Price at Start of Offering* - Offering Price.
represents compensation for the expected secondary market reaction to news of the offering.

Part I provides a theoretical discussion of the relationship of information-related effects in the U.S. secondary market to the Regulation S offering discount. It also analyzes possible harms to U.S. investors. Part II discusses empirical tests of the information effect through an analysis of 701 Regulation S offshore offerings. Part III concludes that the empirical evidence supports the hypothesis that foreign investors are unable to resell into U.S. secondary markets ahead of negative reaction to the Regulation S offering.

I. THE INFORMATION EFFECT FROM REGULATION S OFFERINGS

Regulation S offerings are typically sold at a large discount from the U.S. secondary market price at the time of the offering.20 This discount results from a combination of factors. For example, foreign investors may demand compensation for the illiquidity risk they bear while resale of the securities into the United States is prohibited.21 Similarly, foreign investors, at an informational disadvantage relative to the issuer’s management, may require payment for the risk that the foreign investors may misprice the offered securities because of their lack of adequate information. Managerial opportunism may also drive the discount. Insiders, for instance, may utilize a Regulation S offering to engage in self-dealing, selling securities at a large discount to entities in which the insiders own an interest. Insiders may also raise capital through a Regulation S offering with the intention of exploiting

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20. See BNA SEC. L. Daily, May 25, 1999 at D7 (quoting a release from the U.S. Attorney for the Eastern District of New York dated May 21, 1999, stating that “‘Stock issued under Regulation S typically is priced at substantial discounts below the prevailing market price of the issuing company’s stock . . . .’”). Indeed, it is unclear what harm U.S. investors would suffer if a Regulation S offering is sold at a large premium relative to the fundamental value of the issued securities. Absent insider self-dealing or the presence of confidential information, foreign investors systematically lose relative to mostly U.S.-based pre-offering shareholders in the issuer if the foreign investors purchase at a premium. See infra note 32 and accompanying text.

Nevertheless, the SEC has argued, in the context of convertible debt securities sold through Regulation S, that even securities sold with a high conversion premium relative to the U.S. secondary market price bring the possibility of abuse. See Adopting Release, supra note 1, at *5 (“The potential for abuse exists whenever a domestic issuer can create offshore, in a transaction not subject to the registration provisions of the U.S. securities laws, pools of equity securities that appear to be immediately tradeable back into the United States because of their unrestricted status.”). The SEC, however, did not elaborate on the precise nature or magnitude of this potential “abuse.”

21. See 1998 Amending Release, supra note 9, at *16 (“The size of that price discount reflects, at least in part, the compensation buyers of shares receive for giving up the ability to readily sell the shares immediately in the public market.”).
the capital for their own private purposes at the expense of shareholders.\textsuperscript{22} Foreign investors then will demand a larger discount to compensate for the decrease in company value due to the suboptimal use of capital.\textsuperscript{23} This section focuses specifically on the theoretical relationship between the offering discount and the expected secondary market reaction to news of a Regulation S offering.

News of a Regulation S offering provides valuable information to the securities markets. All other things being equal, managers seeking to maximize value to pre-offering shareholders will tend to promote offerings where they have reason to believe that the market overvalues the issuer’s securities.\textsuperscript{24} Conversely, managers will delay offerings where the market undervalues the securities.\textsuperscript{25} For example, consider the following hypothetical situation involving Zorox, Inc., a company based in Missouri. Zorox has a U.S. secondary market price of $100 per share and one million outstanding common shares traded on NASDAQ. The company’s managers, however, have non-public information that the per share fundamental value of Zorox is $70, giving a $30 difference between the secondary market price and the fundamental value (the “overvaluation surplus”).\textsuperscript{26} To the extent

\textsuperscript{22} For example, managers may use the proceeds from a sale to engage in an acquisition to increase the quantity of the assets under their control regardless of the value to shareholders of the acquisition. Cf. Bernard S. Black, \textit{Bidder Overpayment in Takeovers}, 41 \textit{STAN. L. REV.} 597, 599 (1989) (discussing the hypothesis that bidders in a takeover contest pay too much for the target company). Black writes: “These overpayments don’t cause bidder stock prices to drop because investors already expect the bidder to waste the money, one way or another.” \textit{Id.}

\textsuperscript{23} For example, suppose that a company has 1,000 shares outstanding with a secondary market price of $100 per share and a total aggregate fundamental value of $100,000. The company then attempts to raise an additional $100,000 capital through an offering, issuing 1,000 shares. To the extent the purchasing investors believe that the managers will simply squander the offering proceeds resulting in no net gain to the company, they will refuse to pay $100 per share for the offering. Instead, purchasing investors will pay at most $50 per share (the per share value post-offering where the company has 2,000 outstanding shares and is worth $100,000). The prospect of suboptimal use of capital raised in the offering, therefore, results in a 50% discount from the secondary market price prior to the offering.


\textsuperscript{25} \textit{See} Robert A. Korajczyk et al., \textit{The Effect of Information Releases on the Pricing and Timing of Equity Issues}, 4 \textit{Rev. Fin. Stud.} 685, 688-92 (1992) (discussing the incentive of managers to delay an equity offering prior to the disclosure of positive information but not prior to the disclosure of negative information).

\textsuperscript{26} For purposes of this article, the fundamental value is defined as the amount investors would pay for the issuer’s securities if they had the same knowledge as management on the valuation of the
managers successfully issue an additional one million shares of Zorox to the market at $100 per share, they will increase the fundamental value of Zorox to $85 per share, benefiting all pre-offering shareholders. Rational investors in the market will recognize this incentive on the part of managers. The fact that a company's managers seek to raise capital from the market may suggest that the managers believe the market presently overvalues the company.

The market may therefore take news of a Regulation S offering as a signal that managers believe the U.S. secondary market price overvalues the securities. Certainly, several other motivations may exist for a Regulation S offering. Companies seeking to enter a new geographical market, for example, may desire to establish shareholder ties with key individuals in those countries. The possibility of different motivations, therefore, may result in a noisy signal sent to the market. Nevertheless, to the extent the market suffers from no systematic biases in how it interprets information, on average the market will correctly determine the degree of overvaluation.

For purposes of discussing the relationship between the offering discount and the secondary market effect from a Regulation S offering, consider the two extreme situations, when the market learns of the Regulation S offering: (a) prior to when resales commence and (b) after foreign investors have successfully resold all of their securities into the United States at the pre-disclosure secondary market price.

First, in situation (a) the market learns of a Regulation S offering before foreign investors begin reselling these securities into the United States. For example, an issuer may voluntarily make a public announcement of the offering before the end of the Regulation S restricted period. Alternatively, the market may learn about the Regulation S offering during the period in which foreigners are conducting resales into the United States. Foreign investors that expect such a situation will anticipate a secondary market reaction somewhere between the two extremes, as described in the text.

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27. This assumes that managers do not simply waste the offering proceeds. To simplify, the article assumes, unless otherwise specified, that managers place the offering proceeds into an interest-bearing bank account, preserving the value for shareholders.


29. The noise in the information signal sent from news of a Regulation S offering increases the variance in the market's overall reaction.

30. The market may also learn about the Regulation S offering during the period in which foreigners are conducting resales into the United States. Foreign investors that expect such a situation will anticipate a secondary market reaction somewhere between the two extremes, as described in the text.

31. An increase in trading volume may be due to several alternate possible factors. Nevertheless,
foreign investors are rational, they will take into account the expected secondary market price drop in computing the discount for which they negotiate.

For example, consider Yoshi, an investor located in Japan. Yoshi is contemplating the purchase of securities from Zorox, Inc. Assume further that Zorox has one million shares of common stock outstanding, which trade on NASDAQ at $100 per share. However, Yoshi’s best estimate is that Zorox’s secondary market price will drop to $70 per share once information about the offering is made public. Yoshi does not expect to be able to resell into the United States until after information on the Regulation S offering is made public. Where Yoshi negotiates to pay $100 per share, matching the present secondary market price, he will likely suffer losses on his investment once information on the offering is made public.32 On the other hand, where Yoshi negotiates to pay only $70 per share, receiving shares at a 30% discount from the present secondary market price, he will on average break even once resales commence into the United States.33 Yoshi’s large Regulation S discount, therefore, does not benefit Yoshi at the expense of U.S. investors; rather, it simply reflects the anticipated U.S. secondary market price once resales are allowed to commence.34

a large rise in trading volume may focus analyst attention on the security, leading to further investigation, which may pinpoint the cause.

32. Not only will Yoshi lose systematically, but pre-offering investors in Zorox will benefit. For example, assume that one million shares of Zorox are outstanding and that each share has a fundamental value of $70 per share despite the market price of $100. If Yoshi were to purchase an additional one million shares at $100 per share, Zorox will take in $100 million in cash, raising its fundamental value to $85 per share. All pre-offering investors in Zorox therefore will benefit at Yoshi’s expense.

33. Of course, the market is not always accurate. Absent some systematic bias in the market, however, the market should on average be correct in its assessment of the overvaluation surplus. Rather than change the market’s average reaction, inaccuracies will result in a greater variance in the market’s reaction. Under certain circumstances, the variance of the market’s reaction may provide foreign investors with non-public information on the value of the company with the ability to gain at the expense of U.S. investors from resales. For example, after the market reaction to news of a Regulation S offering, foreign investors may choose to engage in resales only when the market mistakenly continues to overvalue the securities; when the market undervalues the securities, foreign investors may simply choose to hold onto their securities until the market eventually corrects its valuation.

Foreign investors, nevertheless, may face pressure to sell their securities as quickly as possible, regardless of whether the market under or overvalues the securities. In particular, foreign investors acting as conduits for the issuer may have a great deal of capital tied up in the Regulation S securities and thus face a large liquidity risk in addition to high capital costs. Such investors may resell into the United States even when the market undervalues the securities. The expected market reaction for such investors will therefore exactly equal the overvaluation surplus.

34. In contrast, the SEC has noted that one common “abuse” that occurred prior to the 1998 reforms under Regulation S involved placements of securities purportedly offshore under Regulation S under circumstances that
Of course, Yoshi may have negotiated to pay only $60 a share, below the fundamental value of Zorox. In this situation, he will still enjoy a discount even after the secondary market adjusts for news of the Regulation S offering. Where Yoshi, for example, purchases one million shares at $60 per share, the fundamental value of Zorox will drop to $65 per share. Yoshi gains $5 per share. Importantly, the pre-offering Zorox shareholders bear the loss from the offering discount below the fundamental value given to Yoshi.

To the extent managers own shares in Zorox or are compensated through reference to the share price, managers also are harmed and will agree to an offering price less than the fundamental value of the company in two possible cases. First, managers that engage in self-dealing, selling securities to entities in which they own an equity interest, will readily discount Regulation S securities past the issuer’s pre-offering fundamental value. Second, managers may choose to give unrelated foreign investors a discount to compensate the foreign investors for other risks associated with the offering, including the risk of illiquidity while the securities are prohibited from resale into the United States. Such compensation, in turn, may increase the value of the issuer to the extent the discount granted foreign investors is still lower in cost than alternate means of raising capital.

In situation (b), the market learns of the Regulation S offering only after the initiation of resales into the United States, and prices fail to react to this information before foreign investors successfully complete their resales into

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indicate that such securities are in essence being placed offshore temporarily to evade registration requirements with the result that the incidence of ownership of the securities never leaves the U.S. market, or that a substantial portion of the economic risk . . . is left in or is returned to the U.S. market.


When U.S. investors are fully aware of the Regulation S offering before foreign investors are able to shift the risk of the offering back into the United States, however, foreign investors and issuers are unable to gain even against unsuspecting U.S. investors. To the extent the market price accurately adjusts downward to take into account the news of the Regulation S offering, foreign investors engaging in resales will receive the post-disclosure fundamental value of the securities.

35. Yoshi’s purchase will result in offering proceeds of $60 million to Zorox. Assuming Zorox simply puts the money in a bank account, the fundamental value of Zorox will increase to $130 million (given a pre-offering fundamental value of $70 million). With 2 million shares outstanding post-offering, the per share value will be $65 per share.

