

Do Cross-Border Listing Firms Manage Earnings or Seize a Window of Opportunity?

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ABSTRACT: Firms raising new equity capital at cross-listing (IPO) and those cross-listing existing home-country public shares (non-IPO) benefit from earnings that are high when they cross-list on U.S. stock exchanges. IPO firms have greater benefits than non-IPO firms because they receive cash infusion at listing. I find that performance (ROA) and cash flows peak at cross-listing period for all cross-border firms. Using a matched-firm research design to control for industry and performance, the results suggest that both IPO and non-IPO firms time cross-listing when performance is peaking (seize a window of opportunity). Further tests investigate whether IPO and non-IPO firms differ in their incentives to engage in earnings management at the time of cross-listing. The results suggest that both appear to engage in the same level of earnings management at the time of cross-listing. This suggests that incentives to boost earnings to obtain higher cash infusion are not the main motivation for the earnings management observed. Other incentives, such as greater investor recognition could be a stronger motivation.

Keywords: *cross-listing IPO; discretionary accruals; earnings management.*

I. INTRODUCTION

The recent literature on the globalization of capital markets has reported several benefits of cross-listing on U.S. stock exchanges.¹ Specifically, these benefits include (1) a more liquid market for foreign shares leading to lower bid-ask spreads, (2) an ability to raise capital at cheaper prices on a more efficient market, (3) broadening the shareholder base to diversify financial risk, and (4) an increase in prestige and investors' recognition of cross-listing firms. Merton (1987) demonstrates that variation in the levels

¹ See the Geneva Group, Inc., the Bank of New York—the basics & benefits (http://www.adrbny.com/dr_edu_basics_and_benefits.jsp), JPMorgan ADR Group (<http://www.adr.com>), Bancel and Mittoo (2001) and Karolyi (1996, 1998) for detailed discussions of cross-listing benefits from financial press and academic literature.

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of investor recognition of a firm security influences stock prices. Lehavy and Sloan (2005) find that corporate events such as exchange listings increase investor recognition of a firm. They document a positive association between investor recognition and contemporaneous stock returns. Bradshaw et al. (2006) report similar valuation benefits using analyst data. They find that analysts set higher prices for firms raising new financing, an event that increases investors' recognition and is also analogous to cross-listing. Similarly, Lang, Lins, and Miller (2003) find that firms cross-listing on U.S. exchanges have greater analyst coverage and increased market valuations. These benefits of cross-listing are likely to improve if firms time listing to a window of opportunity (period of high earnings) or manage earnings at the cross-listing period. Alford et al. (1993) and Lang et al. (2006) argue that firms are likely to manage earnings at the cross-listing period. Whether these firms manage earnings at cross-listing or cross-list in a window of opportunity is the subject of this paper.

The SEC is concerned about earnings management by cross-border firms and the potential for this practice to erode the integrity of the financial reporting system (Breden 1994; Levitt 1998). The SEC operates from the premise that home-country or other generally acceptable accounting principles (GAAP) produce less transparent financial reporting than U.S. GAAP.² For this reason, the commission requires non-IPO filers to reconcile their financial statements into U.S. GAAP in Form 20-F, Item 17.³ Evidence from Reese and Weisbach (2001) and Lang et al. (2006) suggests that reporting less transparently creates an opportunity for foreign firms to manage earnings. Based on these concerns, the SEC requires firms issuing an IPO at the time of cross-listing to comply with U.S. GAAP and Regulation S-X in Form 20-F, Item 18. The Committee of European Securities Regulators (CESR) considers International Financial Reporting Standards (IFRS) a U.S. GAAP equivalent. CESR disagrees with both the Item 18 requirements and the mandated reconciliation required in Item 17 for cross-listing existing home-country shares.⁴ The differing positions of the SEC and CESR highlight the importance of understanding the effects of their policies on earnings management at cross-border listing. Because the SEC demands more accounting transparency from IPO firms than from non-IPO firms, the former may have a limited opportunity to manage earnings at the cross-border year. Frost and Kinney (1996) report that foreign firms are reluctant to comply with the more-transparent Item 18 for fear that they might reveal aggressive revenue recognition, hidden reserves, or a substantially underfunded pension plan.

