Why do foreign firms leave U.S. equity markets? An analysis of deregistrations under SEC Exchange Act Rule 12h-6

by

Craig Doidge, G. Andrew Karolyi, and René M. Stulz*

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Abstract

On March 21, 2007, the Securities and Exchange Commission (SEC) adopted Exchange Act Rule 12h-6 which makes it easier for foreign private issuers to deregister and terminate the reporting obligations associated with a listing on a major U.S. exchange. We examine the characteristics of 59 firms that immediately announced they would deregister under the new rules, their potential motivations for doing so, as well as the economic consequences of their decisions. We find that these firms experienced significantly slower growth and lower stock returns than other U.S. exchange-listed foreign firms in the years preceding the decision. There is weak evidence that firms experience negative stock returns when they announce deregistration and stronger evidence that the stock-price reaction is worse for firms with higher growth. Though it is unclear whether the Sarbanes-Oxley Act (SOX) affected cross-listed firms adversely, there is no evidence that deregistering firms were affected more negatively by SOX than foreign-listed firms that did not deregister. Our evidence supports the hypothesis that foreign firms list shares in the U.S. in order to raise capital at the lowest possible cost to finance growth opportunities and that, when those opportunities disappear, a listing becomes less valuable to corporate insiders so that firms are more likely to deregister and go home.

1. Introduction

A large literature examines why foreign firms choose to list their shares on a U.S. stock exchange.[1] Until recently, it was extremely difficult for foreign firms cross-listed in the U.S. to terminate the obligations they imposed on themselves by cross-listing in the U.S. Though firms could delist from a U.S. exchange, they faced extremely tough obstacles in deregistering. Without deregistration, a foreign firm is still subject to U.S. securities laws as governed by the Securities Act of 1933 and the Securities Exchange Act of 1934. With this state of affairs, foreign firms that concluded U.S. laws and regulations had become too burdensome could not eliminate this burden easily. All of this changed with a new rule (referred to as Exchange Act Rule 12h-6) unanimously adopted by the Securities and Exchange Commission (SEC) on March 21, 2007. This rule makes it easier for foreign firms to deregister, so that now it is much more realistic for those firms cross-listed in the U.S. to consider taking the step of deregistration. As a result of this policy change, we can now learn more about the benefits and costs of cross-listings by investigating why firms choose to deregister and what the consequences of deregistration are for the shareholders of firms that do so.

Much empirical evidence affirms that, through a U.S. cross-listing, a foreign firm subjects itself to U.S. laws and institutions, and that doing so has benefits. For simplicity, we call this the "bonding theory" of cross-listings since, by subjecting themselves to U.S. laws and institutions, the controlling shareholders of foreign firms credibly bond themselves to avoid some types of actions that might decrease the wealth of minority shareholders.[2] However, recently, there has been a lot of concern that the passage of the Sarbanes-Oxley Act of 2002 (SOX), as well as other regulatory developments in the U.S., have made it more costly for foreign firms to have a U.S. listing. We will call this view the "loss of competitiveness theory," since it is based on the notion that U.S. capital markets have fallen behind other markets –

[1] See Karolyi (2006) for a review of this literature.

[2] Coffee (1999, 2002) and Stulz (1999) are the first to postulate this argument that a U.S. listing enhances the protection of the firm's investors and, consequently, reduces the agency costs of controlling shareholders. See, among others, Reese and Weisbach (2002), Doidge (2004), Doidge, Karolyi, and Stulz (2004), Hail and Leuz (2006), and Lel and Miller (2007) for related evidence.

especially London – in attracting foreign cross-listings.[3] Each of these views has direct implications for which foreign firms would choose to deregister from U.S. markets and for the shareholder wealth consequences of such decisions.

With the bonding theory, a cross-listing has a cost for corporate insiders, which is that they face restrictions in consuming private benefits, and a benefit, which is that they can finance growth opportunities on better terms. The benefit from cross-listing depends critically on how much corporate insiders gain from having their firm access capital markets on better terms. Empirical evidence shows that cross-listing firms have better growth opportunities and that their shareholders benefit when they cross-list (Reese and Weisbach, 2002; Doidge, Karolyi, and Stulz, 2004, 2008; and, Hail and Leuz, 2006). Insiders at a firm with no foreseeable need for external capital gain no benefit from having their firm cross-listed unless they intend to sell their stake. By terminating registration in the U.S., insiders at a firm with enough cash flow to finance its growth opportunities can extract more private benefits from their firm. With the bonding theory, we would expect firms to terminate registration in the U.S. when doing so is feasible and when it benefits their insiders. Bonding is valuable for firms with good growth opportunities, so one reason that insiders would conclude that deregistration is valuable is if the firm no longer has valuable growth opportunities. In the remainder of the paper, we call this specific hypothesis the bonding theory of deregistration. With this theory, firms with poor growth opportunities in relation to their cash flows are more likely to deregister. Shareholders of firms that deregister are expected to be hurt by deregistration, since it increases the corporate insiders' discretion to extract private benefits at the expense of the public shareholders.

Bonding could also become less valuable because of increased deadweight costs associated with a U.S. exchange listing. Greater deadweight costs could reduce the benefit of bonding and lead to deregistration for firms that derive a low benefit from bonding. The loss of competitiveness theory does

[3] Zingales (2007) puts forward this alternative hypothesis. Additional arguments in support of this view can be found in reports of the Committee for Capital Market Reform (2006, 2007), a report of the U.S. Chamber of Commerce (2008), and a report by McKinsey & Company (2007) commissioned by U.S. Senator Charles Schumer and New York Mayor Michael Bloomberg.

not require that firms choose to cross-list because of a bonding benefit. All that is required for that theory to be valid is the existence of a benefit from cross-listing that decreases for some firms because of competitive reasons. For such firms, cross-listing becomes a net cost rather than a net benefit. We explicitly test the loss of competitiveness hypothesis in the context of the passage of SOX, but some of our results apply to more general causes of a loss of competitiveness. The SOX explanation predicts that there are cross-listed firms for which SOX imposed deadweight costs big enough to make it worthwhile for them to deregister. With the loss of competitiveness theory, whether or not a firm deregisters depends on the size of the adverse impact of SOX in relation to the benefits of listing. Although we cannot observe directly the benefits of listing, we can investigate whether the necessary condition for the SOX explanation holds, namely that foreign firms in general, and deregistering firms in particular, were adversely affected by SOX. We can also investigate whether the changes in regulations that made deregistration easier were beneficial for these firms. Presumably the market could assess whether a U.S. listing was valuable for a firm in the post-SOX environment. If a listing was no longer valuable for a firm, that firm would want to deregister and therefore would benefit from the passage of Rule 12h-6, which made deregistration easier. If there was any residual uncertainty about the benefits of deregistration for a firm, it would be resolved when that firm announced its intent to deregister. With the loss of competitiveness theory, the market should interpret such an announcement favorably.

We examine 59 firms that deregistered in the six months after Rule 12h-6 was adopted. Firms that deregister have poor growth opportunities, come predominantly from more economically developed countries, and experienced poor stock return performance over a number of years before deregistration. Compared to other foreign firms listed on U.S. exchanges, the deregistering firms also have a significantly lower "cross-listing premium." However, this lower "cross-listing premium" cannot be explained by an adverse impact of SOX.

We next examine stock-price reactions of these deregistering firms around major events surrounding the passage of SOX and find no clear evidence that the deregistering firms were affected adversely by SOX compared to other foreign firms listed on U.S. exchanges. In fact, whether foreign firms with

exchange listings were affected adversely by SOX at all seems to depend on the benchmark used. For some benchmarks, there is a negative wealth effect of SOX for foreign listed firms as well as for deregistering firms, but for other benchmarks there is no such effect. A reasonable assessment of the evidence is that any inference that SOX adversely affected foreign firms with exchange listings compared to those not affected by SOX is extremely fragile.

The average stock-price reactions of deregistering firms to the announcements of Rule 12h-6 are insignificantly different from zero. Such a result supports neither the loss of competitiveness theory nor the bonding theory. The average stock-price reaction to deregistering announcements is negative but insignificant, although the proportion of firms with a negative stock-price reaction is significantly greater than 50%. We also find that firms with better growth opportunities have a significantly worse deregistration stock-price reaction. These last two results are consistent with the hypothesis that a U.S. exchange listing creates value for firms with valuable growth opportunities.

Overall, our evidence is more consistent with the bonding hypothesis than with the loss of competitiveness hypothesis. While none of the tests provide conclusive evidence that is consistent with the loss of competitiveness hypothesis, we find some results supportive of the bonding hypothesis. At the same time, however, not all results are supportive of that hypothesis. Since our results do not contradict the bonding hypothesis, there may well be an issue of the power of our tests due to the limited size of our sample. It may also be that investors partially anticipated the actions of the deregistering firms.

There are two related papers that examine deregistrations by foreign firms. First, Marosi and Massoud (2008) examine those from 1990 to 2006, all of which took place under the old rules when it was more difficult for foreign firms to meet the deregistration criteria (based on firm size and the number of U.S. shareholders). One advantage of their analysis is that the set of firms they study may be highly motivated to deregister, given the stringency of the old rules. A disadvantage however, is that it is unclear whether their conclusions can be generalized beyond the select group of firms that were able to meet the stringent deregistration criteria under the old rules. A second disadvantage is that different papers do not agree on deregistration counts of foreign firms. This suggests it is difficult to identify accurately firms that

deregistered voluntarily under the old rules and that inferences may be contaminated by incorrect classifications.[4]

Second, Fernandes, Lel, and Miller (2008) examine the stock price reactions of all foreign firms with U.S. exchange listings when the new deregistration rules were announced, which they show to be negative. This approach provides a general assessment of the expected impact of the rule change, even though many of those firms are not eligible to deregister under the new rules. This matters because the stock price reactions for firms that do not meet, or are not expected to meet, the new deregistration criteria should be negligible. They do show that significantly larger negative reactions arise for foreign firms listed on major U.S. exchanges from countries with weaker disclosure and legal protection systems, which they interpret in support of the bonding theory. Our paper addresses a different question from that of the Fernandes, Lel, and Miller paper. We want to understand why firms deregister and to assess the economic consequences of actual deregistrations. In contrast to their approach, which compares the prediction of the bonding theory to the alternative hypothesis that the rule changes had no effect, we also consider the loss of competitiveness explanation for deregistrations and are able to assess the role of SOX as a specific motivation for actual deregistrations. It is important to note that the result of Fernandes, Lel and Miller (2008) that the announcement of the new rules had an adverse impact on cross-listed firms, on average, does not imply that deregistration necessarily was detrimental to the firms that chose to deregister since the number of firms that chose to deregister is small compared to all cross-listed firms. For instance, it could be that the rule change reduced the value of bonding in general, but that the firms that deregistered were firms for which bonding was no longer valuable or firms for which the costs of SOX made a U.S. cross-listing a net cost rather than a net benefit.

[4] Marosi and Massoud (2008) find 97 deregistrations from 2002 – 2005 (126 from 2002 – 2006). Li (2007) includes only 55 deregistrations from 2002 – 2005 in his sample, after excluding firms that also delist in the home country, become private, are acquired, have stock prices less than one unit of home currency, go bankrupt or are liquidated within a year of the deregistration date. Hostak, Karaoglu, Lys, and Yang (2007) find 75 voluntary delistings from major U.S. exchanges from 2002 – 2005. Although delisting does not necessarily imply deregistration, the number of voluntary delistings should represent an upper bound on the number of deregistrations that are relevant to include in a deregistration study. Chaplinsky and Ramchand (2008, Section 3.1) discuss the challenges of identifying "true" voluntary delistings.

The remainder of this paper is organized as follows. In the next section, we describe in detail the past and new rules governing deregistration for foreign firms listed for trading on major U.S. exchanges. We also survey existing empirical research on the economic consequences of deregistration and delisting decisions under the old rules. Section 3 introduces our sample and compares characteristics of deregistering firms with those of foreign listed firms that have not deregistered. The event-study analysis of the stock-price reactions of the deregistering firms to the passage of SOX, to the announcement of the new Rule 12h-6, and around their respective decisions to deregister all follow in Section 4. We then offer concluding remarks.

2. The Past and Present Deregistration Process for Foreign Private Issuers in the U.S.

On March 21, 2007, the SEC unanimously adopted Exchange Act Rule 12h-6 which eased conditions under which foreign private issuers (FPIs) can terminate the registration of a class of securities under Section 12(g) of the Exchange Act and its resulting Section 13(a) reporting obligations, or terminate and not merely suspend Section 15(d) reporting obligations. The new rule took effect on June 4, 2007. In this section, we describe (a) the pre-existing rule and empirical evidence on the impact of that rule on deregistration by FPIs, and (b) the key elements of the new rule and some background on why it was adopted.

a. The Old Rule and Some Evidence

Under the pre-existing Exchange Act Rule 12g-4, the primary determinant regarding whether a FPI can terminate its registration of a class of equity securities under Section 12(g) of the Exchange Act is if the securities are held by less than 300 residents in the U.S. (or alternatively, less than 500 residents if assets are less than $10 million). If a firm successfully terminates its Section 12(g) registration, it must then consider whether it has reporting obligations under Section 15(d) of the Exchange Act. Section 15(d) provides that the periodic reporting requirements of Section 13(a) are applicable to any FPI that files a registration statement under the Securities Act. The criteria to suspend Section 15(d) reporting obligations

under Exchange Act Rule 12h-3 are similar to those under Rule 12g-4. The key distinction is that the reporting obligations are suspended, rather than terminated – if the number of U.S. holders exceeds 300 (or 500, if assets are less than $10 million) at the end of a fiscal year, the FPI must resume its reporting obligations.[5] These conditions are certified by voluntarily filing with the SEC Form 15, a one-page form that includes information such as the class of securities being deregistered, the class of securities that still may require a duty to file, the filer's address and the number of shareholders of record in the U.S.