36. See Hanks, supra note 7, at 313-14.

It is no wonder that U.S. issuers favor a direct Regulation S transaction of this sort. Transaction costs are approximately ten percent of those involved in a public offering, and the transaction can be completed in days. This timing advantage is especially helpful where a company needs money fast to complete an acquisition, complete a build-out, or simply stay solvent.

the United States. Companies whose securities do not trade in an efficient market, for example, may face the possibility of a slow market reaction to the commencement of resales into the market from foreign investors. Foreign investors that negotiate for a discount based on the negative market reaction to news of the Regulation S offering, therefore, will benefit relative to U.S. investors.

Consider Zorox, Inc. again. Assume that the present secondary market price is $100 per share. Zorox managers, however, possess non-public information that the fundamental value is only $70 per share. To take advantage of the market’s overvaluation, managers choose to make a Regulation S offering to Gabrielle, a foreign investor, at $95 per share. Gabrielle then resells quickly into the United States at $100 per share, just prior to Zorox’s disclosure of the Regulation S offering. Any U.S. investors purchasing from Gabrielle, therefore, overpay relative to the $70 fundamental value of Zorox by $30 per share. Of the $30 overvaluation surplus, Gabrielle receives a benefit of $5 per share. The remaining $25 goes to the issuer as proceeds from the Regulation S offering to the foreign investors, benefiting all pre-offering shareholders.

Note two important points about the theoretical possibility of managers using Regulation S to sell overvalued securities to U.S. investors. First, where securities are overvalued in the U.S. secondary market, managers must negotiate with foreign investors regarding the allocation of the return from this overvaluation. For example, in the Zorox hypothetical, managers could have sold Zorox stock to Gabrielle for $75 per share, giving Gabrielle a gain of $25 per share from reselling into the U.S. at $100 per share and the Zorox pre-offering shareholders a gain of $5 from the overvaluation.

To the extent managers seek to maximize the welfare of pre-offering shareholders, however, managers will attempt to give foreign investors as small a discount as possible. Managers, of course, may seek to maximize

37. This Article uses the term “efficient market” to refer to a trading market that displays features of a semi-strong efficient market. The semi-strong version of the efficient capital markets hypothesis posits that the secondary market price of companies reflects all publicly available information on the company as well as all historical data in the company. See Eugene F. Fama, Efficient Capital Markets: A Review of Theory and Empirical Work, 25 J. Fin. 383 (1970); see also Daniel R. Fischel, Efficient Capital Markets, the Crash, and the Fraud in the Market Theory, 74 CORNELL L. REV. 901, 911 n.11 (“The empirical evidence to date (with some exceptions) appears to establish the validity of the weak and semi-strong but not the strong form of the efficient capital markets hypothesis.”). Some have argued that markets are not efficient because of investor irrationalities and cognitive limitations in processing information. See Donald C. Langevoort, Theories, Assumptions, and Securities Regulation: Market Efficiency Revisited, 140 U. PA. L. REV. 851, 853-54 (1992); Lynn A. Stout, Are Stock Markets Costly Casinos? Disagreement, Market Failure, and Securities Regulation, 81 VA. L. REV. 611, 648-50 (1995).

38. In the alternative, issuers may set up a phony offshore shell entity to act as a foreign investor
their own individual welfare. Where no self-dealing is involved, however, there is no incentive to give foreign investors an unnecessary premium. Therefore, in situations where it is likely that the U.S. secondary market will react slowly to information on Regulation S resales into the United States, managers will negotiate to give foreign investors something less than the entire information-related overvaluation surplus. The exact division of the overvaluation surplus will depend on the relative bargaining strengths of foreign intermediary investors and managers. Where many foreign investors compete to purchase Regulation S offerings, for example, managers will be able to capture more of the overvaluation surplus for the issuer and its pre-offering shareholders.

Second, the ability of foreign investors to resell securities in large quantities secretly into the United States faces a number of obstacles. For issuers followed by several analysts, the increase in trading volume will receive immediate attention. Analysts may then further investigate to determine the source of the increased volume. Foreign investors that hope to take advantage of a slowly reacting market, therefore, must sell securities piecemeal into the market. Where several foreign investors own securities, they will also face a collective action problem in restraining themselves from flooding the market with their securities. Similarly, financial institutions with multinational offices may learn of a Regulation S offering from resales that occur abroad and convey this information to related analysts monitoring the issuer inside the United States.

On the other hand, not all companies enjoy an active analyst following. and then use the offshore entity to resell directly into the United States. See, e.g., Jordan, supra note 36, at 76-78. In the case of an offshore shell, issuers will have no incentive to give the shell any discount related to the overvaluation surplus. Instead, issuers will keep the entire surplus for themselves.


In modern securities markets, decisions are made on a shorter term than forty days. Investments today are made on a fluid basis, and the holder of securities experiences far greater risk in a few days than would have been experienced over forty days several decades ago. In addition, distributions of securities come to rest in a much shorter period than in earlier decades.

40. Many financial market intermediaries are now present in a large number of different countries. For example, the investment banking and securities firm Goldman Sachs has 41 offices in 23 countries worldwide. See The Goldman Sachs Group, Inc. homepage (visited April 9, 2000) <http://www.gs.com>. Information learned by Goldman Sachs brokers located abroad regarding U.S. securities issued or traded abroad, therefore, may make its way easily into the U.S. markets through the Goldman Sachs office in New York.

41. Evidence exists that fewer than one thousand of the more than ten thousand Exchange Act reporting companies have at least one investment analyst actively following the company. See JAMES D. COX ET AL., SECURITIES REGULATION: CASES AND MATERIALS 41 (Little, Brown 1991) (citing Report of the Advisory Committee on Corporate Disclosure to the Securities and Exchange

https://openscholarship.wustl.edu/law_lawreview/vol78/iss2/8
The absence of analysts may make it more difficult for the market to respond accurately to the increased trading volume from resales into the United States. Nevertheless, where few analysts follow a particular company, the market typically is thinly traded.  

A large influx of securities therefore may create a larger percentage increase in the trading volume, prompting even casual market participants to investigate further to discover the cause of the volume increase.

II. EMPIRICAL TESTS OF THE INFORMATION EFFECT FROM REGULATION S OFFERINGS

This Part provides an empirical test of whether foreign investors possess the ability to use Regulation S offerings to resell securities into U.S. markets prior to information disclosure of the offering, acting as a conduit for issuers to sell overvalued securities indirectly to U.S. investors. As discussed in Part I, the discount that foreign investors negotiate will depend on whether foreign investors expect (a) the market to learn of the Regulation S offering prior to when resales commence or (b) the market to learn of the offering only after resales are concluded.

To the extent foreign investors expect the secondary market price to drop in response to information on the offering before resales may commence, they will refuse to pay any more than the expected post-disclosure secondary market price, resulting in a large discount. Where the market reaction is correct, foreign investors will demand a discount equal to the entire overvaluation surplus. All other things being equal, therefore, the Regulation S offering discount will be larger for offerings where foreign investors expect the market to adjust for the Regulation S offering prior to resales.  

Figure 1 provides a graphic breakdown of the discounts that foreign investors will negotiate under situations (a) and (b).
To test whether foreign investors are able to resell prior to information disclosure of the Regulation S offering in the U.S. market, this Article makes use of Securities and Exchange Commission ("SEC") reforms in 1996 that greatly increased the amount of information on a Regulation S offering available to the U.S. investing public prior to the commencement of resales into the United States. After November 18, 1996, the SEC required issuers to reveal all equity-related Regulation S offerings under Item 9 of Form 8-K within fifteen days of the offering (the “post-reporting reform” period). In such situations, the secondary market will react to the disclosure of the Regulation S discount prior to the commencement of resales after the forty-day restricted period.

On the other hand, where immediate short sales may occur of a Regulation S issuer’s securities into the United States both prior to and after the reporting reforms, one would expect no change in the offering discount, all other things being equal between the two time periods. For a discussion of this point see infra text accompanying note 102.
the offering discount *increased* after the reporting reforms, all other things being equal.

Using this Article’s sample of Regulation S offerings, the Article tests the information effect of Regulation S offerings. Part A provides a description of the Regulation S data set. Part B reports the empirical tests. First, the article tests the hypothesis that the market reacts negatively to a Regulation S offering. Second, the Article examines the driving factors behind the markets’ assessment of a Regulation S offering. Finally, the Article tests whether, prior to the SEC’s 1996 reporting reforms, issuers use Regulation S to sell overvalued securities through foreign intermediaries to U.S.-based investors.

**A. Description of the Regulation S Data Set**

This Article’s data set of Regulation S offerings spans the period from January 1, 1993 to December 31, 1997. Individual offerings are identified through examination of Securities Exchange Act of 1934 (the “Exchange Act”) reporting filing forms 10-K, 10-Q, and 8-K on LEXIS and Westlaw as well as the SEC’s own Internet version of the EDGAR databases. The PR-Newswire and Wall Street Journal databases on Westlaw were also searched for press releases and news articles useful in identifying Regulation S offerings during the sample period.

Compared with the entire pool of Regulation S offerings, the data set contains two major limitations. First, the procedure used to identify the Regulation S offerings focuses only on Exchange Act reporting companies. Second, the procedure used to identify the Regulation S offerings focuses only on Exchange Act reporting companies.

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As a result, the Article’s empirical findings may not apply to smaller, non-
Exchange Act reporting companies, including issuers that are not listed on a
national securities exchange and that fail to meet the SEC’s minimum net
asset and number of shareholders requirements for Exchange Act reporting
status.

Second, this Article may miss a disproportionately large number of
Regulation S offerings during the period before the 1996 reporting reforms.
Prior to the SEC’s reporting reforms, issuers disclosed information on the
offering in one of their SEC filings or financial statements only to the extent
the offerings were "material" to the understanding of some other required
information disclosure item. For example, some issuers disclosed
information on their Regulation S offerings in their required discussion on
capital resources under Item 7 of the annual Form 10-K filing. Regulation S
offerings prior to November 1996 therefore comprise only a subset of the
total universe of Regulation S offerings. This subset, moreover, may be
biased toward offerings where the issuer believed that disclosure of the
offering outweighed any negative effects from disclosure. Nevertheless, due
to the materiality requirement for SEC filings, the search uncovered the
majority of larger size offerings.

The number of Regulation S offerings in the data sample is reported in
Table 1 both for the entire sample and for the subset of the sample not related
to a Rule 144A offering. Rule 144A offerings differ from stand-alone
Regulation S offering in a number of important ways. Technically only a
resale exemption, Rule 144A provides purchasers of a Regulation S offering
the ability to resell purchased securities quickly to qualified institutional
buyers ("QIBs") comprised mostly of large financial institutions. The

§ 78O(d) (1994).
50. Exchange Act reporting companies must file Form 10-K with the SEC annually. Item 7 of
Form 10-K requires the disclosure of information described in Item 303 of Regulation S-K. See Item 7,
Form 10-K (Management’s Discussion and Analysis of Financial Condition and Results of Operation);
Securities Act Regulation S-K Item 303, 17 C.F.R. § 229.303 (1999). Issuers may also voluntarily
disclose their Regulation S offerings under Item 5 of Form 8-K to the extent the offering was
51. Rule 144A(a)(1) of the Securities Act defines a Qualified Institutional Buyer as an
institutional entity that “in the aggregate owns and invests on a discretionary basis at least $100
million in securities of issuers that are not affiliated with the entity . . . .” Securities Act Rule
144A(a)(1)(i), 17 C.F.R. § 230.144A(a)(1)(i) (1999). Dealers registered pursuant to Section 15 of the
Exchange Act must meet only a $10 million requirement. See Securities Act Rule 144A(a)(1)(ii), 17
C.F.R. § 230.144A(a)(1)(ii) (1999). For the securities of non-Exchange Act reporting issuers, the
purchaser has the right to demand certain specified information at its discretion. Securities Act Rule
144A(d)(4), 17 C.F.R. § 230.144A(d)(4) (1999). Finally, Rule 144A prohibits securities sold under its
provisions from consisting of the same class of any security of the issuer listed on a U.S. securities
exchange or traded on an automated U.S. interdealer quotation system, such as NASDAQ (the “non-
prospect of a liquid aftermarket may result in a reduced discount for Rule 144A-related Regulation S offerings. Many of the Rule 144A offerings also involve simultaneous placements inside the United States and therefore offer more regulatory protection for investors than purely overseas Regulation S offerings.