This study investigates two interesting predictions: Do firms time their cross-listing in a window of opportunity when earnings are peaking or do they manage earnings to make themselves look better at the time of listing? The first set of tests combines all cross-listing firms, while the second tests examine whether IPO and non-IPO subsamples of cross-listing firms are different. In contrast to my research predictions and focus, Lang, Ready,

² Sutton, Chief Accountant of the SEC, indicated that acceptance of home-GAAP for cross-border listing depends on its reporting transparency and how well it measures up with U.S. GAAP (see Harris and Muller 1999; Ndubizu and Sanchez 2006). Pownall and Schipper (1999) report that the SEC treats home-country GAAPs as substandard to U.S. GAAP, with lower comparability, transparency, and full disclosure. Meek and Thomas (2004) point out that U.S. GAAP is more transparent and has more onerous disclosure requirements relative to other GAAPs. Alford et al. (1993) report that the SEC is concerned about cross-border firms using non-U.S. GAAP to manage earnings.

³ Form 20-F Item 17 allows financial statements to be prepared using home-country GAAPs or a comprehensive body of accounting principles, quantifying and reconciling material variations from U.S. GAAP and Regulation S-X.

⁴ See <http://www.cesr-eu.org> for the April 27, 2005 press release from the Committee of European Securities Regulators recommendation. The CESR finds that reconciliation to U.S. GAAP as mandated by the SEC is unnecessary.

and Yetman (2003) examine the characteristics of earnings for cross-border firms relative to foreign firms not cross-listing in U.S. markets, while Lang et al. (2006) investigate whether cross-border firms manage earnings toward a target based on their proportion of small positive earnings. I extend previous research (Lang, Lins, and Miller 2003; Lang, Ready, and Yetman 2003; Lang et al. 2006) by partitioning the cross-listing sample into IPO and non-IPO subsamples, a key innovation of the current research design. This research design feature allows me to control potential effects of reporting transparency and cash infusion from equity offering at cross-listing on firms' incentives to manage earnings. Cross-border IPO firms raise new equity capital for the first time in the U.S. public market at cross-listing. The NYSE and Nasdaq classified these firms as IPO with respect to U.S. markets. The non-IPO cross-border firms list existing home-country public market shares on a U.S. market.

Exhibit 1 compares IPO and non-IPO subsamples together with U.S. domestic IPO firms to provide deeper insight into the underlying differences between the groups and their implications for earnings management incentives. The comparison is based on (1) number of public shares before listing, (2) infusion of cash at listing, (3) reporting GAAP, (4) flexibility of GAAP to manipulate earnings, (5) incentives to manage earnings, (6) incentives to list in a window of opportunity, (7) investor recognition incentives, (8) incentives to maximize share prices, and (9) average minimum new shares at listing. The above dimensions for comparison are analyzed in terms of their impacts on firms' incentives to manage earnings. The comparative analysis shows that IPO and non-IPO firms are different. Because only IPO firms receive a cash infusion at listing, I argue that they have stronger incentives than non-IPO firms to manage earnings, list in a window of opportunity, and maximize share prices and cash infusion by seeking higher levels of investor recognition at listing. If the test results are indistinguishable between IPO and non-IPO subsamples, then the differences identified in Exhibit 1 are not as important as cross-listing per se in the empirical research setting.

I report three primary results. First, I find that cross-border firms have significant ROA, cash flows, and working capital accruals that peak in the listing period (years -1 to 0) and fall in subsequent years (years 1 to 2). The listing period performance, cash flows, and accruals are significantly higher than in later years (years 1 and 2). Because listing-period ROA and cash flows are both high, cross-border firms could be either timing their listings or managing earnings. I then investigate whether they engage in earnings management. If cross-border firms manage earnings, then it would seem reasonable to assume that they would use the flexibility offered by accruals to achieve their goal. For this reason, I examine descriptive statistics on discretionary accruals as well as numerous specifications of discretionary accruals by estimating the modified Jones model. The results indicate that discretionary accruals are significantly higher at cross-listing period than they are in later years. This result supports earnings management.