Each U.S. exchange sets its own delisting standards and these are considerably less burdensome than those that govern deregistration from SEC reporting obligations. Macey, O'Hara, and Pompilio (2004) classify delisting standards into two broad categories: profit-related and reputation-related standards. The profit standards are put in place to eliminate those firms that are unprofitable to the exchange and they stipulate minimum criteria based on market capitalization, price per share, number of publicly-held shares, number of registered shareholders, and trading volume.[6] The reputation-related standards are set to maintain the exchange's reputation as a self-regulatory organization (Chemmanur and Fulghieri, 2003) and allow the exchange to delist firms that go bankrupt, are to be liquidated, or fail to meet the exchange's corporate governance standards. Macey, O'Hara, and Pompilio discuss how foreign firms may be exempted from some of these reputation-related standards.

Many FPIs trade in the U.S. on major stock exchanges in the form of an American Depositary Receipt (ADR). The procedure for termination of an ADR program is set forth in the deposit agreement between the depositary bank and the firm. It usually requires a 30-day notice period prior to termination and the depositary bank will continue to issue ADRs up until the termination date and to keep open the ADR facility for a period afterwards (up to one year) for ADR holders to be able to cancel. Cash distributions

[5] What constitutes a FPI is governed by Exchange Act Rule 3b-4 and the relevant statutory section applies only to equity securities as noted. For the purpose of determining the number of U.S. resident shareholders, a FPI must use the method of counting provided under Rule 12g3-2(a). This method requires looking through the record ownership of brokers, dealers, banks, or other nominees on a worldwide basis and counting the number of separate accounts of customers resident in the U.S. for which the securities are held. Under this rule, issuers are required to make inquiries of all nominees, wherever located and wherever in the chain of ownership, for the purpose of assessing the number of U.S. resident holders. See SEC Release Number 34-55540 of the Federal Register (Volume 72, Number 65, p. 16934, April 5, 2007).

[6] See NYSE Listing Standards (www.nyse.com/regulation/listed/1147474807344.html) and *Listing Standards and Fees*, Nasdaq Stock Market, May 2008 (www.nasdaq.com).

are initiated by the depositary bank for any ADR holders who have not cancelled by that point in time. This ADR termination process is again much less onerous than the process associated with deregistration from reporting obligations to the SEC.

There are several empirical studies of the determinants and economic consequences of foreign delistings from U.S. stock exchanges, fewer on those of foreign delistings from other markets and, to the best of our knowledge, only three on foreign deregistrations from U.S. markets. Liu (2004) looks at the stock-price reactions of 103 foreign firms involuntarily delisting from U.S. markets over the period 1990-2003, while Liu and Stowe (2005) examine the effects of 54 U.S. firms voluntarily delisting from Japan (1982-2002). The former study shows a 4.49% decline on average, while the latter shows no reaction whatsoever. Witmer (2006) confirms a 6% decline for a larger sample of 116 foreign delistings from U.S. exchanges between 1990 and 2003, but he also shows that those that voluntary delist and those with smaller turnover in U.S. markets experience smaller negative reactions.

Li (2007) and Smith (2007) focus their studies on the impact of the passage of SOX on the economic consequences of foreign delistings in U.S. markets. Specifically, Li uncovers a weakly significant negative pre-SOX stock-price reaction around delistings (-1.58% for 15 events with three-day event windows) while Smith finds an insignificant, but positive reaction (3.74% for 82 events); both studies find large positive post-SOX reactions (2.39% for 40 delistings for Li, 6.92% for 66 events in Smith). Hostak, Karaoglu, Lys, and Yang (2007) consider a post-SOX sample of 75 voluntary foreign delistings, but, unlike the Li and Smith studies, they uncover a negative -1.55% three-day cumulative abnormal return. Part of the reason for the differences in these results around the passage of SOX may stem in part from how researchers identify voluntary delistings in the first place and also in part from the special characteristics of the firms that make that choice. Chaplinsky and Ramchand (2008) identify only 48 "true" voluntary delistings from a total sample of 728 foreign firms over the period from 1961 to 2004 and show that the firms delisting following SOX have lower profitability, lower median assets and market capitalization, poorer preceding stock price performance, and lower analyst coverage. Piotroski and

Srinivasan (2008), like Chaplinsky and Ramchand, conclude that important non-SOX related factors influence delisting decisions.

Only three studies examine the consequences of the decision by foreign firms to deregister from U.S. markets.[7] These studies are related to, but are distinct from, the delisting studies described above. Delisting from a U.S. exchange eliminates the obligation to meet the exchange's listing requirements, but does not eliminate SEC registration requirements. Firms might delist with the intent of ultimately deregistering, but delisting does not guarantee that firms will meet the criteria to deregister because they could still have more than 300 U.S. shareholders after delisting. Witmer (2006) uncovers a statistically insignificant negative stock-price reaction (-0.60%) in the three days around announcement of Form 15 filing dates. Almost all of his deregistration events take place after the passage of SOX. Li (2007) and Marosi and Massoud (2006) specifically examine the changes in the count of deregistration events and resulting stock-price reactions before and after SOX. Li finds that the typical negative reaction around pre-SOX deregistrations (-0.62%) becomes positive (+2.30%) post-SOX.[8] Marosi and Massoud, however, do not find such an evolution: the stock-price reactions are negative both before and after SOX. One possible reason for the conflicting findings in these studies is that they classify "voluntary" deregistrations differently and therefore they identify different samples of deregistering firms. A second reason is that only a small and very select set of foreign firms were able to pursue deregistration under the previous rules.

b. The New Rule 12h-6

Exchange Act Rule 12h-6 proposes market-based tests such that firms can qualify for deregistration using a benchmark of less than 5% of average worldwide trading volume taking place on U.S. markets (measured over the preceding year). The average daily trading volume (ADTV) must be no greater than

[7] Two studies examine the long-term impact of SOX in terms of deregistration decisions of U.S. issuers. Leuz, Triantis, and Wang (2008) and Marosi and Massoud (2007) find that more issuers deregister in the post-SOX period, but the significantly-negative abnormal returns at the announcements are similar in the pre- and post-SOX periods.

[8] We refer to the working paper version of the paper because the published version (Marosi and Massoud, 2008) does not contain as much information for the comparison of the pre-Sox and post-Sox periods.

5% of the worldwide ADTV for that security (with clear definitions of which securities qualify for calculation during the preceding 12-month period in order to qualify for a Form 15F filing used to notify the SEC of the decision to terminate registration). Either the standard is met at the time of delisting from the U.S. exchange or there is a one-year ineligibility period for the ADTV calculation after an exchange delisting. There are also three additional conditions: (a) FPIs must have been a reporting company for at least one year, (b) they must not have sold securities in a registered offering for at least one year, and (c) they must maintain a listing in a foreign jurisdiction (primary trading market) for at least one year (see Federal Register, Volume 72(65), 16941-16944).

The rule was originally proposed on December 23, 2005 (Release No. 34-53020) and, following a comment period, was re-proposed on December 22, 2006 (Release No. 34-55540). Why did the SEC change the rule? The original proposal release states:

> *"The Commission proposed to amend these rules out of concern that, due to the increased globalization of securities markets in recent decades as well as other trends, it has become difficult for a foreign private issuer to exit the Exchange Act reporting system even when there is relatively little U.S. investor interest in its U.S.-registered securities. However, because of the* ***burdens and uncertainties*** *associated with terminating registration and reporting under the Exchange Act, the current exit process may serve as a disincentive to foreign private issuers accessing the U.S. public capital markets."* (Federal Register 70, 77689-77690)

There was, in fact, much controversy over the effects of SEC registration and enforcement on foreign companies cross-listed on major U.S. stock exchanges leading up to the original rule proposal. The fact that over 30 comment letters were submitted from 40 different businesses, financial and legal associations, foreign companies and government agencies, and advisory, accounting, and law firms bears this out. The burdens and uncertainties regarding terminating registration likely became an incremental concern in the after-math of the passage of the 2002 Sarbanes-Oxley (SOX) Act. Two letters from the European Association of Listed Companies that discussed these concerns were submitted to the SEC well before the original rule was proposed (February 9, 2004 and March 18, 2005). A further 91 comments

were submitted between January 18, 2006 and February 23, 2007 by various law and accounting firms, consultancy firms, representatives of stock exchanges, academics as well as affected foreign firms.[9]

To date, there is only one study that has examined the market impact of Rule 12h-6 on foreign firms. Fernandes, Lel, and Miller (2008) show that the average abnormal return over the three days surrounding the rule change of exchange-listed foreign firms is -0.5% and is statistically insignificantly different from zero, but the median abnormal return of -0.1%, though smaller, is significant. For over-the-counter traded Level 1 ADRs, the median abnormal return is -0.2%, but is statistically significant only at the 10% level. The negative reactions are concentrated in firms from countries with weaker home-country disclosure requirements. They interpret their results to be supportive of the bonding theory since the rule change makes it easier for foreign firms to break their commitment to U.S. rules and regulations and hence reduces the value of that commitment. In their study, they do not examine which firms actually chose to exercise the option to deregister under the new rule and what the economic consequences were to their particular decisions.

3. Which Firms Deregistered Under New Rule 12h-6?

In this section, we first describe our sample of 59 foreign firms that deregistered from U.S. markets using Rule 12h-6 and then compare the characteristics of these firms with those of firms cross-listed on U.S. exchanges that did not deregister. We first evaluate financial and operating characteristics, including total assets, sales growth, leverage, and country attributes, such as the country of domicile's legal and financial development. Next, we compare the risk-adjusted returns performance of a portfolio of the foreign firms that deregistered under Rule 12h-6 with those of a benchmark portfolio of firms cross-listed on U.S. exchanges that did not deregister over the period from 2001 to 2007.

[9] A summary of the principal comments regarding the original rule and the re-proposed rule amendments is found in Section I.B and I.C of the Release Number 34-55540 of the Federal Register (Volume 72, Number 65, pp. 16935-36, April 5, 2007).

a. The Firms that Chose to Deregister in 2007

The first step in our analysis is to identify the firms that filed for deregistration under the new rule that qualify for our analysis. From the SEC website, we identify 105 firms filing SEC Form 15F certification of FPI termination of registration between March 21, 2007 and September 30, 2007. Not all of these firms qualify for our analysis for a variety of reasons. Among these firms, 18 had previously filed Form 15, the notification for termination or suspension of registration under the previous Rules 12g-4 and 12h-3. The new Rule 12h-6 establishes conditions under which a previous Form 15 filer, who could have applied for just suspension of reporting obligations, could now terminate reporting obligations and would thus necessitate filing of Form 15F. The new rule also permitted FPIs to terminate reporting obligations associated with debt securities. We identified 12 debt deregistrations, which we exclude. We also found 13 "involuntary" deregistration events due to mergers, acquisitions, and successor registrations. In most cases, an unregistered foreign company acquired a registered company and sought deregistration under the "expanded scope" condition of Rule 12h-6 related to successor issues (see Federal Register, Volume 72(65), 16945). In other cases, however, we searched for mergers, consolidations, exchanges of securities, acquisitions of assets or other control-related events to identify possible "involuntary" filings. For example, the Coles Group (Australia) retail chain was acquired by Wesfarmers (ASX: WES) in November 2007 following an announcement on July 2, 2007. Coles deregistration filing, however, occurred on June 13, 2007, less than two weeks in advance of the acquisition announcement. There is one firm that filed for termination of registration under Rule 12g-4, for which the new rule has no bearing. Finally, we excluded two firms for which home market information on stock prices or trading volume is unavailable (Bioprogress PLC, traded on London's AIM and Rolling Thunder Exploration, traded on Canada's TSX Venture Exchange).

After screening, we have 59 firms in our sample of Form 15F filers. Appendix A lists these firms, their Form 15F deregistration types, filing dates, announcement of filing dates, country of domicile, and home trading market. The 46 firms excluded based on the screens above, including the reasons for their exclusion, are listed in Appendix B. Of the 59 firms in our sample, two firms have multiple classes of

equity securities trading on U.S. exchanges and filed Form 15F with respect to each class. Fiat has ordinary, preference, and savings shares and Telecom Italia Media has ordinary and savings shares. In both cases, we only examine the ordinary shares in our analysis. Finally, it is important to note that 11 of the 59 firms delisted from a major U.S. stock exchange sometime prior to their Form 15F filing (which we identified from the Form 15F item under "Recent United States Market Activity") and four others had never listed on a major exchange, but were registered. Screening further based on these additional two conditions (noted in column 5 of Appendix A) leaves a sample of 44 "pure" cases in which the firms delisted and deregistered under the ADTV rule. Our empirical analysis focuses on the larger sample of 59 deregistering firms, but we verify the results with the smaller sample of 44 "pure" deregistering firms.