Table 1: Number of Regulation S Offerings Over Sample Time Period

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Offerings</th>
<th>Mean Offering Amount (millions)</th>
<th>Median Offering Amount (millions)</th>
<th>Market Capitalization (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>30</td>
<td>195.0</td>
<td>16.9</td>
<td>1147.8</td>
</tr>
<tr>
<td>1994</td>
<td>88</td>
<td>15.2</td>
<td>2.3</td>
<td>204.8</td>
</tr>
<tr>
<td>1995</td>
<td>120</td>
<td>18.4</td>
<td>2.6</td>
<td>480.2</td>
</tr>
<tr>
<td>1996</td>
<td>249</td>
<td>28.4</td>
<td>2.2</td>
<td>218.1</td>
</tr>
<tr>
<td>1997</td>
<td>214</td>
<td>43.3</td>
<td>2.0</td>
<td>400.0</td>
</tr>
<tr>
<td>Total</td>
<td>701</td>
<td>36.6</td>
<td>2.3</td>
<td>356.1</td>
</tr>
</tbody>
</table>

fungibility” requirement). Securities convertible into a security that does trade on NASDAQ or a national securities exchange are nevertheless considered in compliance with the non-fungibility requirement to the extent a premium on conversion of at least 10% is applied. See Securities Act Rule 144A(d)(3)(i), 17 C.F.R. § 230.144A(d)(3)(I) (1999).

52. The PORTAL market provides QIBs a forum to execute and settle transactions in non-registered securities pursuant to Rule 144A. For a particular issuer’s securities to trade in the PORTAL market, the National Association of Securities Dealers must first grant their approval. See Hal S. Scott and Philip A. Wellington, International Finance: Transactions, Policy, and Regulation 83-84 (4th ed. 1997) (describing the PORTAL market). Due in part to the PORTAL market, the quantity of resales taking advantage of Rule 144A has grown dramatically. From eight placements totaling $916.0 million in 1990, the use of Rule 144A grew to 243 placements totaling $44.672 billion in 1993. See Staff Report on Rule 144A [1994-1995 Decisions] Fed. Sec. L. Rep. (CCH) ¶ 85,428 (Aug. 18, 1994).

In addition, Rule 144A offerings may result in an offering premium to satisfy the non-fungibility requirement for a Rule 144A resale. See supra note 51 (describing the non-fungibility requirement of Rule 144A). See also Alan L. Beller, Memorandum from Cravath, Swaine & Moore Regarding Sales of Convertible Securities of U.S. Reporting Companies Under Regulation S (August 24, 1998) RE: Sales of Convertible Securities of U.S. Reporting Companies Under Regulation S, 1085 PLI/Corp. 177, 179 (1998) (noting that the average conversion premium for Rule 144A offerings that include a tranche of securities issued under Regulation S was “well above the 10% threshold required under Rule 144A”).
Number of Non-Rule 144A Regulation S Offerings

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Offerings</th>
<th>Mean Offering Amount (millions)</th>
<th>Median Offering Amount (millions)</th>
<th>Market Capitalization (millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1993</td>
<td>21</td>
<td>104.9</td>
<td>7.0</td>
<td>174.1</td>
</tr>
<tr>
<td>1994</td>
<td>82</td>
<td>7.3</td>
<td>2.0</td>
<td>65.6</td>
</tr>
<tr>
<td>1995</td>
<td>109</td>
<td>6.1</td>
<td>2.2</td>
<td>326.4</td>
</tr>
<tr>
<td>1996</td>
<td>216</td>
<td>5.5</td>
<td>1.5</td>
<td>70.5</td>
</tr>
<tr>
<td>1997</td>
<td>174</td>
<td>7.7</td>
<td>1.5</td>
<td>101.4</td>
</tr>
<tr>
<td>Total</td>
<td>602</td>
<td>9.3</td>
<td>1.8</td>
<td>128.7</td>
</tr>
</tbody>
</table>

Offerings of five different types of securities that are treated as equity under Regulation S are tracked: (1) common stock, (2) non-convertible preferred stock, (3) convertible preferred stock, (4) convertible debt securities, and (5) other types of equity-related securities (including warrants). The breakdown of the different securities offerings is presented below in Table 2.

53. The original Regulation S did not provide a formal definition of “equity” security. In application, debt securities that provided for conversion into an equity security within the one-year restricted period for debt securities were considered as equity. Debt securities that provided for conversion only after the one-year restricted period for debt were not considered equity. See Lander, supra note 1, at 372–74. The conversion time period for all convertible debt securities in this Article's data set were examined to ensure that the conversion period occurred prior to the end of the one-year restricted period.

Note that the SEC’s 1998 reforms broadened the definition of “equity” securities to include all securities convertible into “stock, warrants, options, rights to purchase stock, and other types of equity-related securities.” 1998 Amending Release, supra note 9, at *4. Rule 902(a) states that a “debt security” means any security other than an equity security defined in Rule 405 of the Securities Act. Securities Act Rule 902(a), 17 C.F.R. § 230.902(a) (1999). Rule 405, in turn, defines an equity security to mean:

any stock or similar security . . . or any security convertible, with or without consideration into such security, or carrying any warrant or right to subscribe to or purchase such a security; or any such warrant or right; or any put, call, straddle, or other option or privilege of buying such security from or selling such a security to another without being bound to do so.

Table 2: Breakdown of Regulation S Offerings by Security Type

<table>
<thead>
<tr>
<th>Security</th>
<th>Number of Total Reg S Offerings</th>
<th>Percent of Total Reg S Offerings</th>
<th>Mean Offering Amount ($ millions)</th>
<th>Median Offering Amount ($ millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common</td>
<td>378</td>
<td>53.9%</td>
<td>7.18</td>
<td>1.50</td>
</tr>
<tr>
<td>Preferred Non-Convertible</td>
<td>4</td>
<td>0.6</td>
<td>6.13</td>
<td>7.50</td>
</tr>
<tr>
<td>Preferred Convertible</td>
<td>102</td>
<td>14.6</td>
<td>60.96</td>
<td>4.19</td>
</tr>
<tr>
<td>Debt Convertible</td>
<td>209</td>
<td>29.8</td>
<td>69.50</td>
<td>5.38</td>
</tr>
<tr>
<td>Other</td>
<td>8</td>
<td>1.1</td>
<td>52.93</td>
<td>35.49</td>
</tr>
<tr>
<td>Total</td>
<td>701</td>
<td>100.0</td>
<td>36.43</td>
<td>2.28</td>
</tr>
</tbody>
</table>

Note that the majority of offerings were for common stock. Common stock offerings tended to be for a smaller offering amount, however, with a mean of $7.18 million.

B. Empirical Tests of the Information Effect from a Regulation S Offering

To test the informational impact of a Regulation S offering, the Article examines the U.S. secondary market reaction to an offering using event study methodology developed in the finance economics literature. To the extent the secondary securities market for a particular company is efficient, new information on the company will become incorporated rapidly and accurately into the stock market price. The time window for the Article’s event study is taken from the starting date of the offering date to both six weeks and eight weeks after the start of the offering. The end date of the time window roughly corresponds with the forty-day restricted period relevant for offerings during the Article’s sample.


55. This Article’s data sample restriction to only Exchange Act reporting companies provides support for the efficient market assumption. But see supra note 41 (reporting empirical data on the analyst following of Exchange Act reporting companies).

The time window is constructed to coincide with the end of restricted period because prior to the 1996 SEC reporting reforms, issuers were not required specifically to disclose information on the offering.\(^{58}\) Investors, therefore, may learn of the offering only through the commencement of resales into the United States after the restricted period.\(^{59}\) Conversely, for post-reporting reform offerings, the Article’s event windows may be larger than necessary.\(^{60}\) In particular, the expanded event windows may be biased against finding a significant abnormal market reaction.\(^{61}\) To the extent the Article does find a market reaction that is substantial, therefore, the results are more significant. To assess the impact of pre-offering disclosures, alternate time windows from two weeks prior to the offering again to both six weeks and eight weeks post-offering are used in the event study.

Using daily secondary market returns from the Center for Research on Security Prices (“CRSP”),\(^{62}\) the Article then calculates the daily return for each Regulation S issuer over the event time windows. To assess the impact of new information on the daily return, the paper adjusts the return to remove the normal expected return. Expected returns are calculated using the market

\(^{57}\) Prior to the SEC’s 1998 reforms, U.S. Exchange Act reporting issuers that sought to sell equity abroad through Regulation S faced a 40-day restricted period. See Original Regulation S, Securities Act Rule 903(c)(2)(iii) (repealed 1998). Domestic U.S. issuers seeking to sell equity securities through Regulation S now face a one-year distribution compliance period. See supra note 13 (describing the distribution compliance period requirements). Because the forty-day restricted period is measured from the close of the offering, see Original Regulation S, Rule 902(m), Securities Act, resales may commence even after six weeks from the start of the offering depending on the duration of the offering. The eight-week event period is employed in the event study to assess the information effects for offerings that may last longer than several days.

\(^{58}\) See supra text accompanying notes 49-50 (discussing materiality and other requirements that may have led issuers to disclose their Regulation S offering despite no specific disclosure mandate).

\(^{59}\) See Securities Act Rule 903, 17 C.F.R. § 230.903. Indeed, foreign investors have, in the past, sold into the United States prior to the expiration of the 40-day waiting period. In 1996, for example, the National Association of Securities Dealers Regulation Inc. fined Alex, Brown & Son for assisting resales into the U.S. before the end of the 40-day period. See National Association of Securities Dealers Inc.: Alex, Brown, Rep Agree to Fines over Sale of Regulation S Securities, 28 S.E.C. REG. & L. REP. 1217 (1996).

\(^{60}\) For example, XSSYS Technologies Inc. conducted a $2 million common stock Regulation S offering on March 18, 1997 but did not file a Form S-K reporting on the offering until May 16, 1997, almost two months after the offering.

\(^{61}\) Expanding the event window to time periods during which no significant information is released to the market will, on average, not change the cumulative excess return. On the other hand, the standard error will increase, leading to a lower likelihood that the cumulative excess return will be statistically significant.

\(^{62}\) The Center for Research in Security Prices is based at the University of Chicago Graduate School of Business. See <http://gsb-www.uchicago.edu/research/crsp/index.html> (visited Apr. 15, 2000).
model. Subtracting the expected return from the actual daily return gives the daily excess return. The daily excess return then represents a measure of the impact of new information on the secondary market price of the issuer for a particular day. Daily excess returns are then summed across time in each event window, generating the cumulated excess return (“CER”). Table 3 reports the mean cumulative excess returns for the selected event windows and their statistical significance.