Second, to provide further evidence in support of earnings management, I use a matched-firm research design to control for performance, industry, and U.S. stock exchange listing. Because cross-border firms face U.S. information environments and their decisions to cross-list are not directly associated with home-country reporting, I compare them to matched control U.S. firms. I find that the differences in pre-listing year (-2) ROA, cash flows, accruals, working capital accruals, and discretionary accruals are insignificant between cross-border and matched firms. However, cross-border firms have significantly higher discretionary accruals in listing years than the matched firms. Therefore, adjusting for performance, cross-border firms appear to manage earnings at a rate higher than matched

EXHIBIT 1
Differences between U.S. IPO, Cross-Listed IPO, and Cross-Listed Non-IPO Firms

Dimensions of Comparison^a	U.S. IPO Domestic Firms^b	Cross-Listed IPO^c	Cross-Listed Non-IPO^d
Public shares before listing	No	No	Yes
Infusion of cash at listing	Yes	Yes	No
Reporting rules and disclosures	U.S. GAAP	U.S. GAAP	Other GAAP
Flexibility to manipulate earnings	Weaker	Weaker	Stronger
Incentives to manage earnings	Stronger	Stronger	Weaker
Incentives to list when performance is high	Stronger	Stronger	Weaker
Investor recognition incentives	Stronger	Stronger	Weaker
Incentives to maximize share price (cash)	Stronger	Stronger	Weaker
Average minimum new shares issued at listing	NYSE 1.1m/\$40m NASDAQ 1.1m/\$20m	NYSE 2.5m/\$100m NASDAQ 1.1m/\$20m	NYSE 0 NASDAQ 0

^a IPO firms and non-IPO firms are compared based on the following dimensions: public shares before listing; infusion of cash at listing through issuance of initial public offerings (IPO); required accounting rules and disclosure; flexibility of required rules to manipulate earnings; firms' incentives to manage earnings; firms' incentives to list when performance is high; firms' incentives to be recognized by investors; firms' incentives to maximize share price and cash infusion; and average minimum new shares issued at listing. The minimum number of new public shares and market values are obtained from NYSE and Nasdaq for IPO domestic firms and cross-listed IPO firms. This represents the minimum threshold for each exchange. The data from NYSE indicate that the mean and median equity raised at cross-listing by non-U.S. IPO firms are \$343 million and \$180 million during 1995 to 2003. The PricewaterhouseCoopers IPO Watch (<http://www.pwc.com/ustransactionservices>) indicates that the number of domestic IPO rose to 54 in the second quarter of 2005 from 43 in the first quarter. However, proceeds fell to \$9.3 billion from \$10.8 billion in the first quarter, with an average offering of \$250 million dollars. This average is higher than the minimum threshold reported in the exhibit for both exchanges. M = million.

^b U.S. IPO firms are domestic firms.

^c Cross-listed IPO firms are foreign firms that issued initial public offering at the time of cross-border listing. This group is referred to as IPO in the paper.

^d Cross-listed non-IPO firms are foreign firms that cross-listed existing public shares at cross-border listing and are referred to as non-IPO firms.

control U.S. firms. These findings extend Lang, Ready, and Yetman (2003) and Lang et al. (2006) evidence that differences in managerial incentives and regulatory environments affect the characteristics of reported accounting data.

The final test investigates whether the high discretionary accruals are higher for firms raising new equity at cross-listing, which have incentives to issue capital at higher prices. In contrast to previous research that focused on cross-border samples, I compare IPO and non-IPO subsamples of cross-border firms. I find that both groups have similar cash flows, accruals, and discretionary accruals around their cross-listing years, with a peak in their listing years. The results indicate that IPO firms raising new capital have levels of discretionary accruals in listing years similar to those of non-IPO firms. Because their discretionary accruals are indistinguishable, this suggests that the observed earnings management is driven by cross-listing per se rather than incentives to receive cash at high stock prices. These results are of interest to global security market regulators and standards-setters engaged in developing and implementing cross-border accounting standards. The looser GAAP for non-IPO firms does not appear to result in more earnings management.

The remainder of the paper is organized as follows. Section II discusses relevant literature. Section III describes the data, sample selection, and accruals estimation procedures. Section IV presents empirical results. Section V draws conclusions and presents a summary.