By far, most of the deregistering foreign firms in Appendix A are from Europe, including 11 (19% of sample) from France, 8 (14%) from the U.K., and 4 (7%) each from Sweden, Germany, and the Netherlands. In 2006, U.K firms comprise 7% of all U.S. exchange-listed firms, while French, German, Swedish, and Dutch firms each comprise 3% or fewer of the total. Large contingents from Australia (7, 12%) and Canada (6, 10%) represent most of the rest of the sample. Canadian firms represent the largest contingent of foreign firms listed on U.S. exchanges in 2006 (28% of the total). Few firms deregistered from emerging markets (two from Chile, one each from South Korea, Peru, and South Africa).

The earliest announcement date is from Telstra Corp of Australia on March 28, 2007, one week after the rule was passed. They announced that they would terminate registration on June 4, 2007, the first date eligible under the new rule. Most of the 59 firms announced during the months of May (17 firms) and June (15 firms). The rate of announcement activity diminished significantly during the next three months. The median number of days between the announcement date and the actual filing date with the SEC is 23 days with the maximum at 70 days (Groupe Danone of France).

b. Comparisons of Firm Attributes

We obtain a variety of firm-level financial and operating variables on the 59 deregistering firms and on all other firms cross-listed in the U.S. To identify the cross-listed firms, we use information from a

variety of sources, including the ADR divisions of the Mellon Bank of New York, Citibank, JP Morgan, the New York Stock Exchange (NYSE), NASDAQ, OTCBB, end-of-year editions of the National Quotation Bureau's Pink Sheets, the Center for Research on Security Prices (CRSP), firms' annual reports, SEC Form 20-F filings, and Factiva searches. Information from the various datasets is manually cross-checked and verified. The data provided by Citibank and CRSP allows us to keep track of both active and inactive issues for U.S. listings, which mitigates concerns about survivorship bias. We classify firms by listing type, including those on the major exchanges (via Level 2 or 3 ADRs, direct listings, or New York Registered Shares) as well as listings by means of a Rule 144a private placement, and over-the-counter (OTC) issues by means of the OTC Bulletin Board (OTCBB), or the Pink Sheets (usually via Level 1 ADRs).

We begin by comparing the deregistering firms to a benchmark sample of foreign firms with listings on the major U.S. exchanges that did not deregister. There are between 510 and 686 benchmark firms depending on the availability of the firm attribute. Our data source for firm characteristics is Thomson Financial's Worldscope database. Worldscope covers companies in more than 50 developed and emerging markets, representing more than 96 percent of the market value of the world's publicly traded companies. We include firms with total assets of at least $10 million (but also assess the sensitivity of our analysis to higher thresholds of $100 million and excluding financial firms as well as firms from tax havens).

The firm-level variables are defined as follows. Total assets are in U.S. dollars, converted from local currencies at fiscal year-end exchange rates and leverage is defined as total debt divided by total assets. Ownership measures the fraction of shares outstanding held by corporate insiders as computed by Worldscope.[10] It includes, but is not restricted to, shares held by officers, directors and their immediate families, those held in trust, those held by other corporations, those held by pension plans, and by individuals who hold 5% or more of the outstanding shares. We use two proxies for growth opportunities:

[10] Dahlquist, Pinkowitz, Stulz, and Williamson (2003) discuss the strengths and weaknesses of Worldscope's ownership data.

sales growth and the median Tobin's *q* ratio of the global industry group to which the firm belongs. Sales growth is measured as a two-year geometric average of annual inflation-adjusted growth in sales and is winsorized at the 1st and 99th percentiles to reduce the impact of outliers. We adjust sales growth for inflation using the change in the consumer price index for the country, as reported by the International Monetary Fund. Following the literature, we compute Tobin's *q* as follows. For the numerator, we take the book value of total assets, subtract the book value of equity, and add the market value of equity. For the denominator, we use the book value of total assets.

We also use as country variables legal origin (e.g., Common Law) from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998), a legal index that multiplies the anti-director rights variable from Djankov, La Porta, Lopez-de-Silanes, and Shleifer (2008) by the rule of law index from La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998),[11] stock market capitalization divided by GDP (Gross Domestic Product) and (log of) Gross National Product (GNP) per capita. The latter two variables are from the World Bank WDI database.

Table 1 compares characteristics of deregistering firms and foreign firms listed on U.S. exchanges for the end of 2006, which is the most recent data available to the market before the deregistration announcement. Tests of differences in means with two-sided *t*-statistics and of medians with Wilcoxon rank-sum tests are supplied at the bottom of the table. The deregistering firms have, on average, lower sales growth, are larger in total assets (in millions of U.S. dollars), are more highly levered financially, and have a smaller fraction of closely-held shares. For example, the average (median) sales growth of the deregistering firms in 2006 is 7% (4%) compared to 18% (10%) for that of other U.S. exchange-listed firms and these differences are statistically significant. The differences in Tobin's *q* and global industry median *q* are not significantly different, although the average and median Tobin's *q* of deregistering firms are lower. The average and median GNP per capita is higher for deregistering firms. Fewer deregistering firms are domiciled in common law countries, but there are no significant differences in overall legal

[11] We obtain values for the rule of law for China, Hungary, Poland, and Russia from Pistor, Raiser, and Gelfer (2000).

index scores. Finally, stock market capitalization to GDP is often used as a measure of financial development. Deregistering firms typically come from countries that are less financially developed than the foreign firms listed on U.S. exchanges that did not deregister.

We perform several robustness checks. We use data for 2005 and find similar results. We exclude financial firms and those domiciled in tax havens, like Bermuda and the Cayman Islands, from the deregistering and benchmark set of firms and require minimum total assets to exceed $100 million. Inferences are unchanged. When only the "pure" deregistering firms (44 of the 59 firms that had not previously delisted from a major exchange) are included in the comparison analysis, the differences between those and the benchmark exchange-listed firms are similar.

In Table 2 we estimate logit regressions in which the dependent variable equals one for firms that deregistered using Exchange Act Rule 12h-6 in 2007 and zero otherwise, using a benchmark sample of foreign firms cross-listed on U.S. exchanges that did not deregister. The coefficient standard errors are adjusted for clustering on countries – they are computed assuming observations are independent across countries, but not within countries. Model 1 uses data on firm and country characteristics from 2005. The coefficient on sales growth is negative, and is statistically significant, while the coefficient on leverage is positive and significant. Among the country-level variables, only GNP per capita is significant, with a positive coefficient. None of the other variables are significant. Model 2 shows the regression estimates using 2006 data. The results are similar to those in Model 1. Model 3 shows the estimates for the "pure" deregistering firms, the subset of firms that are listed when they announce deregistration, using data from 2006. Again, the results are similar. Finally, Model 4 requires firms to have $100m in assets and excludes financials using 2006 data. In Model 4, sales growth is significantly negative, leverage is significantly positive, and GNP per capita is significantly positive. We also estimated the regressions using the self-dealing index of Djankov, La Porta, Lopez-de-Silanes and Shleifer (2008) instead of our legal variable and the results were unaffected.

Figure 1 shows that these differences in firm characteristics exist for a number of years. In Panel a, we show the evolution of sales growth for the benchmark exchange-listed firms and for the deregistering

firms from 2000 to 2006. Between 2001 and 2003, the average sales growth rates of the deregistering and benchmark firms both declined substantially. However, the growth opportunities of the deregistering firms did not recover after 2003, while those of the benchmark exchange-listed firms did. It seems unlikely that the passage of SOX had influence over the evolution of sales growth of some foreign cross-listed firms during this period.

To compare differences in the "cross-listing premium" for deregistering firms and the benchmark exchange-listed firms, we estimate regressions similar to those in Doidge, Karolyi, and Stulz (2004, 2008) except that we estimate the premium separately for each group of firms.[12] Panel b of Figure 1 shows the evolution of the premium. In 2000, both groups have large premiums and the difference between them is not statistically significant. In 2001 and 2002, the premium decreases for both groups of firms and in 2002, the premium for the benchmark exchange-listed firms is significantly greater. In 2003, the premium for the benchmark exchange-listed firms increases relative to the deregistering firms and that difference remains through 2006. The premium is significantly greater for the benchmark firms each year from 2003 through 2006 with the exception of 2005 (p-values of 0.01, 0.04, 0.13, and 0.10, respectively, by year).[13] The difference in the evolution of the premium after 2002 is consistent with the difference in the evolution of sales growth, which makes it unlikely that it was caused by SOX. Further, the event study evidence that follows in Section 4 shows that it is even less likely that SOX had any impact on the differential evolution of the cross-listing premium for deregistering firms and for the benchmark exchange-listed firms during this period.

[12] The cross-listing premium is estimated from an ordinary least squares regression of Tobin's q on dummy variables for whether the firm was exchange-listed at some point and deregistered in 2007 under Rule 12h-6 or not, whether it is a non-deregistering U.S. exchange-listed firm or not, whether it is a Rule 144a private placement or not, whether it is an Level 1 OTC U.S. listing or not, whether it is listed in London on AIM, as a depositary receipt, or as an ordinary listing, trailing two-year geometric-averaged sales growth, median Tobin's q of the global industry group of the firm, and log assets. The regression includes all firms that are in the Worldscope database and have total assets of at least $10 million in a given year. It is estimated with country fixed effects and with country-level clustering of standard errors.

[13] When we focus on the sample of non-financial firms with at least $100 million in assets, the results are similar. When we focus on the subset of the 44 "pure" deregistering firms, the results are also similar, but with two exceptions: the benchmark exchange-listed coefficients are still larger in 2005 and 2006 (0.23 and 0.24 compared to 0.07 and 0.16), but the difference is not significant.

c. Comparison of Portfolio Returns

Was the stock return performance of the deregistering firms different from the performance of the benchmark exchange-listed firms during the period leading up to their decision to deregister? With the bonding theory of deregistration, we would expect that firms with poor growth opportunities in relation to their cash flows are more likely to deregister. Further, with that theory, firms would have listed when they had good growth opportunities. Consequently, we would expect their returns to underperform leading up to the decision to deregister.

To answer this question, we evaluate the risk-adjusted returns on a portfolio of the firms that deregistered under Rule 12h-6 in 2007 over the period from 2001 to 2007. We compute U.S. dollar-denominated weekly (Friday to Friday) home-market returns for a portfolio of the 59 stocks with data from Datastream. A similar procedure is followed for a portfolio of the benchmark exchange-listed firms.[14] The return difference between the two portfolios is regressed on the weekly U.S. dollar-denominated return on the Morgan Stanley Capital International (MSCI) world market portfolio (excluding the U.S.) obtained from Datastream (in excess of the U.S. Treasury bill yield from CRSP), as well as the size and book-to-market factors, SMB and HML, from Fama and French (1993) obtained from Professor Ken French's website at Dartmouth University.[15]

Table 3 presents the regression results for three different periods, including the full period (2001-2007) and two key subperiods: the pre-deregistration period (2001 – 2004) and the deregistration subperiod (2005 – 2007) during which the new deregistration rule was being deliberated upon by the SEC. Panel a presents the results for equally-weighted portfolios of the 59 deregistering firms and the benchmark firms and Panel b for value-weighted portfolios. For the full period results in Model 1, returns

[14] We exclude benchmark firms with less than 100 weekly observations over the period of analysis (2001-2007), those with less than $10 million in total assets, and any that delisted prior to July 8, 2002. To eliminate extreme observations associated with thin trading, we require that firms' shares trade in at least 40% of the weekly observations. Finally, we screen the data for errors (see Ince and Porter (2006) for a discussion of the issues). The portfolio consists of 600 to 700 different firms over the period of analysis.

[15] SMB is a market-neutral hedge portfolio of U.S. stocks which takes long positions in small capitalization stocks and short positions in large capitalization stocks. HML is a market-neutral hedge portfolio of U.S. stocks which takes long positions in high book-to-market ratio stocks and short positions in low book-to-market ratio stocks.

for the deregistering firm portfolio are significantly lower than those of the benchmark exchange-listed foreign firms. The alpha for the returns difference is -9 basis points (*t*-statistic of 1.72, significant at the 10% level). This result is economically large since it corresponds to an annual underperformance of roughly 4.5 percentage points. The beta on the MSCI world market index (excluding the U.S.) is 0.06 (*t*-statistic of 2.45) which implies that the deregistering firms have slightly higher market risk exposures. The negative coefficient on SMB of -0.14 (*t*-statistic of 3.26) implies that the deregistering portfolio comoves more systematically with larger market capitalization stocks, which is perhaps not surprising since we saw in Table 1 that deregistering firms are larger. Finally, deregistering firms have a stronger systematic comovement with value stocks with a positive coefficient on HML of 0.17 (*t*-statistic of 3.62). The worse performance of deregistering firms occurs during the pre-deregistration period (-18.7 basis points, *t*-statistic of 2.39) since the intercept of the regression for the deregistration subperiod is not significant. Panel b shows different results when we use market value weights for the portfolio of deregistering firms and for the benchmark portfolio of exchange-listed firms. With value-weighted portfolios, there is no underperformance of deregistering firms. One way to understand this difference in results is that smaller deregistrants underperformed more than larger deregistrants, particularly in the pre-deregistration period. We also estimated the regressions using non-financial firms with more than $100 million of assets and using the sample of 44 "pure" deregistering firms. We find similar results for these different samples.