Table 3: Cumulative Excess Returns from Event Study (All Reg S Offerings)

<table>
<thead>
<tr>
<th>Time Window</th>
<th>Observations</th>
<th>Cumulative Excess Returns</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>+0 to +6 Weeks</td>
<td>382</td>
<td>-3.99%</td>
<td>-3.177**</td>
</tr>
<tr>
<td>+0 to +8 Weeks</td>
<td>381</td>
<td>-5.36%</td>
<td>-3.672**</td>
</tr>
<tr>
<td>-2 to +6 Weeks</td>
<td>379</td>
<td>-4.51%</td>
<td>-3.628**</td>
</tr>
<tr>
<td>-2 to +8 Weeks</td>
<td>377</td>
<td>-6.00%</td>
<td>-4.021**</td>
</tr>
</tbody>
</table>

** 5% confidence level. * 10% confidence level.

Cumulative Excess Returns from Event Study (Excluding Rule 144A Offerings)

<table>
<thead>
<tr>
<th>Time Window</th>
<th>Observations</th>
<th>Cumulative Excess Returns</th>
<th>t-statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>+0 to +6 Weeks</td>
<td>300</td>
<td>-3.83%</td>
<td>-2.311**</td>
</tr>
<tr>
<td>+0 to +8 Weeks</td>
<td>299</td>
<td>-5.11%</td>
<td>-2.668**</td>
</tr>
<tr>
<td>-2 to +6 Weeks</td>
<td>298</td>
<td>-3.82%</td>
<td>-2.221**</td>
</tr>
<tr>
<td>-2 to +8 Weeks</td>
<td>296</td>
<td>-5.27%</td>
<td>-2.549**</td>
</tr>
</tbody>
</table>

** 5% confidence level. * 10% confidence level.

63. The market model treats the return for any security as a function of the total market return. For security \(i\), for example, the expected return for time period \(t\) \((R_{it})\) is:

\[ R_{it} = \alpha + \beta_t R_{mt} + \epsilon_{it} \]

where \(R_{mt}\) is the market return and \(\epsilon_{it}\) is the zero mean disturbance term. See Campbell et al., supra note 54, at 155 (describing the market model). A value-weighted return based on all the securities trading on the exchange in which the issuer’s securities are listed is used for the market return. The value-weighted return for all NASDAQ securities is used for securities trading on NASDAQ. For each security, returns from 260 trading days to 10 trading days prior to the start of the offering are used to estimate the parameters of the market model.
Note from Table 3 that after a Regulation S offering, issuers receive a significantly negative cumulative excess return. In particular, for all Regulation S offerings, the cumulative excess return is -3.99% for the +0 to +6 week event window; similarly, for the +0 to +8 week event window, the cumulative excess return is -5.36%. For the sample of Regulation S offerings excluding Rule 144A-related transactions, the secondary market reacts similarly. The cumulative excess return is -3.83% for the +0 to +6 week event window; for the +0 to +8 week event window, the cumulative excess return is -5.11%. All the CERs reported in Table 3 are significant at the 5% confidence level. The evidence from the event study is consistent with the hypothesis that news of a Regulation S offering results in a negative reaction on average in the U.S. securities markets. On the one hand, U.S. investors that purchase a particular Regulation S issuer’s securities prior to disclosure are harmed, as the information about the offering results in a negative return. On the other hand, U.S. investors that sell prior to information disclosure are correspondingly benefited. The harm from the information signal due to a Regulation S offering, therefore, is no different than the harm from any other form of negative information disclosure. Only where foreign investors are able to sell prior to release of the Regulation S offering news into the market are U.S. investors as a group systematically harmed from the secondary market’s pre-offering overvaluation of the issuer’s securities.

To test the factors driving the market reaction to a Regulation S offering, this Article estimates a multivariate ordinary least-squares model using the eight-week cumulative excess return as the dependent variable. Five sets of independent variables are included in the model. First, the model includes independent variables related to the informational disadvantage at which outside investors may find themselves relative to management. The lower the informational disadvantage, the less likely the offering will provide a signal that the market has overvalued the issuer’s securities. The model uses the natural log of the market capitalization of the issuer as a proxy for the informational disadvantage that outside investors face. Analysts are more likely to follow companies with a greater market capitalization, reducing the informational disadvantage against outside investors. Greater market capitalization, therefore, should lead to a reduced negative market reaction to the offering, all other things being equal.

64. Test statistics for significance based on the Student-t distribution are calculated using the method described in Brown and Warner, supra note 54, at 28-29.

65. The natural log transformation is used to generate a more normally distributed independent variable for the market capitalization of the issuer.
Second, the model includes the natural log of the offering amount to market capitalization ratio. The larger the offering amount, the greater the signal sent to that market that management believes the company’s stock is overvalued. All other things being equal, the gain from the sale of overvalued securities into the market is larger the more securities that are sold into the market. Managers, therefore, will tend to make larger offerings when they believe the company’s securities are overvalued. Moreover, the size of the offering relative to the issuer’s total market capitalization is important. The market will interpret an attempt to make an offering of $1 million where the issuer has a market capitalization of $1 million as a stronger signal of overvaluation than an offering of $1 million where the market capitalization is $100 million.

Third, the model includes independent variables relating to the incentives of managers. In particular, managers may exploit the offering for their own purposes. Some managers may engage in self-dealing by selling securities to themselves at greatly discounted prices at the expense of shareholders. The U.S. market may react negatively to insider self-dealing for two reasons: first, the shares of non-insider investors are diluted in value and second, the self-dealing sends a signal that managers may be more likely to engage in subsequent self-dealing activities. The fraction of the board composed of corporate officers and the fraction of shares beneficially owned by officers and directors are included in the model to control for the possibility of insider self-dealing. The greater the fraction of officers on the board of directors, the more likely managers may use the offering for their own purposes. In contrast, the greater the fraction of shares beneficially owned by officers and directors the less likely that managers will conduct an offering that dilutes their share value. Nevertheless, at lower levels of officer and director share ownership, an incremental increase in ownership may help to entrench management, leading to an increased willingness for managers to act

66. The natural log transformation is used to generate a more normally distributed independent variable for the offering amount to market capitalization ratio.

67. For example, in 1997, Cheniere Energy, Inc. sold securities through Regulation S to an overseas investor using Investors Administration Services, Ltd. as its placement agent. One of the principals of the placement agent was the brother of the Chairman of Cheniere Energy. See Cheniere Energy, Inc., Form 8-K (Aug. 27, 1997), available in EDGAR, SEC Archives, datafile. Managers may also make suboptimal use of the offering proceeds, increasing the managers’ own welfare at the expense of all the issuer’s shareholders. See supra notes 22-23 and accompanying text.

68. The composition of each Regulation S issuer’s board of directors was obtained through examination of the issuer’s proxy filing with the SEC for the year of the offering.

69. The beneficial ownership of common shares for the group of all directors and officers, as reported in the Regulation S issuer’s SEC proxy filing for the year of the offering, is used as a measure of the share ownership of directors and officers.
opportunistically in a Regulation S offering. To control for this possible nonlinearity, the model includes a squared term for the beneficial share ownership of directors and officers. The model also includes a dummy variable for purchasers that obtain a board seat as part of the offering. Where a purchaser obtains a board seat, the purchaser may provide greater monitoring services of management for the benefit of all shareholders, resulting in a more positive market reaction.

Fourth, the model controls for the offering’s stated use of proceeds, because investors may value an offering differently depending on how the issuer plans to use the proceeds. For example, the market may react differently to an issuer planning to expand into new markets than to an issuer that simply states the proceeds will be used to repay debt. The use of proceeds for each offering is identified through examination of press releases and SEC filing information on the offerings. In cases where multiple uses of proceeds were cited, the first stated use is recorded as the main use of proceeds. Where no use of proceeds is mentioned, the offering is assigned to the “general corporate purposes” use of proceeds category. Dummy variables for whether proceeds will be used for working capital, product development, capital expenditure, business expansion, balance sheet strengthening, or the repayment of debts are added to the model to compare against the baseline general corporate purposes use of proceeds.

Table: Use of Proceeds Breakdown for the Regulation S Offerings

<table>
<thead>
<tr>
<th>Use of Proceeds</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Capital</td>
<td>34</td>
<td>19.4%</td>
</tr>
<tr>
<td>Product Development</td>
<td>25</td>
<td>14.3%</td>
</tr>
<tr>
<td>Debt Repayment</td>
<td>29</td>
<td>16.6%</td>
</tr>
<tr>
<td>Build Facilities</td>
<td>10</td>
<td>5.7%</td>
</tr>
<tr>
<td>Acquisition</td>
<td>24</td>
<td>13.7%</td>
</tr>
<tr>
<td>Business Expansion</td>
<td>21</td>
<td>12.0%</td>
</tr>
<tr>
<td>Balance Sheet</td>
<td>17</td>
<td>9.7%</td>
</tr>
<tr>
<td>General Corporate Purposes</td>
<td>15</td>
<td>8.6%</td>
</tr>
<tr>
<td>Total</td>
<td>175</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

70. In this Article’s sample of Regulation S offerings, 21 offerings stated business expansion as the first use of proceeds and 29 offerings stated debt repayment as the first use of proceeds. See infra table, note 72.

71. In addition, 15 Regulation S offerings explicitly stated a “general corporate purposes” use of proceeds.

72. The table below provides a breakdown of the Regulation S offerings by the use of proceeds. Where more than one use of proceeds is cited in the Regulation S disclosure, the first stated use of proceeds is taken as the use of proceeds for the offering. Note the frequency for the “General Corporate Purposes” category includes only those offerings that explicitly stated a “General Corporate Purposes” use of proceeds. The baseline “General Corporate Purposes” category used in the article’s CER model includes both offerings that explicitly state the “General Corporate Purposes” use of proceeds as well as offerings that state no explicit use of proceeds.

https://openscholarship.wustl.edu/law_lawreview/vol78/iss2/8
Similarly, the greater the number of international contacts the issuer has, the less suspect will be the issuer’s motive in making an international securities offerings. Contacts overseas may take the form of factories or other productive enterprises abroad or overseas export markets to which the company sells. To capture this possibility, the model includes the number of countries in which the firm either conducted operations or sold products and services. For each Regulation S issuer, the number of countries in which the firm either conducted operations or sold products and services was collected through examination of each firm’s SEC 10-K filing in the offering year.73

Finally, the model includes a set of controls for the type of offering. A dummy variable for whether the offered security is common stock is added to the model to control for the possibility that the market reacts differently to changes in the outstanding capital stock of the issuer that involve common stock as opposed to preferred stock or convertible debt securities. Similarly, a dummy variable for whether the offering is a Rule 144A-related Regulation S offering is used in the model. Rule 144A offerings typically involve larger market capitalization issuers selling significant amounts of securities to institutional investors.74 Consequently, the U.S. secondary market may interpret a Rule 144A offering differently.75

Table 5 reports the results from the model for the entire set of Regulation S offerings. Because the market receives more timely information on Regulation S offering after the SEC’s reporting reforms, the market reaction to news of a Regulation S offering may differ for offerings made after reporting reform. Table 5 therefore also reports the model estimated only for Regulation S offerings that occurred after the SEC reporting reforms took effect in November 1996.

73. This Article calculates the number of world contacts as follows: for each specific country mentioned in the Form 10-K filing, the number of world contacts is increased by 1. Where the issuer’s Form 10-K only mentions a particular continent, the average number of contacts other issuers in the Article’s sample had in the particular continent, conditional on the issuers’ having at least one contact, is used as the number of contacts for that continent. For example, in the entire sample, companies that listed at least one country in Europe on average listed 5 European countries. Issuers that listed Europe, therefore, have their number of world contacts increased by 5.