II. RELEVANT LITERATURE

Recent studies find that firms manage earnings to obtain cheaper capital, to meet analysts' projections, to meet regulatory thresholds and to increase stock prices (Dechow and Skinner 2000; Healy and Wahlen 1999). Foreign firms interested in cross-border listing are especially sensitive to earnings volatility because they must have at least \$100 (\$20) million of market value in public shares to cross-list on the NYSE (Nasdaq).⁵ The NYSE requires a minimum total pre-tax income of \$100 million for the latest three fiscal years (up to and including the cross-border year) and at least \$25 million of pre-tax income in the cross-listing year.⁶ Biddle and Saudagaran (1992) find that the demanding listing threshold prevents firms from cross-listing on U.S. exchanges. Because cross-border listing provides significant economic benefits, including a more liquid market for foreign shares, raising capital at cheaper prices, broadening the shareholder base, and increasing investor recognition, managers have incentives to meet the cross-listing threshold of U.S. exchanges. This incentive is more pronounced for firms close to violating the market value or earnings cross-listing thresholds.

A number of recent studies indicate that the earnings reported by cross-border firms are related to stock prices.⁷ Using both price and return-valuation models, Harris and Muller (1999) find that the U.S. GAAP earnings of cross-border firms are related to their market value. Lang, Lins, and Miller (2003) find that cross-border firms have better analyst coverage, which is associated with higher market valuations. Amir et al. (1993) and Barth and Clinch (1996) provide similar evidence, finding that the earnings reported by cross-border firms on Form 20-F are related to their stock market performance. Using both share prices and the proportion of small positive earnings, Lang et al. (2006) find that the reconciled accounting data of Form 20-F, Item 17 are less informative and more susceptible to managing earnings toward a target than that of the control firms. Also, Lang, Ready, and Yetman (2003) find that cross-listing firms have less aggressive earnings management than non-cross-listing firms in their local home markets. Together, these studies suggest that accounting measures of performance affect the stock prices of cross-border firms, with transparency limiting the opportunity to manage earnings.

Smith and Sofianos (1997) find that the stock prices of cross-border firms rise by 8 percent at the time of listing on U.S. stock exchanges and deteriorate thereafter. Lee (1991), Damodaran et al. (1993), Lau et al. (1994), and Rothman (1995) report a positive market reaction at the time of cross-border listing. However, Alexander et al. (1988) find a decline in stock prices of up to 26 percent for Canadian cross-border firms after three years of listing on U.S. exchanges. Similar results are reported in Howe and Kelm (1987) and

⁵ Saudagaran (1988) reports that cross-border firms' market capitalization is the main factor influencing decisions to list abroad. This result is consistent with the larger proportion of small firms cross-border listing on the Nasdaq, which requires a lower market value of public shares than the NYSE.

⁶ See the NYSE Listing Standards and Procedures for Non-U.S. Corporations (1998) and Nasdaq Background, September 1998.

⁷ Amir et al. (1993) and Frost and Kinney (1996) find that about one-third of their sample of non-U.S. cross-border-listed firms used U.S. GAAP to prepare the financial statements filed with the Securities and Exchange Commission (SEC) or reported no material differences between home GAAP and U.S. GAAP financial statements. The rest of the sample filed Form 20-F item 17, which reconciles home country GAAP operating performance to U.S. GAAP measures.

Foerster and Karolyi (1993, 1996). This stock price behavior resembles the pattern documented for domestic IPO firms.

Loughran and Ritter (1995) find that the operating performance of domestic firms issuing an IPO improves substantially at the time of the offering, but deteriorates five years after the issue.⁸ Eckbo et al. (2000) re-examine these results, finding that long-run underperformance is associated with differences in risk factors between issuers and control non-issuers. Teoh et al. (1998) find that a sample of IPO firms is more likely than a matched non-IPO sample to have income-increasing depreciation policies and bad debt allowances in the IPO year. They conclude that firms with unusually high accruals in the IPO year manage earnings more than other firms. As a group, these studies suggest that the peak in earnings at the time of an IPO is likely related to managers' incentives to improve stock prices and reduce the cost of capital. Because the decision to go public is somewhat analogous to cross-border listing, these incentives should exist for firms that cross-border list. Therefore, results from prior studies suggest that managers of cross-border firms have incentives to manage earnings upward or cross-list in periods of high performance.