4. SOX, Loss of Market Competitiveness, and Deregistering Foreign Firms

The Sarbanes-Oxley Act of 2002 is perhaps the most controversial reform of American corporate law in the last 70 years. It establishes rules affecting not only every public company registered in the U.S., but also many legal, auditing, and financial services firms and government agencies dealing with public companies. A number of public policy organizations and others link the passage of SOX to a loss of U.S. market competitiveness (Committee for Capital Market Reform, 2006, 2007; McKinsey and Company, 2007; U.S. Chamber of Commerce, 2007; and, Zingales, 2007).

Several empirical studies evaluate the effects of SOX on U.S. firms by examining stock returns, changes in accounting and audit costs, and going-private decisions, but with mixed results (see, among others, Rezaee and Jain, 2006; Chhaochharia and Grinstein, 2007; Engel, Hayes, and, Wang, 2007; Li, Pincus, and Rezo, 2007; Zhang, 2007). Leuz (2007) argues that the greatest challenge to these studies is the absence of a natural control group of comparable, but unaffected, U.S. firms against which to judge the impact of SOX. As a result, other researchers have sought answers by focusing on the impact of SOX on various decisions and market outcomes for foreign firms listed on U.S. exchanges relative to equivalent domestic peers unaffected by the legislation (Duarte, Kong, Young, and Siegel, 2007; Hostak, Karaoglu, Lys, and Yang, 2007; Doidge, Karolyi, and Stulz, 2008; Marosi and Massoud, 2008; and, Piotroski and Srinivasan, 2008). Studies by Berger, Li, and Wong (2005), Li (2007), Litvak (2007), and Smith (2007) examine the abnormal stock-price reactions of foreign firms listed on U.S. exchanges to the announcements of the passage of key provisions of the Act and other important related events. Litvak concludes that there is a significant negative reaction to SOX events for exchange-listed foreign firms when measured relative to foreign firms not listed in the U.S. and to foreign firms listed in the U.S. via Rule 144a and Level 1 ADRs as benchmarks; Berger, Li, and Wong look at similar SOX-related events but use a value-weighted portfolio of U.S. stocks as a benchmark and find a positive reaction for foreign exchange-listed stocks; and, both Li and Smith uncover significant negative abnormal returns for foreign-listed firms when measured relative to home-market index returns as benchmarks.

These SOX-related events offer a unique experimental design for our study to evaluate the abnormal stock-price reactions of the foreign firms that eventually deregistered. The loss of competitiveness theory relies on the view that SOX affected firms adversely. As a result of this adverse effect, the value of a U.S. listing became negative for some firms and these firms became eager to leave the U.S. markets. Now that it became easier for firms to leave the U.S. markets, these firms are doing so. We explore the assumptions that underlie this theory. First, we investigate whether the shareholders of foreign listed firms suffered a wealth loss from SOX. Second, we test whether the shareholders of those firms that eventually deregistered suffered a wealth loss from SOX. Finally, if the value of a listing is the same for all firms,

the loss of competitiveness theory would imply that the shareholders of the firms that deregistered suffered greater wealth losses from the passage of SOX than those of firms that did not deregister. We investigate this hypothesis as well.

We can also test a corollary of the loss of competitiveness theory. The SEC eventually adopted the change in rules on terminating registration after significant lobbying pressure from a number of organizations and firms that grew in the wake of SOX. The Commission first issued proposed amendments in December 2005; following an open comment period, the revised rule was issued in December 2006 and adopted in March 2007. When it became clear that qualifying firms could deregister under the new, less-burdensome rules, their shareholders should have benefited. The SEC announcements should be associated with positive abnormal returns for the firms that would eventually deregister relative to other firms with U.S. exchange listings. Further, if there was any uncertainty about whether a specific firm could deregister, a firm's deregistration announcement following the rule's adoption by the Commission should have been associated with a positive abnormal stock-price reaction. Finally, we should expect that the positive abnormal stock-price reactions should be larger for those firms that were most adversely impacted by the passage of SOX. We investigate each of these three additional hypotheses in this section.

a. Stock-Price Reactions of Foreign Firms to SOX

Did the stock prices of foreign firms with U.S. exchange listings react adversely to SOX related announcements? Was there a negative stock-price reaction to the same announcements for deregistering firms and was that reaction worse than for the exchange-listed firms that chose not to deregister during our sample period? To answer these questions, we obtained daily U.S. dollar-denominated home-market returns from 2001 to 2003 from Datastream on each of the 59 deregistering firms listed in Appendix A and on the benchmark set of exchange-listed foreign firms that did not deregister, as used in the analysis of the previous section. We also obtain daily U.S. dollar-denominated returns from Datastream on stocks

of foreign companies listed in the U.S. markets via Level 1 OTC ADRs or Rule 144a private placements.[16]

SOX-related event dates are extracted from Table 1 of Litvak (2007).[17] She identifies 14 different events that range from the earliest proposal by the SEC to create a public company accounting oversight board (eventually, the PCAOB) in January 17, 2002, to deliberations and passage of the bill in the House of Representatives (April 22 to 24, 2002) and in the Senate Banking Committee and Senate (June 12 and July 16, 2002, respectively), to the President's signing of the bill (July 30, 2002). In the context of the loss of competitiveness hypothesis, some events are interpreted positively for U.S. listed foreign firms, such as SEC Chairman Harvey Pitt's suggestion at a *Financial Times* conference of an exemption for foreign companies (October 8, 2002), though most are perceived as negative developments.

To assess the effect of these SOX-related events, we construct equally- and value-weighted portfolios of all exchange-listed firms, of the 59 deregistering firms, and of a benchmark set of exchange-listed firms that did not deregister. This approach allows us to estimate the overall impact of SOX for each group of firms, while accounting for cross-correlations in firms' stock returns, a critical issue when analyzing the impact of common events, like regulatory changes, across firms (see Schwert, 1981, Schipper and Thompson, 1983; and, Binder, 1985). To estimate the abnormal stock-price reactions for the SOX events, we specify and estimate by ordinary least squares (OLS) the following regression over the period from January 1, 2001 to December 31, 2003:

$$R_{p,t} = \alpha + \beta \times R_{b,t} + \boldsymbol{\delta}'\mathbf{Event\_Dummy} + \varepsilon_t,$$

where R_p is the daily return for the portfolio of interest, R_b is the return on a benchmark portfolio, and **Event_Dummy** is a vector that contains 14 dummy variables associated with each of the key SOX dates.

We estimate this regression for the three different portfolios of interest: a portfolio comprised of all exchange-listed firms, a portfolio of 59 firms that deregistered, and a portfolio short in the latter portfolio

[16] Firms with less than 260 daily observations over the period from January 1, 2001 to December 31, 2003 are excluded, as well as those with less than $10 million in total assets and those that delisted prior to July 8, 2002. As noted earlier, we also apply screens for thin trading and data errors.

[17] The 13 SOX event dates in Litvak differ from the 17 key events in Zhang (2007), though 9 events are common. Zhang's dates were constructed for U.S. firms and do not include three events specific to foreign private issuers.

and long in the portfolio of exchange-listed firms that did not deregister. In each regression, the benchmark portfolio consists of Level 1 OTC and Rule 144a firms. These firms constitute an appropriate benchmark since they are foreign firms that are participating in the international capital markets, but are not registered under the Securities Act of 1933 or the Exchange Act of 1934 and are not subject to the provisions of SOX. To define the event dummies, we set each dummy variable equal to one for the day of the event, the day before, and the day after, and to zero on all other days. We include one day before and after the event because the stocks in each portfolio come from different countries where the home markets of these stocks often have different opening hours than the U.S. markets. As a result, news in the U.S. on date *t* could be impounded in the stock price in its home country on date *t-1* or on day *t+1*.[18]

Table 4 presents the results; in Panel a, we examine each individual SOX-related event separately, and, in Panels b and c, we do so for condensed event dummies comprising multiple SOX-related events. Models 1 (equally-weighted) and 4 (value-weighted) in Panel a show a strong contemporaneous correlation of returns on the exchange-listed foreign stocks and the benchmark Level 1 OTC/Rule 144a stocks with a beta coefficient around 1.09 and an adjusted R^2 in excess of 70%. For Model 1 only, we uncover a negative stock-price reaction of -50 basis points (*t*-statistic of 1.67) around the date of the first announcement by the Senate Banking Committee (June 12, 2002) and a positive, significant reaction of 70 basis points (*t*-statistic of 2.33) when the President signs the bill into law (July 30, 2002). The former result is consistent with the loss of competitiveness hypothesis, but the latter is not. Two event date dummy coefficients are significantly different from zero for Model 4. First, around the day that the Senate Banking Committee met and approved the bill, we find a positive significant coefficient of 61 basis points (*t*-statistic of 2.06). Second, around the day that Pitt suggests an exemption, we find a significant positive abnormal return of 39 basis points (*t*-statistic of 1.69). The latter result is consistent with the loss of competitiveness hypothesis, but the former is not.

[18] Although we use the same event dates as Litvak (2007), we define the event dummies differently to account for differences in the time zones of the firms' home markets. For example, for the early SEC announcement on January 17, we set it to one on January 16, 17, and 18 whereas Litvak sets it to one on January 18 (Litvak, 2007, Table 1). When we re-define the dummies this way none of our main conclusions are affected.

Models 2 and 5 present the corresponding results for the deregistering firms. In both models we find a significantly positive abnormal reaction to the announcement that the Senate Banking Committee approves the bill (June 18, 2002). In Model 2, we find a significantly positive reaction on the day of the votes in the House and the Senate ratifying the Conference Committee Report (60 basis points). There is some ambiguity as to how to classify that day, however. On the one hand, agreement on the conference report means that passage of the bill becomes more likely, which should be a negative event from the perspective of the loss of competitiveness hypothesis. On the other hand, Litvak (2007) reports that on that day Senator Michael Enzi of Wyoming argued that foreign companies should be exempted, which should be viewed as a positive event from the perspective of the loss of competitiveness hypothesis. To give the loss of competitiveness hypothesis the benefit of the doubt, we classify this day as one that is supportive of the hypothesis for deregistering firms. The significantly negative reaction to the announcement of no foreign firm exemption to the SEC's proposed Rule 302 on certification requirements for financial officers (106 basis points) and the positive reaction to Pitt's suggestion of an exemption for foreign companies (56 basis points) are also consistent with the theory. In contrast, with Model 5, the abnormal return for the approval of the Conference Committee Report is significantly negative instead of significantly positive, which is inconsistent with the loss of competitiveness hypothesis. The announcement of no foreign exemptions to proposed Rule 302 is associated with an insignificant abnormal return, as is that for the Pitt proposal. Models 3 and 6 examine the differences in abnormal returns between the portfolio of firms that deregistered and the portfolio of firms that did not deregister. The only significant differences in Model 3 are a positive significant difference (so the portfolio of deregistering firms gains relative to the portfolio of firms that did not deregister) on the day of the conference report and a significant negative difference when the announcement of no exemptions to the proposed Rule 302 is made. With Model 6, the only significant difference is a negative one for the announcement of the Conference Committee report.

The results in Models 1 through 6 of Panel a of Table 4 show that (a) results depend on whether one uses equally-weighted or value-weighted portfolios, (b) few SOX announcement days are associated with

significant negative abnormal returns, (c) some days that should be associated with negative stock-price reactions are associated with positive significant stock-price reactions and vice versa, and (d) there is no systematic evidence that the portfolio of deregistering firms reacts more poorly to SOX announcements than the portfolio of exchange-listed firms that did not deregister. To understand better the role of portfolio weighting in the results, we also estimate regressions using an equally-weighted portfolio as the dependent variable and a value-weighted portfolio as the independent variable. These regressions correspond to Models 7 to 9. The only day that has a significantly negative stock-price reaction is for the filing of the Conference Report, but for that day the portfolio of deregistering firms actually performs better than the portfolio of all listed firms.

In Panels b and c, we condense the separate event dummies into one single dummy for all SOX-related events. Panel c specifically includes only the most important eight events, as identified by Litvak (2007) in her Table 1; we indicate this by listing the event name in bold-face type in Panel a. We reverse the sign of the two events that are expected to have positive reactions (Events 10 and 13). Whether for the equally- or value-weighted portfolio returns, there is no significant reaction in any direction for the portfolios of all exchange-listed foreign firms. For the deregistering firms, there is a significant negative coefficient of 18 basis points (*t*-statistic of -1.79) for the equally-weighted portfolio but the coefficient is positive and insignificant for the value-weighted portfolio. The difference between the portfolios of deregistering firms and firms that did not deregister is never significant and no coefficient is significant for Models 7 through 9. In Panel c, we use a dummy variable for the most important SOX-related events. In that panel, we find that for the equally-weighted portfolio of all exchange-listed firms in Model 1, the dummy variable is significantly negative. This result is broadly consistent with the results reported in Litvak (2007). In contrast, that dummy variable is not significant when we use value-weighted returns in Models 4 and 7. The results in Models 2, 5, and 8 for the deregistering firms are similar. The difference between the portfolio of firms that deregistered and the portfolio of firms that did not deregister is never significant.

