# Why do foreign firms leave US equity markets?

Craig Doidge, University of Toronto
G. Andrew Karolyi, Cornell University
René M. Stulz, Ohio State University

Rotman

# Foreign listings in the US

- Substantial growth in foreign listings on major US stock exchanges in the 1990s
  - From 328 in 1990 to 960 in 2000
  - New listings peaked in 2000 at 164
- The number of firms voluntarily leaving begins to increase in 2000 and substantially so in 2002 and again in 2007
  - Coincides with passage of the Sarbanes-Oxley Act in 2002
  - Coincides with rule change in 2007 that makes it easier to leave

# Public policy debate

COMMITTEE ON CAPITAL MARKETS REGULATION

COMMISSION ON THE REGULATION OF U.S. CAPITAL MARKETS IN THE 21ST CENTURY

Report and Recommendations

AN INDEPENDENT, BIPARTISAN COMMISSION ESTABLISHED BY THE U.S. CHAMBER OF COMMERCE

MARCH 2007

WELCOME

The Committee on Capital Markets Regulation is an independent and bipartisan group comprised of 24 leaders from the investor community, business, finance, law, accounting, and academia. It began its work in 2006 and is directed by Prof. Hal S. Scott, Nomura Professor and Director of Program on International Financial Systems at Harvard Law School. The Committee Co-Chairs are Glenn Hubbard, Dean of Columbia Business School, and John L. Thornton, Chairman of the Brookings Institution.

On November 30, 2006, the Committee issued its interim report, highlighting areas of concern about the competitiveness of U.S. capital markets and outlining 32 recommendations in four key areas to enhance that competitiveness. These findings and recommendations are summarized in a separate posting on this web site, entitled "Interim Report Highlights."

In addition to research on the regulation of capital markets and shareholder rights, over the next two years the Committee also will study the competitiveness of mutual funds and derivatives markets, as

LATEST NEWS

4/16 SEC is Considering the Committee's Recommendation on Arbitration

3/13 Committee Update

SPOTLIGHT

3/12 Financial Times Op-ED by Director Hal S. Scott, America must act to renew the primacy of its markets

2/26 SEC Filing on Sarbanes-Oxley Section 404

Sustaining New York's and the US' Global Financial Services Leadership

# Leaving US markets

- Until recently it was very difficult or even impossible for many firms to terminate their SEC registration
  - Even if there are low levels of interest by US residents
  - Rules virtually trapped FPIs in the US system, compared to a “roach motel”, “lobster trap”, etc
- Controversy over the effects of SEC registration and enforcement on FPIs listed on US exchanges
- In 2007, the SEC changed the rules to make it easier for FPIs to deregister
  - Adopted Exchange Act Rule 12h-6 on March 29, 2007

# What is our paper about?

- Why leave?
  - Which firms leave US equity markets?
  - Were US listed firms, and deregistering firms in particular, adversely affected by SOX?
  - Impact of the rule change that makes deregistration easier?
- What are the economic consequences of deregistration for shareholders of deregistering firms?
- What can we learn from the evidence?
  - Firms' listing choices; costs and benefits of cross-listing
  - Contribution to public policy debate: Are US equity markets less competitive because of SOX?

# What do we find?

- Deregistration patterns
  - Prior to the rule change, relatively few firms deregister
  - After the rule change in 2007 there was a spike in deregistrations
  - In 2008, the rate was similar to the rate prior to the rule change
- Deregistering firms are different
  - Poor growth opportunities
  - Have financing surplus (not deficit)
  - Much smaller (before the rule change)
  - From more economically developed countries
  - Have poor prior stock return performance

# What do we find?

- Economic consequences → price reactions
  - **SOX** → little evidence of a negative impact but some cross-sectional variation, e.g., growth opportunities and governance / disclosure
  - **Rule 12h-6** → no significant price reactions but some cross-sectional variation, e.g., governance / disclosure and reaction to SOX
  - **Deregistration announcements** → negative and significant before the rule change but not after → firms with better growth opportunities and larger financing deficits have worse announcement reactions

# Outline

1. US cross-listings & deregistration rules
2. Motivation, hypotheses, & background literature
3. Data & sample
4. Results
   a. Characteristics / performance of deregistering firms
   b. Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions
   c. Stock-price reactions to deregistration announcements & cross-sectional regressions
5. Conclusions