III. SAMPLE AND DATA

Sample Selection

The initial sample consists of 858 non-U.S. firms that cross-border listed on the NYSE and Nasdaq from 1985 to 2003.⁹ The sample was obtained from the NYSE International Listing Department and Nasdaq.¹⁰ To be included in the sample, data on a sample firm must be available on the Compustat Industrial Annual tape for the fiscal year of the cross-border listing. Only 550 firms survive this restriction. To minimize computational costs, firms that changed their fiscal calendars during the analysis period are excluded. This restriction eliminates 15 firms. The final sample consists of 535 cross-border firms. The NYSE and Nasdaq identify cross-border firms that raise new equity capital at cross-listing as IPO firms; firms that cross-list only existing home-country public shares are non-IPO firms. Based on the information obtained from the two stock exchanges, the final sample consists of 192 IPO and 343 non-IPO firms. The differences between these groups are summarized in Exhibit 1. The GAAP differences include mandated compliance with U.S. GAAP and Regulation S-X in Form 20-F, Item 18 for IPO firms. In contrast, non-IPO firms are allowed to cross-list with foreign GAAP and to reconcile material variations between the GAAP used to prepare their financial statements and U.S. GAAP and Regulation S-X in Form 20-F, Item 17.¹¹ The two subsamples are compared to examine whether cross-listing or raising equity capital most affects incentives to manage earnings.

IPO and non-IPO firms have incentives to maximize cash infusions and stock prices by managing earnings. These earnings management incentives are also created by the imposition of a minimum market value threshold for cross-listing on a U.S. stock exchange. Usually, the listing threshold must be met by the time of approval to cross-border list. Because 75 percent of IPO and non-IPO firms cross-border list in quarters one (18 percent),

⁸ Aharony et al. (2000) provide similar results for IPO firms in the transitional economy of China. However, Healy and Palepu (1990) find no evidence of earnings declines after seasoned equity offerings.

⁹ Firms that cross-border listed in the 1970s do not survive the Compustat data file used in the study.

¹⁰ I thank Mark A. Baer, NYSE International Client Services, for providing the initial sample and data. An additional sample was obtained from each exchange website.

¹¹ The filing status of sample firms available on the SEC Electronic Data Gathering and Retrieval System (EDGAR) is consistent with IPO firms filing Item 18 and non-IPO Item 17. For more information on Form 20-F, see <http://www.sec.gov/about/forms/form20-f.pdf>.

two (30 percent), and three (27 percent) of the cross-border year (year 0), I posit that earnings are likely managed in years -1 and 0 . The 25 percent that cross-list in quarter four of year 0 are presumed to have managed earnings either in year 0 or -1 and 0 . Based on the distribution of cross-listing quarters, I consider years -1 and 0 cross-listing years.

The earnings management and timing hypotheses are two potential explanations of any observed increase in performance and accruals at cross-listing years. To control for the timing hypothesis, each cross-border firm is matched with a Compustat-listed non-issuer chosen based on industry, year, U.S. stock exchange listing, and performance. The algorithm for performing this match, suggested by Barber and Lyon (1996) and Kothari et al. (2005), is as follows: Potential matching firms have not issued equity in test years -2 to 2 and are listed on the same U.S. stock exchange as the sample firm to alleviate biases due to differences between the NYSE and Nasdaq listing thresholds.¹² Given this constraint, a firm with the same two-digit industry code and the most similar performance (year -2 ROA) to the cross-border firm is selected as the matched firm. Performance matching is based on ROA in year -2 because firms are likely to cross-list when performance is high and they are also likely to engage in earnings management. I have avoided performance matching in cross-listing years when earnings management and performance are likely correlated. Kothari et al. (2005) suggest that such correlation weakens the reliability of inferences from discretionary accruals.