74. See supra notes 51-52 and accompanying text (describing the requirements of a Rule 144A offering).

75. For example, the high market capitalization and the presence of reputable institutional investors in Rule 144A offerings may lead the market to view the offering as one providing a decreased risk of overvalued resales into the United States.
Table 5: OLS Model of 8-Week Cumulative Excess Return

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>All Regulation S Offerings</th>
<th>Post SEC-Reporting Reform Offerings Only</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Log of Market Capitalization</td>
<td>0.006</td>
<td>-0.002</td>
</tr>
<tr>
<td></td>
<td>(0.326)</td>
<td>(-0.062)</td>
</tr>
<tr>
<td>Natural Log of the Offering Amount to Market Capitalization Ratio</td>
<td>-0.043**</td>
<td>-0.095**</td>
</tr>
<tr>
<td></td>
<td>(-2.403)</td>
<td>(-3.135)</td>
</tr>
<tr>
<td>Dummy Variable for Common Stock</td>
<td>0.040</td>
<td>0.066</td>
</tr>
<tr>
<td></td>
<td>(0.897)</td>
<td>(0.883)</td>
</tr>
<tr>
<td>Dummy Variable for 144A Offering</td>
<td>0.055</td>
<td>0.116</td>
</tr>
<tr>
<td></td>
<td>(0.757)</td>
<td>(0.870)</td>
</tr>
<tr>
<td>Fraction of Board Comprised of Officers</td>
<td>-0.065</td>
<td>0.140</td>
</tr>
<tr>
<td></td>
<td>(-0.574)</td>
<td>(0.683)</td>
</tr>
<tr>
<td>Fraction of Common Stock owned by Directors and Officers (MDHOLD)</td>
<td>-0.168</td>
<td>-0.202</td>
</tr>
<tr>
<td></td>
<td>(-0.537)</td>
<td>(-0.378)</td>
</tr>
<tr>
<td>MDHOLD^2</td>
<td>0.113</td>
<td>0.071</td>
</tr>
<tr>
<td></td>
<td>(0.248)</td>
<td>(0.099)</td>
</tr>
<tr>
<td>Dummy Variable for New Board Seat</td>
<td>0.335**</td>
<td>0.574**</td>
</tr>
<tr>
<td></td>
<td>(2.207)</td>
<td>(2.694)</td>
</tr>
<tr>
<td>Number of World Contacts</td>
<td>-0.006*</td>
<td>-0.005</td>
</tr>
<tr>
<td></td>
<td>(-1.906)</td>
<td>(-0.912)</td>
</tr>
<tr>
<td>Dummy Variable for General Corporate Purposes</td>
<td>Base</td>
<td>Base</td>
</tr>
<tr>
<td>Dummy Variable for Working Capital</td>
<td>-0.014</td>
<td>-0.083</td>
</tr>
<tr>
<td></td>
<td>(-0.150)</td>
<td>(-0.671)</td>
</tr>
<tr>
<td>Dummy Variable for Product Development</td>
<td>0.226**</td>
<td>-0.013</td>
</tr>
<tr>
<td></td>
<td>(2.915)</td>
<td>(-0.069)</td>
</tr>
<tr>
<td>Dummy Variable for Capital Expenditures</td>
<td>0.094</td>
<td>0.105</td>
</tr>
<tr>
<td></td>
<td>(0.825)</td>
<td>(0.698)</td>
</tr>
<tr>
<td>Dummy Variable for Business Expansion</td>
<td>0.122</td>
<td>0.266</td>
</tr>
<tr>
<td></td>
<td>(1.197)</td>
<td>(1.328)</td>
</tr>
<tr>
<td>Dummy Variable for Acquisition</td>
<td>-0.037</td>
<td>0.068</td>
</tr>
<tr>
<td></td>
<td>(-0.426)</td>
<td>(0.572)</td>
</tr>
</tbody>
</table>
From Table 5 note three points. First, the coefficient on the natural log of the offering amount to market capitalization ratio is negative and significant at the 5% confidence level for both the entire sample of offerings and the post-SEC reporting reform offerings. The more securities that managers attempt to sell into the market, the greater the negative reaction in the market. This may indicate that the stock market price of an issuer responds negatively to a signal that managers believe the issuer’s common stock is overvalued. Nevertheless, the evidence is also consistent with the possibility that the negative market reaction is the result of price pressure from the increased volume of securities arising from resales of the Regulation S securities into the United States.  

Second, offerings in which the purchaser obtains a board seat result in a more positive reaction to the offering. The coefficient on the dummy variable for the purchase of a board seat is positive in both models (significant at the 5% level for all Regulation S offerings and the post-SEC reporting reform offerings). Where a clear purpose exists for the Regulation S offering, as indicated through the attainment of a board seat by the purchaser, there is less likelihood that the offering is conducted solely because managers believe the company’s stock is overvalued. The purchase of a board seat by the foreign investor may signal that the management of the company is committed to the success of the offering.

investor also may indicate increased oversight of management to the benefit of shareholders generally. Therefore, the market reacts more positively to such offerings.

Third, weak evidence exists that the market reaction varies depending on the issuer’s stated use of proceeds. For the sample of all Regulation S offerings, the coefficient on the dummy variable for product development use of proceeds was positive and significant at the 5% level (although negative and insignificant for offerings after the 1996 reporting reform). Likewise, the dummy variable for business expansion use of proceeds is positive (insignificant, however, for all Regulation S offerings; significant at only the 20% level for post-SEC reporting reform offerings). Both working capital and debt repayment, on the other hand, correlate with a more negative market reaction relative to general corporate purposes; neither dummy variable, however, is statistically insignificant.

C. Tests of the Overvaluation Resale Hypothesis

The market’s negative reaction to Regulation S offerings is consistent with both the hypothesis that managers are able to use foreign investors to distribute securities at overvalued prices to unsuspecting U.S. investors (the “overvaluation resale hypothesis”) and the competing hypothesis that managers are unable to take advantage of overvaluation through Regulation S because the market reacts too quickly to news of the Regulation S offering. This section examines the relationship between the expected market reaction to a Regulation S offering with the offering discount to test directly the overvaluation resale hypothesis.

In a recent empirical study, Professors Aggarwal, Gray, and Singer also provided a test of the ability of issuers to use Regulation S to sell overvalued securities indirectly to U.S. investors. Using a sample of 192 Regulation S offerings from the pre-reporting reform period, they reported that offerings in their data sample consisted of primarily smaller market capitalization firms. Foreign investors of Regulation S offerings from their sample also received large discounts. Testing whether issuers were “gaming the system” through

77. See supra 41-42 (discussing how the U.S. market may learn of a Regulation S offering even without any disclosure from the issuer).
79. See id. Aggarwal, Gray, and Singer report that during the period before the SEC reporting reform, the median market capitalization of reporting firms was $16.82 million. Id. at 1188.
80. Aggarwal, Gray, and Singer report that the mean discount was 32.84% during the pre-SEC reporting reform period and 21.67% in the post-reporting reform period. Id. at 1189.
sales of discounted securities to foreign investors timed to enable the foreign investors to resell into the United States prior to information disclosure on the offering. Aggarwal, Gray, and Singer provided evidence that a significant fraction of offerings were sold to foreign investors with enough lead time before the next Form 10-Q filing to give the investors the ability to resell into the United States prior to the secondary market reaction to news of the offering.\footnote{81} The authors reported that offerings that in fact granted investors the ability to resell ahead of the secondary market reaction were sold at a greater discount to the foreign investors.\footnote{82}

The findings from the Aggarwal, Gray, and Singer study, however, are vulnerable to several criticisms. First, the greater discount they report for offerings that provide investors the ability to resell ahead of the secondary market reaction to news of the offering is not statistically significant.\footnote{83} Moreover, as discussed above, foreign investors will negotiate for a greater discount precisely when they are unable to sell prior to the secondary market reaction.\footnote{84} Second, Aggarwal, Gray, and Singer’s data sample of 192 offerings from the pre SEC-reporting reform time period may miss many Regulation S offerings and thus contain sample bias. In particular, the authors searched only Form 10-Q filings in constructing their sample.\footnote{85} Issuers, however, may disclose a Regulation S offering through press releases and other forms of SEC filings, including Form 10-K filings.\footnote{86}

\footnote{81. \textit{See id.} at 1191.}
\footnote{82. \textit{See id.} (reporting that offerings sold with the “option” to resell into the United States prior to the next scheduled Form 10-Q disclosure had a mean discount of 35.77\% in comparison to the mean discount of 20.00\% at which offerings without such an option were sold).}
\footnote{83. \textit{See id.}}
\footnote{84. \textit{See supra} Part II (discussing the relationship between the offering discount and the expected market reaction to news of the Regulation S offering). Aggarwal, Gray, & Singer do not recognize the possibility that part of the offering discount may be due to compensation to foreign investors for an inability to resell into the United States prior to the secondary market reaction to news of the Regulation S offering. Instead, they write simply: “The substantial discounts imply large losses for existing U.S. investors who may not even have been aware of these offerings before the rule change and this has also been a cause for concern.” Aggarwal et al., \textit{supra} note 78, at 1188.}
\footnote{85. \textit{See Aggarwal et al., supra note 78, at 1186-87.}}
\footnote{86. Aggarwal, Gray & Singer also conduct an event study around information disclosure of a Regulation S offering and find no statistically significant cumulative excess market return. \textit{See Aggarwal et al., supra} note 78, at 1192-93. They, however, focus on only the filing date of the Form 10-Q immediately after the Regulation S offering. \textit{See id.} As discussed above, \textit{see supra} text accompanying note 82, using the Form-Q filing date is unreliable because information on the offering may reach the market prior to the filing date. In the alternative, because issuers had no direct compulsion to disclose information on the offering in the Form 10-Q prior to the SEC’s reporting reform, information on the offering may reach the market—through an increase in trading volume, for example—well after the Form 10-Q filing date. This Article’s larger event window, therefore, provides a more accurate representation of the time period in which the market learns of the Regulation S offering. Similarly to this Article’s finding of a negative market reaction for Regulation S offerings,
To test the overvaluation resale hypothesis directly, the Article relies on the following theoretical distinction. As discussed in Part II above, foreign investors that expect to resell after the securities markets have reacted to news of a Regulation S offering will demand an offering discount equal to the expected negative market reaction, all other things being equal. In contrast, where foreign investors expect to resell prior to the market reaction, they do not need compensation for the entire expected negative market reaction. Instead, managers in such situations will attempt to sell to foreign investors at as high a price as possible to provide the corporation with greater proceeds at the expense of U.S. investors that eventually purchase from the foreign investors. Although foreign investors may negotiate for a share of the company’s gain from the overvaluation, the discount they receive will necessarily be less than the discount foreign investors who expect to resell only post-disclosure will obtain.

Now consider the pre- and post-SEC reporting reform periods respectively. Post-SEC reporting reform, because the market learns of the Regulation S offering well before resales may commence, foreign investors will demand compensation for the expected negative market reaction, leading to an increased discount, all other things being equal. Whether the offering discounts received by foreign investors pre- and post-SEC reform are similar in magnitude depends on the validity of the overvaluation resale hypothesis. On the one hand, where foreign investors expect to resell prior to disclosure of the offering to the market, the discount they demand will be lower prior to


In a study of equity private placements into the United States from 1979 to 1985, Professor Wruck, in contrast, finds a positive secondary market reaction to news of an offering. See Karen Hopper Wruck, Equity Ownership Concentration and Firm Value: Evidence from Private Equity Financing, 23 J. FIN. ECON. 3, 8-9 (1989). In particular, where share concentration increases as a result of the offering, the secondary market reaction is even more positive. See id. at 10—23 (arguing that greater share concentration leads to both the increased monitoring of management and a raised probability of an eventual takeover). Professor Wruck theorizes that private equity placements typically involve fewer purchasers able to negotiate with management for access to non-public information to gauge the value of the company. Private placement investors, therefore, face a reduced risk of purchasing overvalued securities; the public secondary market, as a result, assesses a different probability of overvaluation from news of a private placement than for a public offering. See id. at 10.

See supra text accompanying notes 30-36 (discussing the relationship between the offering discount and the expected secondary market reactions to news of the Regulation S offering).

87. See supra text accompanying notes 30-36 (discussing the relationship between the offering discount and the expected secondary market reactions to news of the Regulation S offering).
RESALES OF OFFSHORE SECURITIES INTO THE U.S.

SEC reporting reforms. On the other hand, to the extent the market is expected to learn of a Regulation S offering prior to resales, foreign investors will again demand compensation for the expected negative market reaction even prior to SEC reporting reforms. Table 6 summarizes the Article’s hypotheses and predictions:

Table 6: Summary of the Test of the Overvaluation Resale Hypothesis

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Prediction</th>
</tr>
</thead>
<tbody>
<tr>
<td>No resales prior to information disclosure</td>
<td>Mean Pre-Reform Discount = Mean Post-Reform Discount</td>
</tr>
<tr>
<td>Foreign investors engage in resales prior to information disclosure pre-SEC reporting reform (selling overvalued securities to U.S. investors)</td>
<td>Mean Pre-Reform Discount &lt; Mean Post-Reform Discount</td>
</tr>
</tbody>
</table>

To test whether foreign investors are able to resell prior to disclosure of the Regulation S offering prior to the 1996 reporting reforms, the Article examines the offering discount relative to the U.S. secondary market price for the issuer’s common stock at the start of the offering for offerings made before and after the SEC’s reporting reforms. For securities convertible into the issuer’s common stock, the Article uses the conversion price into equity as the Regulation S offering price. The conversion price is measured at the first possible date of conversion and assumes the secondary market price at the time of conversion equals the secondary market price at the start of the offering date. Table 7 reports the summary of the offering discount data below.