# Cross-listing in the US

- The primary vehicle for listing in US markets: ADRs
  - Negotiable certificates issued by US depositary banks on behalf of sponsoring corporation
  - Some firms list their shares directly
- Categories distinguished by capital-raising, trading location, and registration / reporting obligations
  - Rule 144a: Private placements (no registration, PORTAL trading)
  - Level 1: OTC “Pink Sheet” issues (registration, limited disclosure)
  - Level 2: Exchange-listed (Form F-6 registration, 20F annually)
  - Level 3: Exchange-listed capital raising (same as Level 2 + F-1)
- Tremendous growth in number of cross-listings, capital raised, and trading volume since the early 1990s

# Entering and exiting US markets

- Entering US markets
  - Foreign firms with US exchange listings have to register with the SEC → become subject to US securities laws
  - Register under the Exchange Act (1934) (Level II) and the Securities Act (1933) (Level III)
  - Since 2002, provisions of the Sarbanes-Oxley Act
- Exiting US markets
  - **Delisting** → follow rules set by the exchanges and by applying to the SEC on Form 25
  - **Deregistering** → criteria set by the SEC, old vs. new rules

# Deregistration rules

- Old rules: Rules 12g-4 and 12h-3
  - Less than 300 US holders of record worldwide (500, if assets < $10m)
  - Counting US holders → “look through” nominee accounts
  - If US holder count exceeds 300 in the future, the firm must re-register or seek an exemption under Rule 12g3-2(b)
  - FPIs that conducted a registered offering of its securities cannot terminated reporting obligations → only suspend
  - Very difficult to deregister under these rules
- New rule: Rule 12h-6
  - Passed on March 27 and became effective June 4, 2007
  - Market-based tests in which firms can qualify for deregistration using a benchmark of less than 5% of AWTV in US markets
  - Firms can permanently terminate registration
  - Final rules make it much easier to deregister → almost all firms can now qualify to deregister

# Outline

1. US cross-listings & deregistration rules
2. **Motivation, hypotheses, & background literature**
3. Data & sample
4. Results
   a. Characteristics / performance of deregistering firms
   b. Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions
   c. Stock-price reactions to deregistration announcements & cross-sectional regressions
5. Conclusions

# Why cross-list?

- Market segmentation (older view)
  - Asset pricing approach → risk sharing or risk premium theory
  - Lower cost of capital by accessing global capital markets
  - Only direct listing costs matter → applies to all listing types
  - Some empirical support, but many limitations → losing relevance in an increasingly global financial marketplace
- Bonding (newer view)
  - Corporate finance approach → some firms need to improve governance and disclosure to access capital to finance growth
  - Firms can improve governance and disclosure by borrowing institutions abroad, e.g. listing on a US stock exchange
  - Considers indirect costs → more costly for insiders to extract PBC
  - Applies to US exchange listings
  - Empirical evidence → higher valuations, lower cost of capital, better access to capital, lower PBC, better growth opportunities, etc

# Why leave?

- Bonding theory
  - Firms leave when it is feasible and when it benefits their insiders
  - By deregistering, insiders at a firm with enough cash flow to finance growth opportunities can extract more private benefits
- Loss of competitiveness theory
  - Firms that leave were adversely affected by SOX so that a US listing became a burden rather than a benefit for them
  - US capital markets have fallen behind other markets
  - e.g., CCMR, deregistrations after Rule 12h-6 “represent pent-up demand to leave” which is a “reflection of the unattractiveness of the US public equity market”

# Predictions

- Bonding theory
  - Firms that deregister have poor growth opportunities, less need for external capital, and have performed poorly
  - The introduction of Rule 12h-6 hurts minority shareholders
  - Price reactions to deregistration announcements are negative, especially when firms have higher growth opportunities and more need for external capital

# Predictions

- Loss of competitiveness theory
  - Price reactions around SOX announcements are negative; shareholders of foreign firms in general, and of deregistering firms, in particular, were hurt by SOX
  - Firms that reacted poorly to SOX are more likely to leave
  - The introduction of Rule 12h-6 benefits shareholders, especially those of firms that reacted more poorly to SOX
  - Price reactions to deregistration announcements are positive, especially those of firms that reacted more poorly to SOX
  - These predictions hold even if there is a bonding benefit from cross-listing → theories are not mutually exclusive

# Related evidence

- US firms
  - Marosi and Massoud (2007), Engel et al. (2007), Leuz et al. (2008), Howe et al. (2008)
  - Different from deregistrations by foreign firms
- Foreign firms
  - Delisting: Witmer (2006); Chaplinsky & Ramchand (2007); Li (2007); Smith (2007); Hostak et al. (2007)
  - Deregistration, old rules: Witmer (2006); Li (2007); Marosi & Massoud (2008)
  - Deregistration, new rules: Fernandes et al. (2009)
  - Evidence / conclusions are mixed