The bottom line from these regressions is that inferences about whether or not SOX had an adverse impact on foreign exchange-listed firms and on deregistering firms are extremely model sensitive. For example, Litvak (2007) concludes that SOX had a negative impact on the stock prices of foreign firms with U.S. exchange listings. However, her approach gives equal weight to each observation or uses an equally-weighted benchmark.[19] The results reported in Table 4 show that with a value-weighted benchmark, there is no evidence that SOX had a negative impact on stock prices. Since an equally-weighted portfolio gives more weight to small firms than a value-weighted portfolio, it seems reasonable to say that the results are consistent with the view that the wealth losses associated with SOX were not economically significant but that it is possible that the smallest firms were affected adversely. There is no significant evidence, however, showing that the deregistering firms had worse stock-price reactions to SOX announcements than the benchmark exchange-listed foreign firms. These conclusions are robust if we restrict our sample firms to non-financial firms with assets of more than $100 million, if we focus on the sample of 44 "pure" deregistering firms, and to different estimation windows.

b. Stock-Price Reactions of Deregistering Firms to the SEC's New Rule

Did the firms that deregistered in 2007 react favorably to the announcement of Rule 12h-6 back in 2005 and 2006 to ease the process toward termination of registration? The loss of competitiveness theory would predict it would be so since the market at that time would have understood well the costs of the new provisions of SOX and likely knew that these firms would have a good chance to be eligible to exercise the option to deregister under the new rules.

To answer this question, we use the same equally- and value-weighted portfolios of the sample of deregistering firms, and benchmark portfolios of the other exchange-listed foreign firms and Level 1 OTC/Rule 144a private placement firms. There are three events we consider in the analysis: (a) December

[19] The *t*-statistics on the SOX dummies reported in Litvak's Table 6 are also likely overstated. The regressions are estimated using ordinary least squares, which is problematic when the regression uses firm-level data and event dates common across all firms. The standard errors do not account for the cross-correlation of the error terms across firms, which is likely to be substantial around the event period.

14, 2005, which was the date of the announcement of the proposed rule,[20] (b) December 13, 2006, which was the date of the announcement of the re-proposed rule after the extended comment period,[21] and (c) March 21, 2007, when the Commission officially adopted the rule. We use the same methodology as the previous section considering each deregistration event date with a separate dummy variable and a condensed event dummy for all three events.

Table 5 provides our estimates of the stock-price reactions to the announcements related to Rule 12h-6. We find that no date has a positive stock-price reaction. The result for exchange-listed firms is not surprising in light of the work of Fernandes, Lel, and Miller (2007). The result for deregistering firms is surprising, however, given the loss of competitiveness theory since the market would presumably have anticipated that these firms would benefit from the announcements. At the same time, however, the estimates are not supportive of the bonding theory either. With that theory, we would expect a negative announcement return for the rule change since allowing firms to renege more easily on the bonding provided by adherence to U.S. laws and regulations would decrease the value of a U.S. listing.

c. Stock-Price Reactions of Deregistering Firms to their Deregistration Announcements

We now turn to the stock-price reactions around firms' deregistration announcements. Although the firms made their announcements at different times after the new rules were adopted, they are closely clustered in calendar time and the returns of these firms are not independent. We therefore estimate the stock-price reactions of the different firms in a SUR system as recommended in the literature for this type of situation (see Schipper and Thompson, 1983). This approach employs Zellner's seemingly-unrelated regression (SUR) in which a returns-generating time-series model (usually, a market model) is specified for each stock with dummy variables for key event dates and these equations are estimated as a system of equations. Binder (1998) recommends this approach over standard event-study methodology, in particular

[20] See Release No. 34-53020 and as it applies to 17 Code of Federal Regulation Parts 200, 232, 240 and 249. http://www.sec.gov/rules/proposed/34-53020.pdf.
[21] See Release No. 34-55005 at http://www.sec.gov/rules/proposed/2006/34-55005.pdf.

for events with uncertain or partially-anticipated dates, and for those naturally clustered in calendar time, like for regulatory events.[22]

The results are reported in Table 6. We find that the mean and median abnormal returns are negative, but not significant. At the same time, however, 65% of the abnormal returns are negative whether we use an equally-weighted or a value-weighted benchmark portfolio. The probability of finding such a high fraction of negative abnormal returns when the sign of the abnormal return is randomly distributed is only 3%. Consequently, the binomial test provides some evidence that there is a statistically significant predominance of negative abnormal returns. There is clearly no evidence to support the view that firms gain from deregistration and there is some weak evidence to support the view that shareholders lose.

We next turn to regressions to understand the cross-sectional variation in abnormal returns. These regressions are presented in Table 7. The format of the table is exactly the same as the format of Table 2, although we add two additional variables in these regressions: U.S. trading %, the percentage of the total average daily trading volume (home market plus U.S. market) that takes place in the U.S. and a SOX cost dummy. We estimate regressions using 2005 data, 2006 data, for the sample of the 44 "pure" deregistering firms using 2006 data, and for the non-financial firms with assets of more than $100 million using 2006 data. Sales growth is always significant with a negative coefficient, as is leverage. None of the other variables are consistently significant, although U.S. trading %, which has a negative coefficient is significant in three of four regressions. We investigated whether firms attribute their decision to deregister partly to SOX and U.S. regulatory burdens. For 18 of the 59 firms, we found evidence of this, based on statements made in the press release of the deregistration announcement and set the SOX cost dummy equal to one for these firms. This dummy variable has a positive coefficient, but it is never statistically significant. When we use a value-weighted benchmark portfolio to estimate the abnormal returns, we find

[22] See Section 5.2 in Binder (1998).

similar results. When we use White's (1980) robust standard errors instead of OLS standard errors, sales growth always has a significant coefficient and the results for the other variables are similar.[23]

The evidence in Table 7 consistently suggests that deregistration is bad news for shareholders of firms with good growth opportunities. Firms with good growth opportunities are firms for which a U.S. listing with SEC registration is more valuable. Hence, it might not be surprising that the market would react poorly to the announcement that such firms chose to deregister.

5. Conclusion

Until the SEC changed the rules on March 21, 2007 to facilitate U.S. deregistration for foreign firms from U.S. markets, it was extremely difficult for them to do so. As a result, firms that wished to deregister most likely did not do so because they were unable to meet the necessary requirements. When Rule 12h-6 came into effect, deregistration became substantially easier and the change in the rules was followed by a large number of deregistrations. In this paper, we investigate the characteristics of the firms that chose to deregister immediately after the change in the rules and the economic consequences of their decisions.

Two theories offer predictions about the characteristics of and consequences for the deregistering firms. The first theory follows directly from the bonding theory of cross-listing that predicts that corporate insiders value a listing when their firm has valuable growth opportunities that they can finance on better terms by committing to the laws and rules that govern U.S. markets. The listing comes at a cost to insiders since it limits their ability to extract private benefits from their controlling position. If a firm is no longer expected to require outside finance because its growth opportunities have been taken advantage of or because they have disappeared, a listing is no longer valuable for insiders. Consequently, firms that deregister should be those with poor growth opportunities that have performed poorly. Deregistration should be advantageous for insiders, but not for minority shareholders, so that it should be accompanied by a negative abnormal return. Further, this negative return should be worse for firms with higher growth

[23] We also computed standard errors with country-level clustering. A difficulty with this approach is that in several countries, there is only one deregistering firm. In any case, sales growth remains significant in each of the regressions.

opportunities. With the bonding theory, the value of a cross-listing is higher for a firm if it is harder for the firm to deregister. Consequently, the passage of new Exchange Act Rule 12h-6 should have had an adverse impact on cross-listed firms. The other theory, which we call the loss of competitiveness theory, predicts that firms deregister because the Sarbanes-Oxley Act of 2002, and possibly other regulatory developments, reduced the net benefits of a listing in the U.S. so that, for some firms, the value of a listing became negative. With this theory, foreign firms should have experienced wealth losses from SOX, the firms that deregistered should have experienced worse wealth losses, and the introduction of the new deregistration rules and the deregistration announcements themselves should increase shareholder wealth.

Admittedly, the power of some our tests is limited by the fact that our sample of deregistering firms includes only 59 firms. Nevertheless, we find evidence that deregistering firms have poorer growth opportunities than other foreign firms with exchange listings and that these deregistering firms performed poorly prior to their deregistration announcements. We do not find any reliable evidence that foreign listed firms suffered from SOX or that SOX had a more adverse impact on deregistering firms. Finally, deregistering firms did not benefit from (and actually, in some tests, may have been hurt by) their deregistration announcements, and the shareholders of deregistering firms with better growth opportunities were affected more adversely by deregistration. None of these results are directly supportive of the loss of competitiveness theory. Some of these results are directly supportive of the bonding theory and others do not contradict it.

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Table 1. Summary Statistics.

This table compares the characteristics of the 59 non-U.S. firms that deregistered from U.S. Markets using Rule 12h-6 between March 21, 2007 and September 30, 2007 with the characteristics of non-U.S. firms with cross-listings on U.S. exchanges that did not deregister. Firms must be in the Worldscope database and must have total assets of at least $10 million. Data is for 2006. Sales growth is inflation adjusted two-year sales growth (winsorized at 1% and 99% tails), global industry *q* is the median global industry *q*, Tobin's *q* is computed as ((Total Assets – Book Equity) + Market Value of Equity) / Total Assets (all variables are in local currency)., total assets are in $ millions, leverage is defined as total debt divided by total assets, and ownership is the data item "closely-held shares" from Worldscope. Common law is a dummy variable that equals one if a country's legal origin is based on common law. Legal is anti-director × rule of law, from Djankov et al. (2008) and La Porta et al. (1998). Log of GNP per capita ($) and stock market capitalization to GDP are from the World Bank WDI Database. The tests at the bottom of each panel report *p*-values from t-tests (means) and Wilcoxon rank-sum tests (medians).

	Sales growth	Tobin's *q*	Global industry *q*	Total assets	Leverage	Ownership	Common law	Legal	GNP / capita	Market cap /GDP
Deregistering firms										
Mean	0.07	1.85	1.47	34527.27	0.28	0.20	0.39	32.89	36434.58	1.09
Median	0.04	1.42	1.41	7254.66	0.28	0.17	0.00	35.00	36550.00	1.10
N	58	56	59	59	59	52	59	59	59	59
Exchange-listed firms										
Mean	0.18	2.00	1.49	47619.53	0.21	0.31	0.57	30.50	27605.57	1.24
Median	0.10	1.54	1.36	1784.93	0.19	0.25	1.00	31.60	36170.00	1.17
N	609	637	686	686	684	510	657	652	657	657
t-test	0.06	0.41	0.70	0.64	0.00	0.00	0.00	0.12	0.00	0.27
Wilcoxon rank sum test	0.01	0.64	0.97	0.00	0.00	0.00	0.00	0.21	0.00	0.07

Table 2. Logit Regressions: The Characteristics of Deregistering Firms.
Logit regressions are estimated where the dependent variable equals one for each of the 59 firms that deregistered from U.S. markets using Rule 12h-6 between March 21, 2007 and September 30, 2007 and is zero for non-U.S. firms cross-listed on U.S. exchanges that did not deregister. Models 1-3 require that firms have total assets of at least $10 million. Model 1 uses data for 2005; Models 2-4 use data for 2006. In Model 3, the dependent variable equals one for the 44 "pure" deregistering firms, described in Section 3. In Model 4, firms with total assets less than $100m, financial firms, and firms from tax havens are excluded from the sample. Firm-level data is from the Worldscope database. Sales growth is inflation adjusted two-year sales growth (winsorized at 1% and 99% tails), global industry *q* is the median global industry *q*, total assets are in $ thousands, leverage is defined as total debt divided by total assets, and ownership is the data item "closely-held shares" from Worldscope. Legal is anti-director × rule of law, from Djankov et al. (2008) and La Porta et al. (1998). Log of GNP per capita ($) and stock market capitalization to GDP are from the World Bank WDI Database. The *t*-statistics, in parentheses are adjusted for clustering on countries – they are computed assuming observations are independent across countries, but not within countries. Pseudo-R^2 is a goodness-of-fit measure based on the difference between unrestricted and restricted likelihood functions. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3	Model 4
Constant	-18.885	-20.203	-19.869	-19.541
	(2.82)***	(2.64)***	(2.57)**	(2.31)**
Sales growth	-0.840	-0.982	-1.158	-1.779
	(1.93)*	(2.20)**	(1.81)*	(1.90)*
Global Industry *q*	0.245	0.315	-0.020	0.054
	(0.55)	(0.57)	(0.04)	(0.08)
Log(assets)	0.021	0.038	0.076	-0.049
	(0.26)	(0.47)	(0.79)	(0.49)
Leverage	2.364	1.925	2.352	2.94
	(2.80)***	(3.01)***	(2.88)***	(3.92)***
Ownership	-0.943	-0.834	-0.996	-1.125
	(1.35)	(1.14)	(1.06)	(1.52)
Legal	-0.030	-0.038	-0.057	-0.039
	(0.74)	(0.87)	(1.33)	(1.00)
Stock market cap / GDP	-0.282	-0.283	-0.164	-0.239
	(0.64)	(0.62)	(0.37)	(0.61)
Log(GNP)	1.658	1.783	1.756	1.872
	(2.41)**	(2.31)**	(2.24)**	(2.29)**
Number of observations	571	514	504	418
Pseudo R^2	0.1339	0.1320	0.1448	0.1642

Table 3. Return Performance of Deregistering Firms.