Table 7: Summary of the Regulation S Offering Discount Pre- and Post-SEC Reporting Reform

<table>
<thead>
<tr>
<th>Type of Offering</th>
<th>Observations</th>
<th>Mean Discount</th>
<th>25% Quartile</th>
<th>Median Discount</th>
<th>75% Quartile</th>
<th>(t-test of difference in means p-value = 0.0848*)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Reporting Reform</td>
<td>263</td>
<td>18.81%</td>
<td>39.05%</td>
<td>18.15%</td>
<td>-1.75%</td>
<td></td>
</tr>
<tr>
<td>Post-Reporting Reform</td>
<td>213</td>
<td>13.56%</td>
<td>30.00%</td>
<td>20.00%</td>
<td>-10.00%</td>
<td></td>
</tr>
</tbody>
</table>

89. The initiation of resales into the United States, for example, may alert analysts to the possibility of a Regulation S offering. See supra notes 39–40 and accompanying text discussing how the U.S. market may learn of a Regulation S offering even without any disclosure by the issuer.

90. See supra note 18 (defining offering discount for purposes of this article).
Excluding Rule 144A Offerings

<table>
<thead>
<tr>
<th>Type of Offering</th>
<th>Observations</th>
<th>Mean Discount</th>
<th>25% Quartile</th>
<th>Median Discount</th>
<th>75% Quartile</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Reporting Reform</td>
<td>226</td>
<td>24.97%</td>
<td>41.82%</td>
<td>25.00%</td>
<td>9.00%</td>
</tr>
<tr>
<td>Post-Reporting Reform</td>
<td>174</td>
<td>22.13%</td>
<td>35.00%</td>
<td>25.00%</td>
<td>11.97%</td>
</tr>
</tbody>
</table>

(t-test of difference in means p-value = 0.3539).

Table 7 provides evidence against the overvaluation resale hypothesis. The mean offering discount decreases, rather than increases, in magnitude post-reform. For the entire sample of Regulation S offerings, the discount decreases from a mean of 18.81% to 13.56% (difference significant at the 10% level). The presence of Rule 144A offerings in the sample may skew the mean Regulation S discount. Rule 144A Regulation S offerings of convertible debt securities typically are sold with a conversion right into the issuer’s common stock. The conversion premium, moreover, is usually set at above 10% relative to the U.S. secondary market price for common stock at the time of the offering to meet the non-fungibility requirement of Rule 144A, resulting in a downward bias in the mean discount for the pool of all Regulation S offerings. 91 Table 7 reports, nevertheless, that for the sample of only non-Rule 144A Regulation S offerings, the discount also decreases from 24.97% to 22.13%; moreover, the difference is statistically insignificant. Moreover, the median discount remains the same at 25.00% for the non-Rule 144A offerings. Looking at the difference in the mean offering discount from the pre- to post-reporting reform time period, therefore, provides no evidence that foreign investors were able to engage in pre-disclosure resales at overvalued prices to U.S. investors.

The lack of an increase in the magnitude of the offering discount during the post-SEC reporting reform period, however, may be due to a number of other factors that may reduce the size of the offering discount during the post-reporting reform period. In particular, a shift may have occurred in the types of Regulation S offerings occurring post-reporting reform. Even though a decrease in the ability of issuers to use Regulation S to engage in resales of overvalued securities may lead to an increased discount post-reform, 92 a shift in the pool of offerings may mask the increase with an even greater decrease in the overall offering discount.

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91. See supra note 51 (describing the non-fungibility requirement for Rule 144A resales).
92. See supra Part I (providing a theoretical discussion for the relationship between the offering discount and the expected market reaction to news of a Regulation S offering).
of the offering discount.

This Article therefore provides controls for changes in: (a) the liquidity of the Regulation S securities during the restricted period overseas; (b) the risk foreign investors face that they themselves may misprice the Regulation S securities; and (c) the incentive of managers to act opportunistically through a Regulation S offering.

First, the liquidity of the Regulation S securities sold prior to the SEC reporting reforms may differ from the liquidity of securities sold after the reporting reforms. Some have argued, for example, that the reporting reforms increased the “respectability” of Regulation S offerings, leading to larger market capitalization issuers selling securities. To the extent larger market capitalization issuers have greater international contacts and, as a result, more of their securities trade in liquid markets overseas, one would expect that foreign investors would demand a reduced discount from these issuers. Thus, issuers and foreign investors may have been able to use Regulation S to sell overvalued securities into the United States prior to the reporting reforms. Nevertheless, the discount did not increase after the reporting reforms due to the shift in offerings toward more liquid Regulation S securities.

Second, foreign investors may demand a discount in part to compensate for the mispricing risk they face due to their information disadvantage relative to the issuer’s management. Where foreign investors purchase with a view to hold the securities, for example, they face the risk that the securities are overvalued. Similarly, foreigners purchasing with a view to resell into the United States face a risk of mispricing the degree of overvaluation in the United States, leading to insufficient compensation from the issuer for the expected negative secondary market reaction prior to resale. A difference in the mispricing risk foreign investors bear after the reporting reforms, in turn, may account for a decrease in the discount they demand post-reform. To the extent larger, more well-followed companies tend to issue securities under Regulation S with greater frequency post-SEC reporting reform, investors may demand a lower discount than they would for the lower market capitalization companies more prevalent pre-reporting reforms. As with a possible increase in overseas liquidity, this shift in the risk facing foreign investors may mask any increase in the offering discount post-reporting reforms.

Third, the Regulation S discount may simply be the result of managers engaging in self-dealing, using Regulation S to sell securities at a large

93. See Aggarwal et al., supra note 78, at 1189 (“Conversations with industry officials suggest that larger firms are using the Regulation S market more [post-SEC reporting reform] because it is not seen as ‘shady’ anymore.”).
discount to themselves. Alternatively, the discount may result from the
dilution foreign investors expect from managers using a Regulation S
offering to engage in a suboptimal capital investment designed to improve
the managers’ own private welfare.94 To the extent managerial opportunism
became less prevalent post-reporting reform, due for example to the greater
publicity surrounding Regulation S offerings, one would expect the offering
discount to decrease post-reporting reform and counter any increase due to
the reduction in the ability to conduct overvalued resales into the United
States.

To control for these exogenous shifts in the pool of Regulation S offering
after the SEC’s reporting reforms, his Article constructs a multivariate
ordinary least-squares model with the Regulation S offering discount as the
dependent variable. The ordinary least-squares model of the offering
discount includes several categories of independent variables.

First, the model includes independent variables relating to the liquidity
foreign investors expect after purchasing the offering. Offerings that provide
foreign investors with a high degree of liquidity outside the United States
should receive a reduced discount, all other things being equal. This is
incorporated in the model by including the natural log of the offering amount
to market capitalization ratio. Where only a small fraction of an issuer’s
outstanding capitalization is sold abroad, trading activity will gravitate back
to the United States, where most securities are located. Conversely, the
greater the offering amount sold abroad in relation to the total market
capitalization, the greater is the likelihood of a significant resale market
overseas. In addition, the model includes the number of world contacts as an
independent variable.95 The greater the number of world contacts, the more
likely that a significant number of overseas investors may follow the issuer
leading to the development of a foreign resale market.

Second, the model includes variables to account for the risk to foreign
investors of mispricing Regulation S securities purchased from the issuer
during the Regulation S offering. The natural log of the market capitalization
may correlate with the mispricing risk that foreign investors face. The greater
the market capitalization of the issuer, on average, the larger is the number of
analysts that will follow the company. The more analysts following the
company, the less asymmetric informational advantage managers will
possess over foreign investors, and therefore, the less risk foreign investors
will face. The number of world contacts independent variable also acts as a

94. See supra notes 22-23 and accompanying text.
95. See supra note 73 (describing the Article’s methodology in calculating the number of world
contacts for each Regulation S issuer).
proxy for the overvaluation risk foreign investors face. The greater the number of world contacts, the more likely that the foreign investors will have good information on the issuer.

Third, the model includes variables relating to the incentive of managers to engage in opportunistic self-dealing or suboptimal capital investments. Where managers are engaged in self-dealing through the Regulation S offering, one would expect a greater discount. The fraction of the board of directors composed of insiders and the fraction of outstanding common stock beneficially owned by directors and officers therefore are included in the model. Greater management presence on the board may lead to greater insulation against shareholder action, increasing the incidence of opportunistic Regulation S offerings. In contrast, the greater the fraction of shares in the hands of insiders, the more harm insiders face from any dilution resulting from such opportunistic actions. At lower levels of director and officer share ownership, however, incremental increases in ownership may help entrench management, leading to greater managerial opportunism. To control for this possible nonlinearity, the model includes a squared transformation of the director and officer share ownership variable.

Fourth, the model includes the reaction that foreign investors expect the U.S. secondary market to have to the offering. The more negative the expected market reaction, the greater discount one would expect foreign investors to demand in cases where they expect to resell only after the market reaction. As a proxy for the expected market reaction, this Article uses the actual cumulative excess return in U.S. secondary markets following the offering. Two variations of the model are fitted. The first model uses the six-week cumulative excess return (calculated from +0 to +6 weeks) as an independent variable; the eight-week cumulative excess return (calculated from +0 to +8 weeks) is fitted in the second model. The Appendix discusses and controls for a possible simultaneity bias between the offering discount and the cumulative excess return.

Fifth, the model includes a series of controls for the type of offering. An independent variable for whether the offering is for common stock is added to the model. For securities convertible into common stock, the calculated offering discount may not accurately reflect the offering discount an investor would have negotiated for the issuer’s common stock directly. On one hand, the conversion price does represent the price the foreign investor would have to pay to obtain common shares if they chose to convert. Nevertheless, the foreign investor also enjoys the option not to convert. Because the option not to convert is valuable, for instance, the foreign investor may accept a higher conversion price (resulting in a reduced calculated offering discount) in return for the option not to convert. Similarly, the model includes an
independent variable for whether the offering is part of a Rule 144A placement. Foreign investors that partake in a Rule 144A offering and therefore enjoy the prospect of liquid resales into the PORTAL market through Rule 144A will demand a lower discount.\footnote{See supra note 52 (description of the PORTAL market).}

For convertible securities sold through Rule 144A, the minimum 10\% conversion premium into common stock to meet the non-fungibility requirement will also result in a reduced mean offering discount.\footnote{See supra note 51 (describing the non-fungibility requirement for Rule 144A resales).}

Sixth, the geographical region of the offshore offering may affect the discount. To the extent Europe provides greater regulatory protections and a more liquid capital market, investors may demand a reduced discount, for example. The model therefore includes a series of geographic region dummy variables (with Europe as the base).\footnote{The geographical location of the majority of offshore offerings in the data set, however, is unknown. Moreover, because issuers voluntarily self-report the geographical location of the offering, the sub-sample of offerings where the geographical location is known may not be representative of the entire sample of offerings. Both the 6- and 8-week CER offering discount models are re-estimated with the exclusion of the geographic location variables (6-week model: 288 observations with an 0.434 adjusted R$^2$; 8-week model: 288 observations with a 0.440 adjusted R$^2$). The dummy variable for the Pre-Reporting Reform period is positive in both re-estimated models, consistent with the qualitative results in Table 8 (statistically insignificant in the 6-week CER model and significant at only the 10\% level in the 8-week CER model).}

Finally, to test the impact of the November 1996 reporting reforms on the overall level of the Regulation S offering discount, a dummy variable for whether the offering is made before or after the reporting reforms is included in the model. Table 8 reports the results from the offering discount model fitted for the six-week and the eight-week cumulative excess returns.