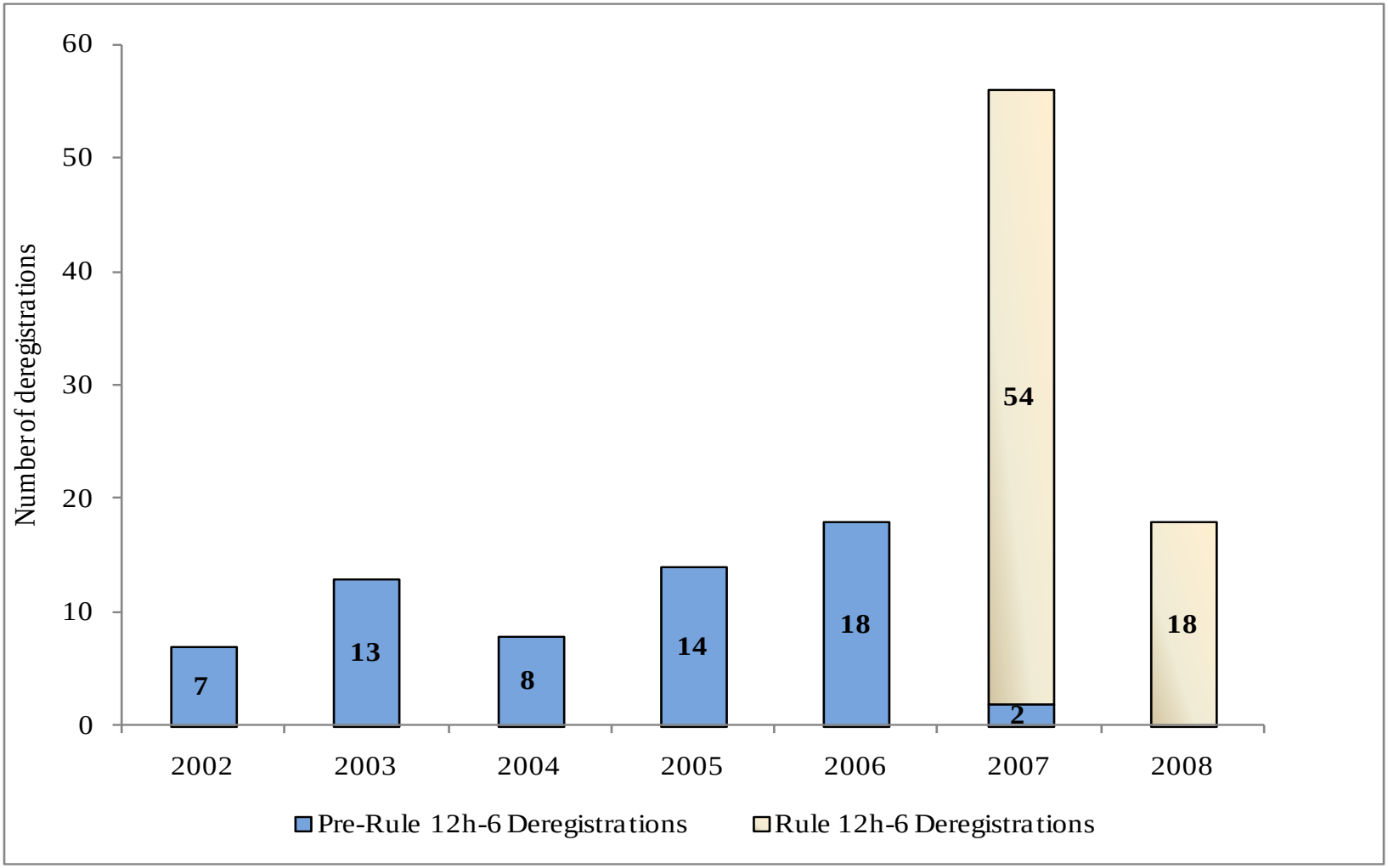
# Outline

1. US cross-listings & deregistration rules
2. Motivation, hypotheses, & background literature
3. **Data & sample**
4. Results
   a. Characteristics / performance of deregistering firms
   b. Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions
   c. Stock-price reactions to deregistration announcements & cross-sectional regressions
5. Conclusions