Panel A of Table 1 reports by year the number of cross-border firms that survived the sampling restrictions. The number of cross-border listings is in the single digits for most of the late 1980s and rises to double-digits from 1992 to 2003. The numbers of IPO firms are in double-digits in the bullish market of 1993 to 2000. Similarly, the numbers of non-IPO firms are in double digits from 1993 to 2002. Panel B provides industry representation of the sample. The sample is spread across a range of industries, with a minor concentration in manufacturing and transportation. The matching criteria implemented alleviate concerns about industry effects obscuring earnings management at cross-listing. Sample representation by country is not reported. However, the sample firms are spread across 48 countries, with the greatest representation in Canada, the United Kingdom, and Israel. To mitigate potential country effects, analyses on a sample excluding Canada, the United Kingdom, and Israel were performed to ensure that results are not country-driven. Those results are generally similar to the reported results.¹³

Estimation of Discretionary Accruals

Discretionary accruals are measured as the difference between total actual accruals and predicted nondiscretionary accruals.¹⁴ The modified cross-sectional Jones (1991) model developed in Dechow et al. (1995) and refined in Kothari et al. (2005) is used to predict nondiscretionary accruals as follows:¹⁵

$$ACCR_{jt}/TA_{jt-1} = b_0 + b_1[(CREV_{jt} - CREC_{jt}/TA_{jt-1} + b_2[PPE_{jt}/TA_{jt-1}]] + e_{jt} \quad (1)$$

¹² Matched firms are not conducting IPO or SEO during the test periods based on the review of Wall Street Journal Index, Lexis online services, and SDC new issues database for years -2 to 2 .

¹³ The combined results for Canada, the U.K., and Israel are consistent with the results reported.

¹⁴ Total accruals are the difference between net income before extraordinary items and cash flow from operations.

¹⁵ Shivakumar (2000) points out that the modified Jones model controls for changes in a firm's economic environment. Kothari et al. (2005) find that including a constant term controls for heteroscedasticity not alleviated by using assets as the deflator and mitigates problem of an omitted size variable, both of which make power of test comparisons more robust. Thus, model estimations include a constant term.

TABLE 1
Cross-Border Sample, Listing Year, and Industry Distribution

Panel A: Number of Listings by Calendar Year

<u>Year</u>	<u>Number of Listings</u>	<u>Percent of Listings</u>	<u>Number of IPO Listings</u>	<u>Percent of IPO Listings</u>
1985	3	0.56	0	0.00
1986	5	0.93	2	1.04
1987	12	2.24	2	1.04
1988	6	1.12	2	1.04
1989	12	2.24	5	2.60
1990	2	0.37	1	0.52
1991	7	1.31	4	2.08
1992	16	2.99	8	4.17
1993	30	5.61	16	8.33
1994	34	6.36	15	7.81
1995	28	5.23	12	6.25
1996	57	10.65	22	11.46
1997	58	10.84	27	14.06
1998	49	9.16	10	5.21
1999	48	8.97	21	10.94
2000	81	15.14	28	14.58
2001	41	7.66	7	3.65
2002	33	6.17	6	3.13
2003	13	2.43	4	2.08
Total	535	100.00	192	100.00

Panel B: Number of Listings by Industrial Classification

<u>Industry</u>	<u>SIC Code^a</u>	<u>Number of Listings</u>	<u>Number of IPO Listings</u>
Agriculture, Forestry, and Fishing	0	5	0
Mining, Construction	1	46	8
Manufacturing	2	108	33
Manufacturing	3	136	59
Transportation and Public Utilities	4	128	55
Trade	5	22	7
Services	7	81	28
Services	8	6	1
Services	9	3	1

IPO denotes firms that issue initial public offering at the time of cross-border listing.

^a First digit of SIC code.

where:

$ACCR_{jt}$ = total accruals for firm j in year t ;

TA_{jt-1} = total assets for firm j in year $t-1$;

$CREV_{jt}$ = change in sales for firm j in year t ;

$CREC_{jt}$ = change in accounts receivable for firm j in year t ;

PPE_{jt} = property, plant, and equipment for firm j in year t ; and
 e_{jt} = error term.

Subtracting the change in accounts receivable in Equation (1) assumes that credit sales are discretionary (Dechow et al. 1995; Dechow et al. 2003). *CREC* is only subtracted in cross-listing years. The above model is separately estimated for each two-digit SIC group-year with at least ten firms. The estimated parameters in Equation (1) are used to compute discretionary accruals.