**Table 8: OLS Models of the Regulation S Offering Discount**

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>OLS Model of Offering Discount using 6-Week CER</th>
<th>OLS Model of Offering Discount using 8-Week CER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Log of Market Capitalization</td>
<td>-0.027 (0.996)</td>
<td>-0.028 (-1.065)</td>
</tr>
<tr>
<td>Natural Log of the Offering Amount to</td>
<td>-0.027 (-1.110)</td>
<td>-0.026 (-1.104)</td>
</tr>
<tr>
<td>Market Capitalization Ratio</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of World Contacts</td>
<td>-0.004 (-0.853)</td>
<td>-0.005 (-0.996)</td>
</tr>
</tbody>
</table>
### Table 1: Regression Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dummy Variable for Common Stock</td>
<td>0.081</td>
<td>0.076</td>
<td>1.327</td>
</tr>
<tr>
<td>Dummy Variable for 144A Offering</td>
<td>-0.226*</td>
<td>-0.230**</td>
<td>-1.937</td>
</tr>
<tr>
<td>Fraction of Board Comprised of Officers</td>
<td>0.416**</td>
<td>0.400**</td>
<td>2.281</td>
</tr>
<tr>
<td>Fraction of Common Stock owned by Directors</td>
<td>-0.126</td>
<td>-0.111</td>
<td>-0.265</td>
</tr>
<tr>
<td>and Officers (MDHOLD)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MDHOLD^2</td>
<td>0.146</td>
<td>0.151</td>
<td>0.201</td>
</tr>
<tr>
<td>6 Week Cumulative Excess Return</td>
<td>-0.204**</td>
<td></td>
<td>-2.215</td>
</tr>
<tr>
<td>8 Week Cumulative Excess Return</td>
<td>.</td>
<td>-0.214**</td>
<td></td>
</tr>
<tr>
<td>Dummy for Pre-Reporting Reform Period</td>
<td>0.018</td>
<td>0.021</td>
<td>0.318</td>
</tr>
<tr>
<td>Dummy Variable for Europe</td>
<td>Base</td>
<td>Base</td>
<td></td>
</tr>
<tr>
<td>Dummy Variable for Canada</td>
<td>-0.014</td>
<td>-0.008</td>
<td>-0.163</td>
</tr>
<tr>
<td>Dummy Variable for Asia</td>
<td>-0.028</td>
<td>-0.014</td>
<td>-0.300</td>
</tr>
<tr>
<td>Dummy Variable for Middle East</td>
<td>-0.187</td>
<td>-0.183</td>
<td>-0.980</td>
</tr>
<tr>
<td>Dummy Variable for Latin/South America</td>
<td>0.106</td>
<td>0.090</td>
<td>1.611</td>
</tr>
<tr>
<td>Dummy Variable for Other (including Africa)</td>
<td>-0.418</td>
<td>-0.408</td>
<td>-1.707</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.017</td>
<td>-0.001</td>
<td></td>
</tr>
<tr>
<td>Observations</td>
<td>89</td>
<td>89</td>
<td></td>
</tr>
<tr>
<td>F-Value</td>
<td>4.63**</td>
<td>5.00**</td>
<td></td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.382</td>
<td>0.405</td>
<td></td>
</tr>
</tbody>
</table>

** 5% confidence level. * 10% confidence level. F-value tests the joint hypothesis that all regression coefficients equal zero.
The results from Table 8 provide additional evidence against the overvaluation resale hypothesis. First note that the coefficients for both the six- and eight-week cumulative excess returns are negative. A more negative secondary market reaction, therefore, correlates with a larger discount from the U.S. secondary market price measured at the start date of the offering. This finding provides evidence that foreign investors demand compensation for the expected drop in market prices. The coefficient is significant at the 5% level for both the six-week and eight-week cumulative excess return independent variables.

Second, note that the dummy variable for whether the offering occurs prior to the 1996 SEC reporting reforms is positive and statistically insignificant for both versions of the model in Table 8. Offerings that occur prior to the SEC reporting reforms receive a statistically indistinguishable offering discount from offerings that occur after the SEC reporting reform. In contrast, the overvaluation resale hypothesis predicts that offerings prior to the reporting reforms where foreign investors are able to resell prior to disclosure of the offering to the market should receive a reduced discount. Even after controlling for other factors that may affect the offering discount, the results in Table 8 do not support the hypothesis that foreign investors were able to resell pre-disclosure prior to the 1996 SEC reporting reforms.

D. Potential Shortcomings of the Empirical Tests

Despite the controls for some factors that may have affected Regulation S offerings after the 1996 reporting reform, other exogenous factors exist that may have independently caused the offering discount to drop after the reporting reforms, masking an increase in the discount consistent with the overvaluation resale hypothesis. First, the pre-reporting period sample of Regulation S offerings used in the Article may miss a greater percentage of smaller offerings than the post-reporting period sample. This bias, in turn, may result in an observed pre-reporting reform offering discount that is different from the true discount for the entire population of pre-reporting reform offerings. To the extent, however, that issuers typically bear a larger offering discount for a smaller offering to compensate for greater illiquidity risk on the part of foreign investors, one would expect the lack of smaller offerings to result in a reduced discount for the pre-reporting reform period. Thus, the bias should raise the probability of finding an increase in the offering discount post-reporting reform in support of the overvaluation resale

99. See supra text accompanying notes 49-50.
Second, a possible simultaneity bias may also exist between the offering discount and the cumulative excess return proxy for the expected market reaction to news of a Regulation S offering.\(^{100}\) On one hand, foreign investors will demand compensation for the expected negative market reaction to the extent that they must sell after information disclosure, leading to a greater offering discount. On the other hand, a greater offering discount may lead to a larger negative market reaction. For example, where the offering discount is due to managers opportunistically using Regulation S to transfer value to themselves from the shareholders of the issuer, a greater offering discount will directly reduce the value of the issuer. Where the offering price is below the pre-offering fundamental value, the share value of all pre-offering investors is necessarily diluted. A larger offering discount under such circumstances, therefore, will result in a greater negative market reaction.

The appendix uses a two-stage least-squares model to control for possible simultaneity bias in the estimation of the offering discount model. As discussed in the Appendix, the coefficient on the pre-reporting reform dummy variable in the two-stage least-squares model is not statistically significant. The results from the Appendix, therefore, also fail to provide evidence in support of the overvaluation resale hypothesis.

Third, the ability of foreign investors to engage in short sales immediately after an offering of the issuer’s securities inside the United States during both the pre- and post-reporting reform periods also calls into question this Article’s results.\(^{101}\) Through a short sale, foreign investors are effectively able to sell the economic risk of ownership of the Regulation S securities even prior to the expiration of the resale-restricted period. To the extent short sales occur even during the post-reporting reform period, therefore, foreign investors may be able to sell into an overvalued market prior to disclosure of the offering. Short sales, therefore, may eliminate the beneficial information effect of the reporting reforms and thereby reduce the effectiveness of this Article’s tests that focus on differences between the pre and post-reporting reform periods. The SEC, nevertheless, started taking a hard line against foreign investors engaging in short sales of Regulation S securities in 1995.\(^{102}\) Even with the theoretical possibility of short sales, therefore,

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100. Simultaneity bias occurs when one of the independent variables in a regression model, in fact, is a function of the dependent variable.
101. See supra note 8 and accompanying text. Alternatively, foreign investors both pre- and post-reporting reform may simply ignore Regulation S’s resale prohibitions and resell illegally into the United States immediately after the offering. For a discussion of the possibility of illegal resales see Jordan, supra note 36, at 75.
102. See 1995 Problematic Practices Release, supra note 16, at *3:
investors should have found it more difficult to engage in overvaluation resales into the United States after the 1996 SEC’s reporting reforms. The presence of short sales, if anything, should have increased the likelihood of finding a greater offering discount in the post-reform time period in support of the overvaluation resale hypothesis.

Finally, the offering discount model suffers from at least one additional flaw: the controls may not capture all the exogenous factors that may have shifted between the pre- and post-reporting reform periods. The amount of overvaluation in the pool of companies seeking to conduct a Regulation S offering, for example, may have shifted from the pre- to the post-reporting reform periods. Prior to the reporting reforms, companies with overvalued securities in the U.S. secondary market may have made use of Regulation S to issue securities indirectly into the United States. The 1996 reporting reform reduces the gain from offering securities into an overvalued market, leading fewer companies with overvalued securities to engage in Regulation S offerings. With a lower average level of overvaluation, the offering discount may decline in the post-reporting reform period. Foreign investors may demand a greater offering discount as a percentage of the overvaluation amount in the U.S. secondary market during the post-reporting reform period due to a decreased ability to engage in overvalued resales; alternatively, the offering discount may have dropped due to the reduced overall level of overvaluation among companies seeking to engage in a Regulation S offering.

Consider the following numerical example. Assume the mean level of

Since the adoption of Regulation S, it has come to the Commission’s attention that some market participants are conducting placements of securities purportedly offshore under Regulation S under circumstances that indicate that such securities are in essence being placed offshore temporarily to evade registration requirements with the result that the incidence of ownership of the securities never leaves the U.S. market, or that a substantial portion of the economic risk relating thereto is left in or is returned to the U.S. market during the restricted period, or that the transaction is such that there was no reasonable expectation that the securities could be viewed as actually coming to rest abroad. These transactions are the types of activities that run afoul of Preliminary Note 2, would not be covered by the safe harbors and would be found not to be an offer and sale outside the United States for purposes of the general statement under Rule 901.

Id. See also In re GFL Ultra Fund Ltd., Securities Act Release No. 7423, [1997 Transfer Binder] Fed. Sec. L. Rep. (CCH) ¶ 85,949 at 89,752 (June 18, 1997) (holding that a fund that purchased securities through a Regulation S offering and then immediately engaged in short sales into the United States acted as a statutory underwriter under Section 2(11) of the Securities Act for the issuer); supra note 9 (discussing the 1998 reforms provisions against hedging transactions).

103. The use of the natural log of the market capitalization as an independent variable in this article’s offering discount models, in part, may control for the difference in mean secondary market overvaluation for Regulation S issuers prior to and after the SEC’s 1996 reporting reforms. However, even among issuers with the same amount of market capitalization, a range of secondary market overvaluation may exist.
secondary market overvaluation among Regulation S issuers equals 40% of the U.S. secondary market price pre-reporting reform. Pre-reporting reform, assume further that foreign investors are able to resell into the U.S. market prior to any market reaction and negotiate a one-quarter share of the overvaluation amount. Pre-reporting reform, therefore, foreign investors will receive a 10% offering discount on average. In comparison, assume that post-reporting reform the mean level of secondary market overvaluation among Regulation S issuers falls to only 5%. Foreign investors unable to resell prior to the market reaction will demand compensation for the entire expected secondary market reaction, leading to a 5% offering discount. Under this particular example, the observed offering discount will decrease in the post-reporting reform period. Nevertheless, such decrease is consistent with the overvaluation resale hypothesis.

To call this Article’s findings against the overvaluation resale hypothesis into question, however, it is not enough simply to argue that the level of overvaluation among Regulation S issuers is lower than the overvaluation among the pre-reporting reform issuers. Suppose that the overvaluation resale hypothesis is true and pre-reporting reform and foreign investors acting as conduits negotiate to take a \( x \) % share of the overvaluation surplus on average. To mask an increase in the offering discount due to a reduced ability to engage in resales of overvalued securities post-reporting reform, the mean level of overvaluation must then fall to \( x \) % of its pre-reporting reform level. Thus, in the above numerical example, because pre-reporting reform foreign investors negotiated a one-quarter share of the overvaluation surplus, the post-reporting reform mean overvaluation amount must be reduced to twenty-five percent of its pre-reporting reform level; that is, it must drop from forty dollars to ten dollars or less per share. Significantly, the smaller the negotiated share of the overvaluation surplus, the greater the drop in the mean overvaluation level among Regulation S issuers that is necessary post-reporting reform to mask any increase in the discount.\(^{104}\)

Importantly, the 1996 reporting reforms did not eliminate the presence of overvalued securities in the U.S. secondary market. Nor did the reforms reduce the incentive of managers with undervalued securities to forego making a securities offering.\(^{105}\) Instead, the reforms may have resulted in a

\(^{104}\) For example, if foreign investors took only a 10% share of the overvaluation surplus pre-reform, the mean level of overvaluation among Regulation S issuers must drop from $40 down to $4 post-reporting reform to mask the increase in the offering discount due to the reduced ability to engage in resales prior to information disclosure after the reporting reforms.