# Data and sample

- Two samples of firms that voluntarily delist from US exchanges and deregister
  - N = 62: Old rules from 2002 – Mar 2007
  - N = 72: New rules from Mar 27, 2007 – Dec 2008
- Exclude
  - “Involuntary” deregistrants due to M&A, those that were kicked off US exchanges for violating listing standards, etc
  - “Questionable” voluntary delistings / deregistrations
  - Debt deregistrations
  - When deregistration occurs more than 2 years after delisting
  - Firms not in Worldscope or Datastream

# Figure 1. Deregistrations since 2002



# Dataset and sample

- Data sources
  - Deregistering firms: SEC website, Form 15F filers
  - U.S. cross-listings: Citibank, BoNY, CRSP, JP Morgan, Factiva
  - Home country stock return data (U$): Datastream
  - Firm-level accounting data: Worldscope
  - Governance / disclosure: S&P rating
  - Country variables:  Worldbank, La Porta et al. (1998), Djankov et al. (2008)
- Main results impose minimal data constraints, e.g., require $10m in assets and exclude financial firms
  - Robustness checks with more stringent data constraints, e.g., exclude firms with less than U$100m in total assets

# Outline

1. US cross-listings & deregistration rules
2. Motivation, hypotheses, & background literature
3. Data & sample
4. **Results**
   a. **Characteristics / performance of deregistering firms**
   b. Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions
   c. Stock-price reactions to deregistration announcements & cross-sectional regressions
5. Conclusions

# Firm characteristics

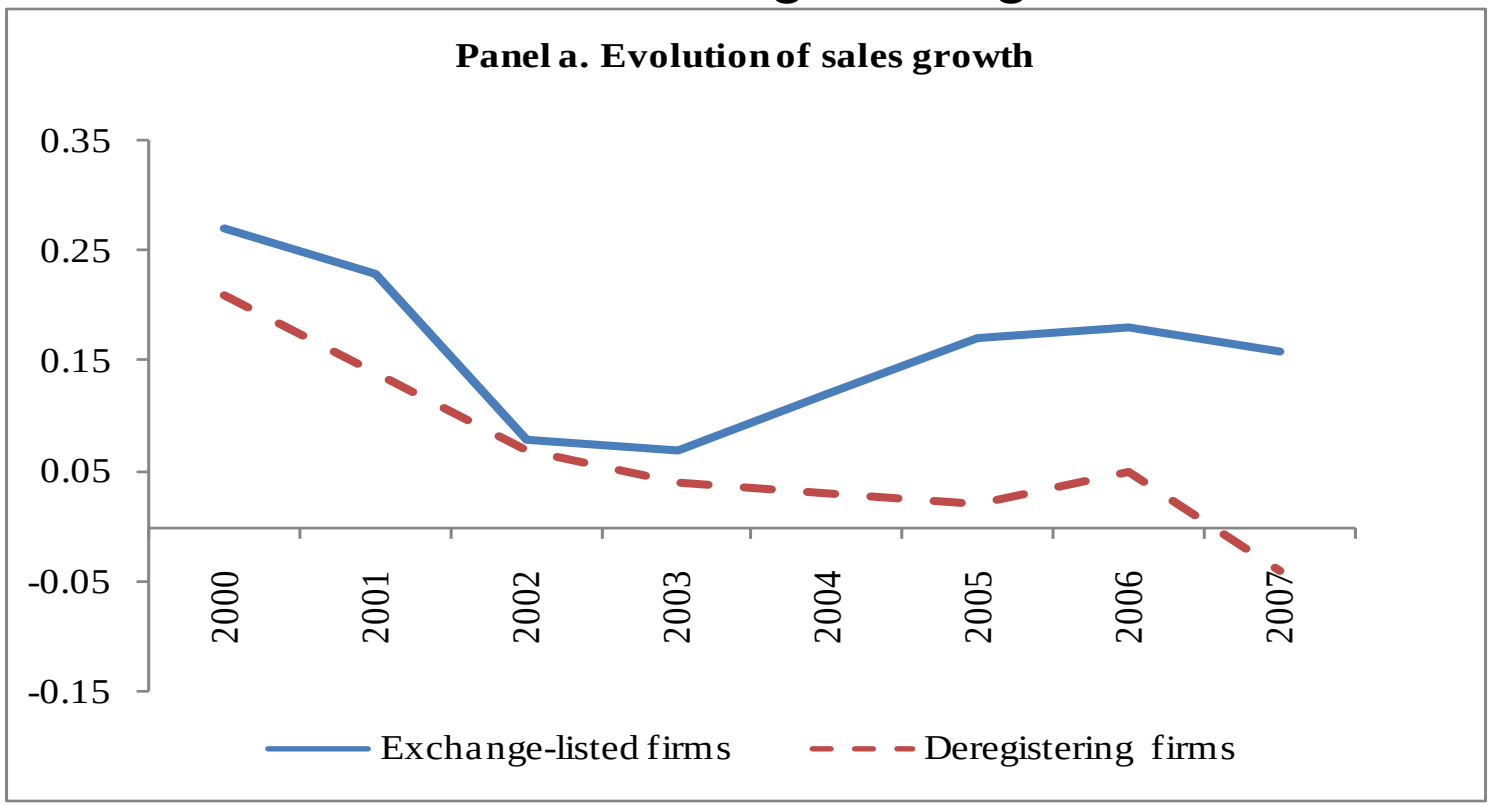
- Compare characteristics of deregistering firms with benchmark sample
  - Benchmark sample: 609-651 foreign firms with US exchange listings that did not deregister
  - Use data in year prior to deregistration for: financial and operating variables; ownership, investor protection, GNP per capita, stock market development
- **Tables 1 & 2:** univariate and multi-period logit results
  - Compare deregistering firms to benchmark firms
  - Compare firms that deregister under the old vs. new rules