This table compares the return performance of firms that deregistered under using Rule 12h-6 with non-U.S. firms cross-listed on U.S. exchanges that did not deregister. The regression, $R_{Dereg,\,t} - R_{Bench,\,t} = \alpha + \beta \times [R_{W\_exUS,\,t} - R_{f,t}) + \gamma \times SMB_t + \delta \times HML_t + \varepsilon_t$, is estimated by OLS over the period from Jan 1, 2001 – Dec 31, 2007 in (1) and (4), from Jan 1, 2001 – Dec 31, 2004 (the "Pre-deregistration" period) in (2) and (5), and from Jan 1, 2005 – Dec 31, 2007 (the "Deregistration" period) in models (3) and (6). R_{Dereg} is the weekly (Friday to Friday) U.S. dollar return on a portfolio of firms that deregistered using Rule 12h-6 in 2007 and R_{Bench} is return on a portfolio of non-U.S. firms listed on U.S. exchanges that did not deregister. R_{W_exUS} is the weekly U.S. dollar return on the world market portfolio (excluding the U.S.). SMB and HML are the size and book to market factors from Fama and French (1993). In Panel a, the portfolios are formed using equally-weighed returns and in Panel b they are formed using value-weighted returns. Firms with less than 100 weekly observations, less than $10 million in total assets, and firms that delisted prior to July 8, 2002 are excluded. *t*-statistics are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Panel a. Equally-weighted portfolio returns			Panel b. Value-weighted portfolio returns		
	(1) Full period	(2) Pre-deregistration period	(3) Deregistration period	(4) Full period	(5) Pre-deregistration period	(6) Deregistration period
Constant	-0.00090	-0.00187	0.00027	0.00012	-0.00062	0.00087
	(1.72)*	(2.39)**	(0.42)	(0.21)	(0.77)	(1.22)
World market ex-US	0.06263	0.09658	0.01265	-0.09176	-0.12151	-0.03519
	(2.45)**	(2.64)***	(0.38)	(3.41)***	(3.23)***	(0.94)
SMB	-0.14754	-0.09530	-0.22712	0.05368	0.07295	0.01182
	(3.26)***	(1.57)	(3.35)***	(1.13)	(1.17)	(0.16)
HML	0.17792	0.21361	0.11790	0.31551	0.34881	0.12395
	(3.62)***	(3.48)***	(1.25)	(6.11)***	(5.52)***	(1.18)
Number of observations	364	208	156	364	208	156
Adjusted R^2	0.0630	0.0693	0.0684	0.1269	0.1871	-0.0053

Table 4. Stock-Price Reactions of Exchange-Listed firms and Deregistering Firms Around SOX Events.

The regression $R_{p,t} = \alpha + \beta \times R_{b,t} + \boldsymbol{\delta}'\mathbf{Event\_Dummy} + \varepsilon_t$, is estimated from Jan 1, 2001 – Dec 31, 2003. **Event_Dummy** is a vector that includes dummy variables for the SOX event dates from Litvak (2007), Table 1. Events predicted to have a negative (positive) reaction have "-" ("+") superscripts. Events in bold are identified by Litvak (2007) as important SOX events. In (1), (4), and (7) R_p is the daily U.S. dollar return on a portfolio that includes all non-U.S. firms cross-listed on U.S. exchanges. In (2), (5), and (8) R_p is the return on a portfolio of firms that subsequently deregistered using Rule 12h-6 in 2007. In (3), (6), and (9) R_p is the difference in returns on the portfolio of deregistering firms and the portfolio of exchange-listed firms that did not deregister (denoted "Dereg – Exch"). R_b is the return on the benchmark portfolio that includes all non-U.S. firms listed in the U.S. via Level 1 or Rule 144a ADRs. Firms with less than 260 daily observations, less than $10 million in total assets, and firms that delisted prior to July 8, 2002 are excluded. In Panel a, coefficients are estimated for each event dummy variable. In Panels b and c, a single dummy variable that equals one (negative one) on predicted negative (positive) events is defined. *t*-statistics, in parentheses. , **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Equally-weighted portfolio returns			Value-weighted portfolio returns			R_p is EW; R_b is VW		
Panel a. Individual SOX event dummies	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(4) All exchange-listed firms	(5) Deregistering firms	(6) Dereg – Exch	(7) All exchange-listed firms	(8) Deregistering firms	(9) Dereg – Exch
Constant	-0.00024	-0.00071	-0.00050	-0.00053	-0.00031	0.00024	0.00020	-0.00033	-0.00057
	(1.24)	(2.69)***	(2.28)**	(2.81)***	(1.34)	(0.99)	(1.08)	(1.53)	(2.68)***
1- Early SEC	-0.00272	-0.00226	0.00050	-0.00090	-0.00097	-0.00008	-0.00143	-0.00074	0.00075
	(0.90)	(0.56)	(0.15)	(0.30)	(0.27)	(0.02)	(0.49)	(0.22)	(0.22)
2- House Committee	-0.00330	-0.00120	0.00228	-0.00132	-0.00019	0.00123	-0.00238	-0.00052	0.00201
	(1.09)	(0.29)	(0.67)	(0.45)	(0.05)	(0.33)	(0.82)	(0.16)	(0.60)
3- Full House	-0.00225	-0.00162	0.00068	-0.00144	-0.00163	-0.00020	-0.00351	-0.00291	0.00066
	(0.96)	(0.51)	(0.26)	(0.63)	(0.58)	(0.07)	(1.56)	(1.12)	(0.25)
4- Senate Committee 1st announcement	-0.00503	-0.00142	0.00392	-0.00030	0.00334	0.00396	-0.00329	0.00091	0.00456
	(1.67)*	(0.35)	(1.15)	(0.10)	(0.92)	(1.05)	(1.13)	(0.27)	(1.36)
5- Senate Committee follow up	0.00384	0.00681	0.00322	0.00609	0.00914	0.00332	0.00220	0.00537	0.00344
	(1.27)	(1.67)*	(0.94)	(2.06)**	(2.53)**	(0.88)	(0.76)	(1.61)	(1.03)
6- WorldCom Announcement	0.00118	0.00443	0.00352	0.00425	-0.00015	-0.00478	-0.00325	0.00037	0.00392
	(0.39)	(1.09)	(1.03)	(1.44)	(0.04)	(1.27)	(1.12)	(0.11)	(1.17)
7- Sarbanes Amendment	-0.00146	-0.00276	-0.00140	-0.00119	-0.00383	-0.00287	-0.00124	-0.00280	-0.00169
	(0.56)	(0.78)	(0.47)	(0.47)	(1.22)	(0.88)	(0.49)	(0.97)	(0.58)
8- Dorgan Amendment	-0.00285	-0.00447	-0.00175	-0.00423	-0.00201	0.00243	0.00188	0.00160	-0.00030
	(0.84)	(0.97)	(0.45)	(1.26)	(0.49)	(0.57)	(0.57)	(0.42)	(0.08)

Table 4, continued.

Panel a. Individual SOX event dummies	Equally-weighted portfolio returns			Value-weighted portfolio returns			R_p is EW; R_b is VW		
	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(4) All exchange-listed firms	(5) Deregistering firms	(6) Dereg – Exch	(7) All exchange-listed firms	(8) Deregistering firms	(9) Dereg – Exch
9^{-} Bills pass House and Senate	0.00027	0.00124	0.00106	0.00286	0.00038	-0.00269	-0.00078	0.00015	0.00101
	(0.11)	(0.38)	(0.39)	(1.21)	(0.13)	(0.89)	(0.33)	(0.06)	(0.38)
10^{+} Conference Report	-0.00035	0.00606	0.00694	0.00127	-0.00564	-0.00750	-0.01144	-0.00506	0.00692
	(0.13)	(1.70)*	(2.32)**	(0.50)	(1.80)*	(2.30)**	(4.54)***	(1.75)*	(2.39)**
11^{-} President	0.00702	0.00609	-0.00101	0.00199	0.00446	0.00268	0.00100	-0.00120	-0.00239
	(2.33)**	(1.50)	(0.30)	(0.67)	(1.23)	(0.71)	(0.34)	(0.36)	(0.71)
12^{-} SEC Rule 302: no exemption	-0.00256	-0.01069	-0.00880	-0.00018	-0.00510	-0.00532	0.00157	-0.00508	-0.00720
	(0.85)	(2.62)***	(2.57)**	(0.06)	(1.41)	(1.41)	(0.54)	(1.52)	(2.14)**
13^{+} Pitt suggests exemptions	0.00334	0.00558	0.00243	0.00388	-0.00054	-0.00480	-0.00184	0.00018	0.00220
	(1.43)	(1.77)*	(0.92)	(1.69)*	(0.19)	(1.65)	(0.82)	(0.07)	(0.85)
14^{-} SEC rules 404, 406, 407 no exemptions	-0.00171	-0.00532	-0.00392	-0.00413	-0.00236	0.00193	0.00357	0.00048	-0.00336
	(0.57)	(1.31)	(1.15)	(1.40)	(0.65)	(0.51)	(1.23)	(0.14)	(1.00)
Portfolio: Level 1 & Rule 144a firms	1.08943	1.14068	0.05552	1.15299	0.91925	-0.25285	0.90774	1.03817	0.14152
	(42.73)***	(33.18)***	(1.92)*	(56.29)***	(36.68)***	(9.68)***	(45.02)***	(44.91)***	(6.10)***
Number of observations	782	782	782	782	782	782	782	782	782
Adjusted R^2	0.7102	0.5937	0.0078	0.8073	0.6435	0.1061	0.7310	0.7275	0.0492

Table 4, continued.

Panel b. Condensed event dummy – all SOX events included	Equally-weighted portfolio returns			Value-weighted portfolio returns			R_p is EW; R_b is VW		
	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(4) Exchange-listed firms	(5) Deregistering firms	(6) Dereg – Exch	(7) Exchange-listed firms	(8) Deregistering firms	(9) Dereg – Exch
Constant	-0.00023	-0.00060	-0.00041	-0.00048	-0.00038	0.00011	0.00006	-0.00038	-0.00049
	(1.21)	(2.34)**	(1.88)*	(2.59)***	(1.66)*	(0.48)	(0.34)	(1.84)*	(2.30)**
All events dummy	-0.00095	-0.00183	-0.00095	-0.00017	0.00064	0.00088	0.00075	0.00009	-0.00072
	(1.26)	(1.79)*	(1.11)	(0.23)	(0.71)	(0.93)	(1.02)	(0.10)	(0.86)
Portfolio: Level 1 & Rule 144a firms	1.09097	1.13303	0.04555	1.15302	0.92633	-0.24521	0.91192	1.04011	0.13910
	(43.65)***	(33.52)***	(1.61)	(57.06)***	(37.44)***	(9.52)***	(45.44)***	(45.74)***	(6.07)***
Number of observations	782	782	782	782	782	782	782	782	782
Adjusted R^2	0.7092	0.5900	0.0023	0.8068	0.6420	0.1038	0.7255	0.7283	0.0441
Panel c. Condensed event dummy – important SOX events only	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(4) Exchange-listed firms	(5) Deregistering firms	(6) Dereg – Exchange	(7) Exchange-listed firms	(8) Deregistering firms	(9) Dereg – Exch
Constant	-0.00021	-0.00058	-0.00041	-0.00046	-0.00033	0.00014	0.00009	-0.00036	-0.00049
	(1.10)	(2.27)**	(1.88)*	(2.48)**	(1.44)	(0.61)	(0.50)	(1.71)*	(2.32)**
Important SOX events dummy	-0.00221	-0.00355	-0.00146	-0.00112	-0.00099	0.00014	0.00002	-0.00090	-0.00100
	(2.30)**	(2.74)***	(1.34)	(1.18)	(0.86)	(0.11)	(0.02)	(0.85)	(0.93)
Portfolio: Level 1 & Rule 144a firms	1.08916	1.13004	0.04427	1.15131	0.92387	-0.24602	0.91105	1.03847	0.13825
	(43.67)***	(33.51)***	(1.56)	(56.90)***	(37.26)***	(9.53)***	(45.27)***	(45.58)***	(6.02)***
Number of observations	782	782	782	782	782	782	782	782	782
Adjusted R^2	0.7106	0.5923	0.0030	0.8072	0.6421	0.1028	0.7251	0.7285	0.0443

Table 5. Stock-Price Reactions of Exchange-Listed Firms and Deregistering Firms Around Rule 12h-6 Events.