\(^{105}\) See supra note 24 and accompanying text (discussing the incentive of managers to sell when
shift in the subset of the overall pool of U.S. companies that sought to
conduct a Regulation S offering toward less overvalued companies. The
effect exact magnitude of this shift is crucial in assessing the validity of this
Article’s tests of the overvaluation resale hypothesis. 106

As an additional test of the level of overvaluation during the pre and post-
reporting reform periods, the Article compared the Tobin’s Q level across the
two periods. Tobin’s Q represents a measurement of the degree to which the
stock market valuation of a company exceeds its book value. A low Tobin’s
Q indicates the possibility of only small amounts of overvaluation in the
market. A high Tobin’s Q, on the other hand, may mean either that the
security of a company is overvalued or that the company has substantial
intangible value, due to good will for example. Table 9 presents a breakdown
of the mean Tobin’s Q level for the pre and post-reporting reform sample of
issuers on which offering discount data is available.

<table>
<thead>
<tr>
<th>Type of Offering</th>
<th>Observations</th>
<th>Mean Tobin’s Q</th>
<th>Median Discount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Reporting Reform</td>
<td>246</td>
<td>3.02</td>
<td>2.27</td>
</tr>
<tr>
<td>Post-Reporting Reform</td>
<td>163</td>
<td>3.45</td>
<td>2.22</td>
</tr>
</tbody>
</table>

(t-test of difference in means p-value = 0.3161).

Tobin’s Q is defined as \( \frac{\text{Market Value of equity} + \text{book-value of long-
term debt} + \text{book-value of short-term debt} + \text{preferred stock at carrying}
\text{value}}{\text{book value of assets}} \).

From Table 9 note that the mean Tobin’s Q actually increases from the
pre to post-reporting reform period. Although the increase is not statistically
significant, it does provide evidence that the Tobin’s Q did not decrease. The
results from Table 9, however, are not conclusive to the extent the increase in
Tobin’s Q may be due to greater intangible value in issuers post-reporting
reform rather than overvaluation.

The limitations of the Article’s empirical tests raised in this section make
it important not to overstate the finding that the Regulation S offering
discount did not change in a statistically significant manner between the pre-
and post-reporting reform time periods. Other exogenous factors may exist in

106. For example, an issuer with highly overvalued securities in the U.S. secondary market may
choose to conduct a Regulation S offering post-reporting reform to raise capital for new capital
expenditures.

https://openscholarship.wustl.edu/law_lawreview/vol78/iss2/8
addition to those covered in this section. Moreover, this Article’s results apply only to Exchange Act reporting issuers. Nevertheless, the empirical evidence should alert policy makers to the theoretical possibility that a large offering discount is not necessarily detrimental to the interests of U.S. investors. The evidence is also at least consistent with the hypothesis that issuers and foreign investors were unsuccessful in using Regulation S as a conduit to sell overvalued securities into the United States before the 1996 reporting reforms. Even to the extent that non-Exchange Act reporting issuers present a greater risk to U.S. investors, this Article sheds doubt on the value of the SEC’s 1998 Reforms’ wholesale tightening of Regulation S for all types of issuers regardless of Exchange Act reporting status.

III. CONCLUSION

Regulation S offerings result on average in a negative secondary market reaction once U.S. investors learn of the offering. The Article provides evidence that the likelihood that managers believe the issuer’s securities are overvalued as well as the issuer’s stated use of proceeds from the offering are weakly significant in explaining the secondary market reaction.

Focusing on the U.S. secondary market reaction, this Article tests whether foreign investors expect to resell Regulation S securities into the United States ahead of the market reaction to news of the offering. Where foreign investors are able to resell prior to information disclosure of the Regulation S offering to the secondary market, foreign investors may act as conduits for issuers attempting to sell overvalued securities into the United States. To the extent managers seek to benefit pre-offering shareholders, they will negotiate to give foreign investors as small an offering discount as possible. In contrast, where foreign investors are unable to resell prior to the secondary market reaction to news of the offering, they will demand a greater discount in compensation for the entire expected market reaction. Without such a discount, Regulation S offerings result in a transfer in value from foreign investors to U.S. investors; rational foreign investors will choose not to

107. For example, the liquidity of world markets generally may have increased from the pre-to post-reporting reform time periods. Foreign investors, therefore, may demand a lower illiquidity premium for their Regulation S securities. This reduction in illiquidity discount then may have offset any increase in the offering discount due to a reduction in the ability of issuers and foreign investors to resell securities into the United States prior to market reaction to news of the Regulation S offering. See supra text accompanying note 48 (describing the methodology used to collect Regulation S offerings for the article’s data set).

participate in such offerings.

This Article furnishes evidence consistent with the hypothesis that foreign investors were in fact unable to engage in resales ahead of the U.S. secondary market reaction to a Regulation S offering before the SEC’s 1996 reporting reforms. For example, the commencement of resales may have signaled sufficient information to U.S.-based financial analysts to trigger a secondary market reaction to the Regulation S offering before significant quantities of securities are resold into the United States. This Article therefore weakens the arguments of those that point to the large offering discount foreign investors typically receive as evidence of the danger of Regulation S to U.S. investors. To the extent that the offering discount compensates foreign investors for the expected drop in the U.S. secondary market price, foreign investors do not gain relative to U.S. investors.

A full evaluation of the benefits from the SEC’s recent reforms to Regulation S requires additional inquiry into the other ways in which a Regulation S offering may harm U.S. investors aside from the resale of overvalued securities into the United States. Nevertheless, the Article’s findings cast doubt on the value of the SEC’s 1998 reforms that increased restrictions indiscriminately for all U.S. companies seeking to raise capital abroad through Regulation S.

110. See generally Choi, supra note 17 (providing a general analysis of the benefits of the SEC’s 1998 reforms to Regulation S).
Appendix

A possible simultaneity bias may exist with the cumulative excess return independent variable in this Article’s offering discount ordinary least-squares models. The greater the expected negative market reaction, as measured using the cumulative excess return, the larger offering discount foreign investors will obtain. The reverse causality, however, is also possible. A larger offering discount may lead foreign investors to expect a more negative market response to the offering. Where insiders gain opportunistically through a Regulation S offering, for example, the size of the offering discount is directly related to the dilution the issuer’s pre-offering shareholders endure and therefore will determine the expected U.S. secondary market reaction to the offering.

To control for the simultaneity bias, a two-stage least-squares model is estimated for the offering discount, taking both the offering discount and the cumulative excess return variables as endogenous. The equation for the offering discount is based on offering discount model reported in Table 8. The equation for the cumulative excess return is based on the model reported in Table 5 for the cumulative excess return with the addition of independent variables for the number of institutional investors that own common stock in the issuer and the fraction of common stock in the hands of institutional investors. Both institutional investor-related variables are assumed to correlate with the speed with which the market reacts to news from a Regulation S offering. For companies with a large number of institutional investors the market may react more quickly to resales of Regulation S securities into the United States even during the pre-reporting reform period, increasing the expected market reaction prior to when resales commence. Likewise, for companies with a small number of institutional investors, the market may react slowly even during the post-reporting reform period, decreasing the expected market reaction at the time foreign investors are able to engage in resales into the United States. Neither measure of institutional presence, however, is assumed to directly affect the offering discount given to foreign investors.

Table 10 reports the results for the two-stage least-squares model of the offering discount using the six-week cumulative excess return in Model A. Model B then estimates the two-stage least square model using the eight-week cumulative excess return.

111 Both the number of institutional investors and the fraction of common stock in the hands of institutional investors are obtained for each Regulation S issuer from the SEC Disclosure database.
Table 10: Two-Stage Least Squares Model of the Offering Discount

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th>Model A: Two-Stage Least Squares Model of the Offering Discount (using 6-Week CER)</th>
<th>Model B: Two-Stage Least Squares Model of the Offering Discount (using 8-Week CER)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Log of Market Capitalization</td>
<td>-0.027 (-0.904)</td>
<td>-0.030 (-1.006)</td>
</tr>
<tr>
<td>Natural Log of the Offering Amount to Market Capitalization Ratio</td>
<td>-0.024 (-0.933)</td>
<td>-0.024 (-0.934)</td>
</tr>
<tr>
<td>Number of World Contacts</td>
<td>-0.001 (-0.242)</td>
<td>-0.002 (-0.359)</td>
</tr>
<tr>
<td>Dummy Variable for Common Stock</td>
<td>0.054 (0.737)</td>
<td>0.044 (0.649)</td>
</tr>
<tr>
<td>Dummy Variable for 144A Offering</td>
<td>-0.256* (-1.866)</td>
<td>-0.247* (-1.836)</td>
</tr>
<tr>
<td>Fraction of the Board composed of Officers</td>
<td>0.439** (2.122)</td>
<td>0.435** (2.090)</td>
</tr>
<tr>
<td>Fraction of Common Stock owned by Directors and Officers (MDHOLD)</td>
<td>-0.198 (-0.389)</td>
<td>-0.216 (-0.428)</td>
</tr>
<tr>
<td>MDHOLD^2</td>
<td>0.278 (0.361)</td>
<td>0.295 (0.387)</td>
</tr>
<tr>
<td>Predicted 6 Week Cumulative Excess Return From First Stage of Model</td>
<td>-0.158 (-0.563)</td>
<td>.</td>
</tr>
<tr>
<td>Predicted 8 Week Cumulative Excess Return From First Stage of Model</td>
<td>.</td>
<td>-0.097 (-0.415)</td>
</tr>
<tr>
<td>Dummy for Pre-Reporting Reform Period</td>
<td>0.026 (0.400)</td>
<td>0.030 (0.486)</td>
</tr>
<tr>
<td>Dummy Variable for Europe</td>
<td>Base</td>
<td>Base</td>
</tr>
<tr>
<td>Dummy Variable for Canada</td>
<td>-0.023 (-0.251)</td>
<td>-0.022 (-0.242)</td>
</tr>
<tr>
<td>Dummy Variable for Asia</td>
<td>-0.035 (-0.300)</td>
<td>-0.044 (-0.378)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dummy Variable for Middle East</th>
<th>-0.259</th>
<th>-0.313</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(-0.863)</td>
<td>(-1.181)</td>
</tr>
<tr>
<td>Dummy Variable for Latin/South America</td>
<td>0.114</td>
<td>0.104</td>
</tr>
<tr>
<td></td>
<td>(1.586)</td>
<td>(1.484)</td>
</tr>
<tr>
<td>Dummy Variable for Other (including Africa)</td>
<td>-0.399</td>
<td>-0.357</td>
</tr>
<tr>
<td></td>
<td>(-1.352)</td>
<td>(-1.310)</td>
</tr>
<tr>
<td>Constant</td>
<td>-0.005</td>
<td>0.017</td>
</tr>
<tr>
<td></td>
<td>(-0.028)</td>
<td>(0.097)</td>
</tr>
<tr>
<td>Observations</td>
<td>81</td>
<td>81</td>
</tr>
<tr>
<td>F-value</td>
<td>3.59**</td>
<td>3.63**</td>
</tr>
<tr>
<td>Adjusted R2</td>
<td>0.345</td>
<td>0.353</td>
</tr>
</tbody>
</table>

** 5% confidence level. * 10% confidence level. (t-statistic in parenthesis). F-value tests the joint hypothesis that all regression coefficients equal zero.

As reported in Table 10, even after controlling from the simultaneity bias, the coefficients on the six-week and eight-week cumulative excess return variables are negative. A greater negative market reaction correlates with a larger offering discount. Neither coefficient, however, is statistically significant.

Note also from Models A and B in Table 10 that the coefficient on the dummy variable for the pre-reporting reform period is both positive and statistically insignificant. If anything, therefore, the discount is greater during the pre-reporting reform period even after controlling for the simultaneity bias between the offering discount and the cumulative excess return. Models A and B, therefore, provide no support for the overvaluation resale hypothesis (where foreign investors are able to engage in resales ahead of information disclosure, one would expect a lower discount during the pre-reporting reform period). Nevertheless, the two-stage least-squares model may not fully correct for the simultaneity bias to the extent the additional exogenous variables, including the number of institutional investors and the fraction of common stock held by institutional investors, correlate not only with the market reaction but also directly with the offering discount.