# Firm characteristics

- **Table 2: Multi-period logits**
  - Lower SG, financing surplus (not deficit), from more economically developed countries, but with less developed stock markets
  - S&P rating is not significant and neither is the SOX CAR
- Deregistration is more likely following the rule change
- Old vs. new rule firms
  - Under the old rules, smaller firms and firms with more concentrated ownership are more likely to deregister
  - Under the new rules, firms with more leverage are more likely to deregister

# Evolution of sales growth

- **Figure 2**: Sales growth declines after 2000, but does not recover for deregistering firms



# Stock return performance

- Comparison of risk-adjusted returns
  - Home country, weekly $ returns, from 2001-2008
- Two portfolios (EW)
  - Portfolio 1: exchange-listed firms that did not deregister
  - Portfolio 2: deregistering firms prior to deregistration (excluded after deregistration)
- Regress return difference (2-1) on MSCI world portfolio, plus SML and HML factors from FF
  - $R_{dereg,t} - R_{bench,t} = \alpha + \beta \times [R_{W\_exUS,t} - R_{f,t}] + \gamma \times SMB_t + \delta \times HML_t + \varepsilon_t$

# Stock return performance

- **<u>Table 3</u>: Comparison of risk-adjusted returns**
  - All deregistering firms: alpha = -22 basis points (t-stat = 3.17)
  - Old rule firms only: alpha = -20 basis points (t-stat = 2.11)
  - New rule firms: alpha = -13 basis points (t-stat = 2.01)
- Deregistering firms underperformed
- Results are weaker with VW portfolios
  - Alpha is not significant for new rule firms → smaller new rule firms underperformed more than larger deregistering firms

# Outline

1. US cross-listings & deregistration rules
2. Motivation, hypotheses, & background literature
3. Data & sample
4. **Results**
   a. Characteristics / performance of deregistering firms
   b. **Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions**
   c. Stock-price reactions to deregistration announcements & cross-sectional regressions
5. Conclusions

# Stock-price reactions to SOX

- Loss of competitiveness theory relies on the view that SOX affected firms adversely
  - Debate: CCMR, Zingales (2007), Litvak (2007a,b,c), Doidge, Karolyi, & Stulz (2009), Piotroski & Srinivasan (2008), plus others
  - More firms leave after SOX and with Rule 12h-6 it is easier for firms to leave US markets
- If the increase in compliance costs was all that mattered, then foreign listed firms in general, and deregistering firms in particular, would be adversely affected by SOX

# Stock-price reactions to SOX

- **Table 4: Event study around SOX announcements**
  - 14 dates from Litvak (2007), some labeled as more important
  - Form portfolios and estimate regression with event dummies
  - Daily data, home country $ returns from 2001-2003

- $R_{p,t} = \alpha + \beta \times R_{b,t} + \boldsymbol{\delta' Event\_Dummy} + \varepsilon_t$
  - $R_p$ is either the 1) EW return on portfolio of all exchange-listed firms, 2) EW return on portfolio of deregistering firms, or 3) 2-1
  - $R_b$ is the return on the VW portfolio of benchmark firms → firms with Rule 144a and OTC listings – firms participating in international capital markets, but are not registered with the SEC