The regression $R_{p,t} = \alpha + \beta \times R_{b,t} + \boldsymbol{\delta}'\mathbf{Event\_Dummy} + \varepsilon_t$, is estimated from Jan 1, 2005 – Dec 31, 2007. **Event_Dummy** is a vector that includes dummy variables for deregistration event dates from www.sec.gov. In (1) and (4), R_p is the daily U.S. dollar return on a portfolio that includes all non-U.S. firms cross-listed on U.S. exchanges. In (2) and (5), R_p is the return on a portfolio of firms that subsequently deregistered using Rule 12h-6 in 2007. In (3) and (6), R_p is the difference in returns on the portfolio of deregistering firms and the portfolio of exchange-listed firms that did not deregister (denoted "Dereg – Exch"). R_b is the return on the benchmark portfolio that includes all non-U.S. firms listed in the U.S. via Level 1 or Rule 144a ADRs. Firms with less than 260 daily observations and firms with less than $10 million in total assets are excluded. In Panel a, coefficients are estimated for each dummy variable. In Panel b, a single dummy variable that equals one over all event days is defined. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Equally-weighted portfolio returns			Value-weighted portfolio returns		
Panel a. Individual deregistration event dummies	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(4) All exchange-listed firms	(5) Deregistering firms	(6) Dereg – Exch
Constant	-0.00028	-0.00026	0.00003	-0.00015	-0.00001	0.00015
	(1.95)*	(1.52)	(0.19)	(1.33)	(0.07)	(1.22)
1 December 14, 2005	-0.00045	-0.00069	-0.00026	-0.00127	-0.00031	0.00104
	(0.19)	(0.25)	(0.11)	(0.72)	(0.12)	(0.53)
2 December 13, 2006	-0.00041	0.00114	0.00169	0.00146	0.00192	0.00051
	(0.17)	(0.42)	(0.70)	(0.82)	(0.77)	(0.26)
3 March 21, 2007	0.00124	-0.00159	-0.00309	0.00139	0.00095	-0.00050
	(0.53)	(0.59)	(1.28)	(0.79)	(0.38)	(0.25)
Portfolio: Level 1 & Rule 144a firms	0.85317	0.91176	0.06401	0.86681	0.86501	-0.00216
	(49.15)***	(45.16)***	(3.56)***	(67.63)***	(47.67)***	(0.15)
Number of observations	781	781	781	781	781	781
Adjusted R^2	0.7567	0.7235	0.0130	0.8550	0.7452	-0.0046
Panel b. Condensed event dummy	(1) All exchange-listed firms	(2) Deregistering firms	(3) Dereg – Exch	(3) All exchange-listed firms	(4) Deregistering firms	(3) Dereg – Exch
Constant	-0.00029	-0.00026	0.00003	-0.00015	-0.00001	0.00015
	(1.96)*	(1.52)	(0.20)	(1.33)	(0.07)	(1.23)
All events dummy	0.00013	-0.00038	-0.00055	0.00053	0.00085	0.00036
	(0.10)	(0.24)	(0.39)	(0.51)	(0.59)	(0.31)
Portfolio: Level 1 & Rule 144a firms	0.85373	0.91123	0.06283	0.86732	0.86517	-0.00254
	(49.30)***	(45.24)***	(3.50)***	(67.76)***	(47.78)***	(0.18)
Number of observations	781	781	781	781	781	781
Adjusted R^2	0.7572	0.7240	0.0130	0.8550	0.7457	-0.0024

Table 6. Stock-Price Reactions Around Deregistration Announcements.
The regression $R_{i,t} = \alpha_i + \beta_i \times R_{b,t} + \delta_i \times Event\_Date_i + \varepsilon_{it}$, is estimated for each firm as a system of equations using SUR from Jan 1, 2005 – Dec 31, 2007. Event_Date is a dummy variable that equals one for the three day window around the firm's deregistration announcement date. Announcement dates are identified from firm's Form 15F filings (Item 7). R_i is the daily U.S. dollar return for deregistering firm i and R_b is the return on the benchmark portfolio that includes all non-U.S. firms cross-listed in the U.S. via Level 1 or Rule 144a ADRs. Firms with less than 260 daily observations and firms with less than $10 million in total assets are excluded from this portfolio. The sample includes 59 firms that announced their intention to deregister their securities via Rule 12h-6 between March 21, 2007 and September 30, 2007. Two firms are excluded because they do not have complete data over the sample period. The table reports the distribution of the estimated δ's and their corresponding t-statistics. Tests 1 and 2 report p-values based on the estimated SUR covariance matrix. The binomial test tests whether the percentage of negative values of δ is different from 50%. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

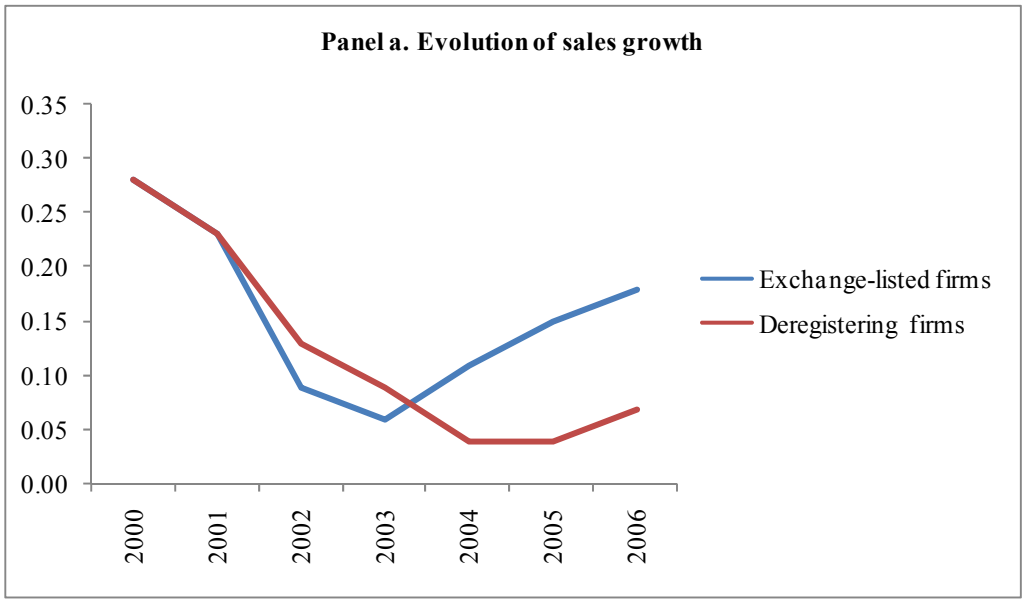
	Benchmark portfolio: EW		Benchmark portfolio: VW	
	δ's	t-statistics	δ's	t-statistics
Mean	-0.00112	-0.09	-0.00087	-0.06
Median	-0.00311	-0.28	-0.00268	-0.30
Minimum	-0.03075	-2.45	-0.03063	-2.32
Maximum	0.02400	3.31	0.02838	3.35
% negative	65%		65%	
% positive	35%		35%	
Test 1: $\delta_{i's}$ jointly equal zero	0.18		0.13	
Test 2: average δ equals zero	0.41		0.53	
Binomial test	0.03**		0.03**	

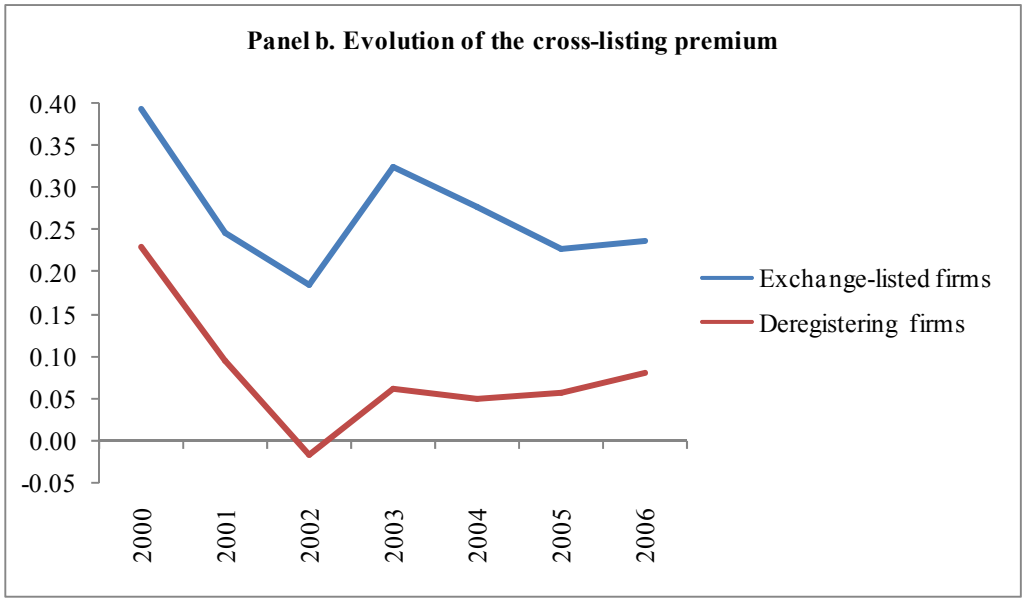
Table 7. Cross-Sectional Regressions of Cumulative Abnormal Returns Around Deregistration Announcement Dates.

This table presents cross-sectional regressions that examine the impact of firm and country characteristics on the stock-price reaction around firms deregistration announcement dates (-1,+1). Stock market reactions are estimated in Table 6. The sample includes 59 firms that deregistered from U.S. markets using Rule 12h-6 between March 21, 2007 and September 30, 2007. Two firms are excluded because they do not have complete data over the sample period. Models 1-3 require that firms have total assets of at least $10 million. Model 1 uses data for 2005; Models 2-4 use data for 2006. In Model 3, the dependent variable equals one for the 44 "pure" deregistering firms, described in Section 3. In Model 4, firms with total assets less than $100m, financial firms, and firms from tax havens are excluded from the sample. Firm-level data is from the Worldscope database. Sales growth is inflation adjusted two-year sales growth (winsorized at 1% and 99% tails), global industry *q* is the median global industry *q*, total assets are in $ thousands, leverage is total debt divided by total assets, and ownership is the data item "closely-held shares" from Worldscope. U.S. Trading % is the percentage of the total average daily trading volume (home market plus U.S. market) that takes place in the U.S. SOX cost is a dummy variable that equals one for 18 firms that mentioned compliance costs associated with SOX as motivation for the deregistration decision in press releases. Legal is anti-director × rule of law, from Djankov et al. (2008) and La Porta et al. (1998). Log of GNP per capita ($) and stock market capitalization to GDP are from the World Bank WDI Database. *t*-statistics are in parentheses. *, **, and *** indicate statistical significance at the 10%, 5%, and 1% levels, respectively.

	Model 1	Model 2	Model 3	Model 4
Constant	0.0737	0.0863	0.0567	0.0609
	(1.48)	(1.56)	(1.10)	(1.15)
Sales growth	-0.0348	-0.0248	-0.0250	-0.0371
	(3.65)***	(2.78)***	(2.16)**	(3.69)***
Global Industry *q*	0.0023	0.0017	0.0039	-0.0026
	(0.42)	(0.25)	(0.53)	(0.35)
Log(assets)	0.0008	0.0006	0.0012	0.0020
	(0.91)	(0.71)	(1.41)	(2.06)**
Leverage	-0.0132	-0.0248	-0.0220	-0.0242
	(1.78)*	(2.69)**	(2.38)**	(2.53)**
Ownership	0.0042	0.0064	-0.0013	0.0012
	(0.55)	(0.74)	(0.15)	(0.14)
U.S. trading %	-0.0574	-0.1165	-0.1357	-0.1524
	(1.40)	(2.20)**	(2.17)**	(2.48)**
SOX cost dummy	0.0052	0.0050	0.0037	0.0051
	(1.60)	(1.49)	(1.04)	(1.53)
Legal	0.0003	0.0004	0.0003	0.0003
	(1.09)	(1.33)	(1.14)	(1.25)
Stock market cap / GDP	-0.0036	-0.0029	-0.0025	-0.0022
	(1.57)	(1.23)	(1.15)	(0.96)
Log(GNP)	-0.0087	-0.0094	-0.0075	-0.0082
	(1.64)	(1.65)	(1.40)	(1.47)
Number of observations	48	47	39	41
Adjusted R^2	0.1810	0.1833	0.0710	0.3082

Figure 1. The Evolution of Sales Growth and the Cross-listing Premium.
In Panel a, the figure shows average sales growth each year from 2000 – 2006 for exchange-listed firms and for the sample of 59 firms that deregistered from U.S. markets using Rule 12h-6 between March 21, 2007 and September 30, 2007. For each sample, each year, sales growth is inflation adjusted two-year sales growth (winsorized at 1% and 99% tails). Panel b shows the the estimated coefficients for δ_3 and δ_4 from the regression, $q_i = \alpha + \delta_1 \times \text{Rule } 144a_i + \delta_2 \times \text{OTC}_i + \delta_3 \times \text{Exchange-listed}_i + \delta_4 \times \text{Deregister}_i$ + control variables, which is estimated each year from 2000 – 2006. Tobin's *q* is computed as ((Total Assets – Book Equity) + Market Value of Equity) / Total Assets (all variables are in local currency). Exchange-listed is a dummy variable that equals one for firms listed on a major U.S. exchange in a given year and did not deregister. Deregister is a dummy that equals one for the exchange-listed firms that deregistered from U.S. markets. The sample includes firms in the Worldscope database with total assets of at least $10 million in a given year. The sample size for the exchange-listed firms ranges from 593 in 2000 to 623 in 2006. The sample size for the deregistering listed firms ranges from 39 in 2000 to 58 in 2006.