IV. RESULTS

Cross-Border Firms

Table 2 presents the mean and median returns on assets (*ROA*), cash flows, total accruals, current assets accruals (*CAAC*), and current liability accruals (*CLAC*) before (year -2), during (years -1 to 0), and after (years 1 to 2) cross-listing periods for cross-border firms.¹⁶ I find that performance and all accrual variables peak in cross-listing years and fall significantly in subsequent years. For example, the median *ROA*, cash flows, and total accruals increase from 0.0799, 0.1027 and -0.0558 in year -2 to 0.0929, 0.1219 and -0.0375 , respectively, in the cross-listing year and then decline to 0.0671, 0.1042 and -0.0591 , respectively, in year 2. A similar pattern is observed for working capital accruals, which also peak in cross-listing years. This pattern of peak and trough across test variables supports both earnings management and timing listings to a window of opportunity.

In addition, Table 2 presents *p*-values from the *t*-test (mean) and Mann-Whitney test (median) comparing each test variable between the cross-listing and future periods. I find that the cross-listing period has significantly higher mean and median *ROA* (*p*-value = 0.00), cash flows (*p*-value = 0.00), and working capital accruals (*p*-value = 0.01) than the later years. Because accruals and cash flows are both higher in the cross-listing period, cross-border firms are perhaps managing earnings and/or timing listings to a window of opportunities.

Because managers are more likely to manage earnings with discretionary accruals, I summarize the descriptive statistics on discretionary accruals in Table 3, Panel A and results of regression specifications of discretionary accruals based on modified Jones models in Panel B. In Panel A, the mean and median discretionary accruals increase respectively from year -2 (-0.0074 , -0.0074) to year 0 (0.0434, 0.0446) by approximately 700 percent and then fall in year 2 (-0.0127 , -0.0012) by 129 percent and 103 percent. The mean and median cross-listing years (-1 and 0) discretionary accruals are 0.0506 and 0.0329, while future values are respectively -0.0111 and 0.0031 (years 1 and 2). I find that the cross-listing periods have significantly higher discretionary accruals than the later years (*p*-value = 0.00). This discretionary accruals result supports earnings management.

Panel B of Table 3 provides results of several specifications of discretionary accruals. Panel B reports the estimations of a modified Jones model with a dummy variable (*Manip*) coded 1 for cross-listing years (-1 to 0), and 0 otherwise. The dummy compares discretionary accruals in the two periods, with positive coefficients reflecting earnings management in the cross-listing period. Also, I adjust changes in net sales in the Jones model by

¹⁶ All variables are winsorized at the 1st and 99th percentiles. Total accruals and discretionary accruals are defined in Equation (1). Other test variables are defined as follow: cash flows are operating cash flows as reported on the statement of cash flows scaled by average total assets; *ROA* is the return on assets defined as the sum of net income and interest expense scaled by total assets in each year; Current assets accruals (*CAAC*) are the sum of accounts receivable, inventory and other current assets scaled by lagged total assets; Current liabilities accruals (*CLAC*) are the sum of accounts payable, taxes payable and other current liabilities scaled by lagged total assets.

TABLE 2
Earnings and Accruals Variables for Cross-Border Firms

Test Years	ROA		Cash Flows		ACCR		CAAC		CLAC	
	Mean	Median	Mean	Median	Mean	Median	Mean	Median	Mean	Median
-2	0.0833	0.0799	0.1219	0.1027	-0.0556	-0.0558	0.3378	0.3152	0.2230	0.2058
-1	0.1037	0.0959	0.1349	0.1231	-0.0548	-0.0510	0.4222	0.3611	0.3095	0.2504
0	0.1019	0.0929	0.1249	0.1219	-0.0101	-0.0375	0.5211	0.4082	0.3499	0.2627
1	0.0806	0.0819	0.1055	0.1038	-0.0419	-0.0436	0.3310	0.2977	0.2192	0.1932
2	0.0557	0.0671	0.1060	0.1042	-0.0653	-0.0591	0.3133	0.2855	0.2151	0.1922
-1 to 0 (M)	0.1023	0.0947	0.1352	0.1307	-0.0461	-0.0519	0.4659	0.3734	0.3342	0.2550
1 to 2 (P)	0.0674	0.0732	0.1049	0.1022	-0.0539	-0.0525	0.3236	0.2976	0.2196	0.1980
Differences (M-P)	0.0349	0.0215	0.0303	0.0285	0.0078	0.0006	0.1423	0.0758	0.1146	0.0570
p-values	0.00***	0.00***	0.00***	0.00***	0.09*	0.13	0.00***	0.00***	0.00***	0.00***

*, **, *** Significant at the 0.10, 0.05, and 0.01 levels, respectively.