# Stock-price reactions to SOX

| Panel b. Important SOX events only | (1) Exchange-listed firms | (2) Deregistering firms | (3) Dereg – Exch |
|---|---|---|---|
| Constant | 0.0001 | -0.0007 | -0.0009 |
| | (0.46) | (3.09)*** | (4.95)*** |
| **Important SOX events dummy** | **-0.0001** | **-0.0007** | **-0.0009** |
| | **(0.11)** | **(0.60)** | **(0.82)** |
| Portfolio: Level 1 & Rule 144a firms | 0.9151 | 1.1013 | 0.2235 |
| | (45.00)*** | (46.88) *** | (11.23)*** |
| Number of observations | 782 | 782 | 782 |
| Adjusted $R^2$ | 0.7227 | 0.7393 | 0.1405 |

# Stock-price reactions to SOX

- Only find weak evidence that there is an adverse affect due to SOX in general
- SOX might affect firms differently
  - Depends on the tradeoff between agency costs and compliance / listing costs
- **Table 5: Cross-sectional regressions**
  - Dependent variable is the abnormal return around the important SOX event dates for each firm
  - Firms with better growth opportunities benefit more
  - Firms with better governance / disclosure benefit less

# Stock-price reactions to Rule 12h-6

- **Table 6: Stock-price reactions to Rule 12h-6**
  - Key announcements: Dec 14, 2005; Dec 13, 2006; Mar 21, 2007
  - Regressions similar to those in Table 4, but over 2005-2007
  - Focus on new rule firms only
- No significant price reactions and deregistering firms do not react differently → not clearly supportive of either theory
  - LOC theory predicts positive price reactions
  - Bonding theory predicts negative price reactions

# Stock-price reactions to Rule 12h-6

- Neither theory explains the average abnormal returns around Rule 12h-6
  - Passage of Rule 12h-6 might affect firms differently → depends on the tradeoff between agency costs and compliance / listing costs
- **Table 7: Cross-sectional regressions**
  - Dependent variable is the abnormal return around the March 21, 2007announcement date
  - Firms with more potential for agency problems are hurt more by Rule 12h-6
  - Firms that were hurt more by SOX benefit more from Rule 12h-6

# Outline

1. US cross-listings & deregistration rules
2. Motivation, hypotheses, & background literature
3. Data & sample
4. **Results**
   a. Characteristics / performance of deregistering firms
   b. Stock-price reactions to SOX and to Rule 12h-6 & cross-sectional regressions
   c. **Stock-price reactions to deregistration announcements & cross-sectional regressions**
5. Conclusions

# Table 8: Deregistration announcements

| | Level 1 and Rule 144a ADRs as benchmark firms | Non-U.S. firms on U.S. exchanges as benchmark firms |
|---|---|---|
| **All firms** | | |
| CAR | **-1.17%** | -1.20% |
| *t*-statistic | **(2.76)**$^{***}$ | (2.84)*$^{***}$ |
| % negative | 60% | 62% |
| Binomial test (*p*-value) | 0.031$^{**}$ | 0.007$^{***}$ |
| **Old rule firms** | | |
| CAR | **-2.12%** | -2.10% |
| *t*-statistic | **(2.56)**$^{**}$ | (2.53)$^{**}$ |
| % negative | 65% | 67% |
| Binomial test (*p*-value) | 0.030$^{**}$ | 0.014$^{**}$ |
| **New rule firms** | | |
| CAR | **-0.43%**$^{\#}$ | -0.50%$^{\#}$ |
| *t*-statistic | **(1.02)** | (1.19) |
| % negative | 62% | 63% |
| Binomial test (*p*-value) | 0.041$^{**}$ | 0.022$^{**}$ |

# Deregistration announcements

- **Table 9: Cross-sectional regressions**
  - Dependent variable → CARs from Table 8
- Key results
  - Price reaction is more negative for firms larger financing deficits
  - Firms that were hurt more by SOX benefit more from deregistration
- Implications
  - Deregistration is typically bad news for shareholders of firms with financing needs and good news for the firms affected adversely by SOX

# Conclusions

- Two theories offer predictions about why firms leave
  - Some evidence consistent with bonding theory
  - Evidence for LOC is more mixed, but some evidence that firms leave because of compliance costs
- Clearest evidence is that
  - Firms leave because they do not need to raise funds externally
  - The more funds a firm needs to raise externally, the poorer the market's reaction to the firm's decision to leave