Appendix A. Sample of Deregistering Firms.

This appendix provides the list of 59 non-U.S. firms included in our sample that announced the deregistration of 62 securities from U.S. markets using Rule 12h-6 between March 21, 2007 and September 30, 2007 (Fiat SPA and Telecom Italia Media SPA filed Form 15F on multiple securities trading in U.S. markets). Eleven of the 59 firms delisted from a U.S. stock exchange sometime prior to their Form 15F filing and 4 other firms had never listed on a major exchange, but were registered.

Company name	Deregistration form type	Filing date	Announcement date	Prior delisting	Country of domicile	Home trading market
Acambis PLC	15F-12G	6/7/2007	9/13/2006	Yes	U.K.	London Stock Exchange
Aktiebolaget Electrolux	15F-12G	9/12/2007	9/4/2007	Yes	Sweden	Stockholm Stock Exchange
Akzo Nobel NV	15F-12G	9/28/2007	7/24/2007	No	Netherlands	Euronext Amsterdam
Alamos Gold Inc	15F-12G	6/15/2007	6/15/2007	Not listed	Canada	Toronto Stock Exchange
Amcor Ltd	15F-12G	6/4/2007	5/2/2007	Yes	Australia	Australian Stock Exchange
Ansell Ltd	15F-12G	6/5/2007	6/4/2007	No	Australia	Australian Stock Exchange
Australia & New Zealand Banking Group Ltd	15F-12G	7/13/2007	6/20/2007	No	Australia	Australian Stock Exchange
BASF AG	15F-12B	9/6/2007	7/30/2007	No	Germany	Deutsche Börse
Bayer AG	15F-12B	9/28/2007	9/5/2007	No	Germany	Deutsche Börse
BG Group PLC	15F-12B	9/21/2007	7/25/2007	No	U.K.	London Stock Exchange
Breakwater Resources Ltd	15F-12G	6/29/2007	6/27/2007	Yes	Canada	Toronto Stock Exchange
British Airways PLC	15F-12B	6/5/2007	4/25/2007	No	U.K.	London Stock Exchange
Bunzl PLC	15F-12B	6/6/2007	5/1/2007	No	U.K.	London Stock Exchange
Canwest Global Communications Corp	15F-12B	6/13/2007	5/11/2007	No	Canada	Toronto Stock Exchange
Cinram International Income Fund	15F-12G	6/13/2007	6/13/2007	Yes	Canada	Toronto Stock Exchange
Commonwealth Bank Of Australia	15F-12B	6/5/2007	5/9/2007	Not listed	Australia	Australian Stock Exchange
Ducati Motor Holding SPA	15F-12B	6/4/2007	5/14/2007	No	Italy	Italian Stock Exchange
E On AG	15F-12B	9/10/2007	8/21/2007	No	Germany	Deutsche Börse
EDP Energias De Portugal SA	15F-12B	6/7/2007	5/15/2007	No	Portugal	Euronext Lisbon
Euro Disney SCA	15F-15D	6/5/2007	6/5/2007	Not listed	France	Euronext Paris
Extendicare Real Estate Investment Trust	15F-12B	6/4/2007	6/4/2007	Yes	Canada	Toronto Stock Exchange
Fiat SPA	15F-12B	8/23/2007	8/3/2007	No	Italy	Italian Stock Exchange
Genesys SA	15F-12B	6/4/2007	5/10/2007	No	France	Euronext Paris
Groupe Danone	15F-12B	7/5/2007	4/26/2007	No	France	Euronext Paris
Hanaro Telecom Inc	15F-12B	6/28/2007	6/8/2007	No	Korea	Korean Securities Dealers (KOSDAQ)
Infovista SA	15F-12G	6/25/2007	6/25/2007	No	France	Euronext Paris
International Power PLC	15F-12B	6/28/2007	6/6/2007	No	U.K.	London Stock Exchange
Kirkland Lake Gold Inc	15F-12G	8/8/2007	8/3/2007	Not listed	Canada	Toronto Stock Exchange
Lafarge	15F-12B	9/24/2007	8/2/2007	No	France	Euronext Paris
Metso Corp	15F-12B	9/17/2007	7/26/2007	No	Finland	OMX Nordic Exchange
Millea Holdings Inc	15F-12G	7/30/2007	7/5/2007	No	Japan	Tokyo Stock Exchange
Naspers Ltd	15F-15D	6/8/2007	5/17/2007	No	South Africa	Johannesburg Stock Exchange,
National Australia Bank Ltd	15F-12B	6/21/2007	5/10/2007	No	Australia	Australian Stock Exchange
Oce NV	15F-12G	6/29/2007	6/19/2007	No	Netherlands	Amsterdam Stock Exchange

Appendix A, continued

Company name	Deregistration form type	Filing date	Announcement date	Prior delisting	Country of domicile	Home trading market
PCCW Ltd	15F-12B	6/4/2007	6/4/2007	No	Hong Kong	Stock Exchange of Hong Kong
Petroleum Geo Services ASA	15F-12B	7/20/2007	5/18/2007	No	Norway	Oslo Stock Exchange
Petsec Energy Ltd	15F-12G	6/6/2007	5/30/2007	Yes	Australia	Australian Stock Exchange
Pfeiffer Vacuum Technology AG	15F-12B	10/4/2007	8/30/2007	No	Germany	Deutsche Börse
Publicis Groupe SA	15F-12B	9/7/2007	9/7/2007	No	France	Euronext Paris
Rhodia	15F-12B	9/28/2007	9/7/2007	No	France	Euronext Paris
Royal Ahold NV	15F-12B	9/28/2007	8/30/2007	No	Netherlands	Euronext Amsterdam
SCOR	15F-12B	6/4/2007	4/3/2007	No	France	Euronext Paris
SKF Inc	15F-12G	6/5/2007	6/4/2007	Yes	Sweden	Stockholm Stock Exchange
Skyepharma PLC	15F-12G	6/4/2007	5/4/2007	No	U.K.	London Stock Exchange
Sodexho Alliance SA	15F-12B	7/16/2007	5/30/2007	No	France	Euronext Paris
Suez	15F-12B	9/21/2007	8/29/2007	No	France	Euronext Paris
Swedish Match Corp	15F-12G	6/5/2007	4/27/2007	Yes	Sweden	Stockholm Stock Exchange
Technip	15F-12B	8/6/2007	7/25/2007	No	France	Euronext Paris
Telecom Italia Media SPA	15F-15D	6/6/2007	6/7/2007	No	Italy	Italian Stock Exchange
Telefonica Del Peru SAA	15F-12B	6/15/2007	6/15/2007	Yes	Peru	Lima Stock Exchange
Telekom Austria AG	15F-12B	6/5/2007	4/24/2007	No	Austria	Vienna Stock Exchange
Telenor ASA	15F-12G	6/12/2007	5/22/2007	No	Norway	Oslo Stock Exchange
Teliasonera AB	15F-12G	6/7/2007	5/23/2007	No	Sweden	Stockholm Stock Exchange
Telstra Corp Ltd	15F-12B	6/4/2007	3/28/2007	No	Australia	Australian Stock Exchange
TNT NV	15F-12B	6/18/2007	5/25/2007	No	Netherlands	Euronext Amsterdam
Trend Micro Inc	15F-12G	6/27/2007	4/26/2007	No	Japan	Tokyo Stock Exchange
Unimarc Supermarkets Inc	15F-12B	9/25/2007	9/25/2007	Yes	Chile	Santiago Stock Exchange
United Utilities PLC	15F-12B	6/25/2007	5/30/2007	No	U.K.	London Stock exchange
Vernalis PLC	15F-12G	6/4/2007	4/24/2007	No	U.K.	London Stock exchange

Appendix B. Firms Excluded From the Final Sample.

This appendix provides the list of 46 non-U.S. firms that filed SEC Form 15F certification of FPI termination of registration between March 21, 2007 and September 30, 2007 and are excluded from our sample. Of the 105 firms that filed Form 15F-12B, 15F-12D, or 15F-12G certifications of FPI termination of registration (deregistrations) we exclude 18 firms because they filed Form 15 prior to March 21, 12 firms that deregistered debt securities only, 13 firms that deregistered as a result of corporate control transactions, and two firms in which home market information is not available from the TSX Venture Exchange and London's AIM.

Excluded firms	Reason for exclusion
Aerco Ltd	Deregistering debt securities only.
AES Gener Inc	Deregistering debt securities only.
Alstom	Previously filed form 15 and deregistered the subject securities.
Aurelia Energy NV	Deregistering debt securities only.
Autonomy Corp PLC	Previously filed form 15 and deregistered the subject securities.
Bayer Schering Pharma AG	Acquired by Bayer and deregistered as a result of the takeover.
Belgo-Mineira Steel Co	Previously filed form 15 and deregistered the subject securities.
Bioprogress PLC	Bioprogress is listed on AIM and home market data is unavailable.
British Energy Group PLC	Previously filed form 15 and deregistered the subject securities.
Cable & Wireless PLC	Previously filed form 15 and deregistered the subject securities.
Coles Group Ltd	Acquired by Wesfarmers and deregistered as a result of the takeover.
Colt Telecom Group PLC	Previously filed form 15 and deregistered the subject securities.
Cookson Group PLC	Previously filed form 15 and deregistered the subject securities.
Daiichi Sankyo Company Ltd	Previously filed form 15 and deregistered the subject securities.
Dialog Semiconductor PLC	Previously filed form 15 and deregistered the subject securities.
ECI Telecom Ltd	Acquired by Swarth Group and deregistered as a result of the takeover.
Embratel Participacoes SA	Acquired by Telefonos de Mexico and deregistered as a result of the takeover.
Enodis PLC	Previously filed form 15 and deregistered the subject securities.
Gemalto NV	Acquired Gemplus and deregistered its securities. The deregistration occurred as a result of the merger.
Genterra Inc	Acquired Mirtronic and deregistered its securities. The deregistration is in connection with the merger.
Gracechurch Card Funding No 6 PLC	Deregistering debt securities only.
Iberdrola, SA	Acquired Scottish Power and deregistered its securities. The deregistration occurred as a result of the merger.
Imperial Chemical Industries PLC	Acquired by Akzo Nobel NV and deregistered as a result of the takeover
Intesa Sanpaolo SPA	Banca Intesa merged with IMI Sanpaolo in 2006. The new entity, Intesa Sanpaolo is deregistering IMI Sanpaolo's securities.
Jean Coutu Group (PJC) Inc	Deregistering debt securities only.
Merck Serono SA	Acquired by Merck KGaA and deregistered as a result of the takeover.
Mitchells & Butlers PLC	Previously filed form 15 and deregistered the subject securities.
MTR Corp Ltd	Deregistering debt securities only.

Appendix B, continued.

Excluded firms	Reason for exclusion
O A O Tatneft	Previously filed form 15 and deregistered the subject securities.
Oslo Challenger PLC	Deregistering debt securities only.
Oslo Explorer PLC	Deregistering debt securities only.
Oslo Seismic Services Inc	Deregistering debt securities only.
Pernod Ricard SA	Previously filed form 15 and deregistered the subject securities.
PGS Geophysical AS	Deregistering debt securities only.
Premier Farnell PLC	Previously filed form 15 and deregistered the subject securities.
Rank Group PLC	Previously filed form 15 and deregistered the subject securities.
Rolling Thunder Exploration Ltd	Listed on the TSX Venture Exchange and home market data is unavailable.
Royal & Sun Alliance Insurance Group PLC	Previously filed form 15 and deregistered the subject securities.
Russel Metals Inc	Deregistering debt securities only.
Scottish Power PLC	Deregistering debt securities only.
TDC A/S	Previously filed form 15 and deregistered the subject securities.
Third Century Bancorp	Filing under the rule 12g-4(a), a preexisting rule. The rule change has no bearing on the decision to deregister.
Tyler Resources Inc	Going through an acquisition attempt by Mercato Minerals Ltd. They deregistered in anticipation of the merger.
United Business Media PLC	Previously filed form 15 and deregistered the subject securities.
Vecima Networks Inc	Acquired Spectrum Signal Processing and deregistered its securities. The deregistration occurred as a result of the merger.
Xenova Group PLC	Acquired by Celtic Pharma Development and deregistered as a result of the takeover.