The test statistics for differences between cross-listing (-1 to 0) and post-listing (1 to 2) periods are t-test (mean) and Mann-Whitney test (median), with p-values reported. Total Accruals (ACCR) are the difference between net income before extraordinary items (Compustat item 18) and operating cash flow (Compustat item 308) scaled by lagged total assets (Compustat item 6). Current assets accruals (CAAC) are the sum of accounts receivable (Compustat item 2), inventory (Compustat item 3) and other current assets (Compustat item 68) scaled by beginning of the year total assets. Current liabilities accruals (CLAC) are the sum of accounts payable (Compustat item 70), taxes payable (Compustat item 71) and other current liabilities (Compustat item 72) scaled by beginning-of-year total assets. Cash Flows are operating cash flows as reported on the Statement of Cash Flows (Compustat item 308) scaled by average total assets. ROA is the return on assets defined as the sum of net income (Compustat item 172) and interest expense (Compustat item 15) scaled by total assets in each year. The cross-listing period includes one year before and the year of cross-border listing, in which earnings management is anticipated because 75 percent of the sample cross-border listed in quarter 1 (18 percent), 2 (30 percent), and 3 (27 percent) of year 0 (cross-border listing year). The post-listing periods include years 1 and 2 after cross-border listing. The numbers of firms-observations in each year -2 to 2 are 277, 471, 494, 520, and 494, respectively.

TABLE 3
Descriptive Statistics on Discretionary Accruals and Coefficients (t-statistics) from Modified Jones Models with Dummy (*Manip*) to Capture Cross-Border Years Earnings Management

Panel A: Discretionary Accruals (*DACC*)

<u>Test Years</u>	<u>Mean</u>	<u>Median</u>	<u>p-values</u>	<u>n</u>
-2	-0.0074	-0.0074	0.18	277
-1	0.0628	0.0127	0.21	471
0	0.0434	0.0446	0.00	494
1	-0.0097	-0.0021	0.58	520
2	-0.0127	-0.0012	0.74	494
-1 to 0 (M)	0.0506	0.0329	0.00	965
1 to 2 (P)	-0.0111	0.0031	0.41	1014
Differences (M-P)	0.0617	0.0298	0.00	***

Panel B: Coefficients (t-statistics) from Modified Jones Models

$$ACCR_{j,t} = b_0 + b_1Manip + b_2(CREV - CREC)_{j,t} + b_3PPE_{j,t} + e_{j,t}$$

<u>Model based on:</u>	<u>Independent Variables</u>			<u>Adj. R²</u>	<u>n</u>
	<u><i>Manip</i></u>	<u><i>CREV - CREC</i></u>	<u><i>PPE</i></u>		
All Sample Pooled (t-value)	0.0324*** (4.17)	0.0620*** (6.65)	-0.0681*** (-10.40)	0.08	2595
Industry Basis (t-value)	0.0241*** (2.79)	0.0182*** (6.43)	-0.0569*** (-3.21)	0.09	155

*, **, *** Significant at the 0.10, 0.05, and 0.01 levels, respectively.

In Panel A, Discretionary accruals (*DACC*) are calculated as the difference between Total Accruals and Nondiscretionary accruals (*NDA*), where *NDA* are estimated using modified Jones (1991) Model as follows:

$$ACCR = b_0 + b_1(CREV - CREC) + b_2PPE + e$$

where:

CREV = change in net sale (Compustat item 12) for the year scaled by average total assets;

CREC = change in receivables (Compustat item 2) for the year scaled by average total assets; this variable is only subtracted in the cross-listing years; and

PPE = gross amount of property, plant, and equipment (Compustat item 7) scaled by total assets.

The test statistics for differences between cross-listing (-1 to 0) and post-listing (1 to 2) periods are t-test (mean) and Mann-Whitney test (median), with p-values reported.

In Panel B, parameter estimates for all sample model above are based on pooled regression over -2 to 2 years, while industry specification is based on average parameter estimates from the respective two-digit SIC-year regressions (with at least 10 firms in each two-digit SIC industry). For industry model, I provide mean coefficient estimates for the model above based on 155 two-digit SIC-year regressions. t-statistics are reported in parentheses below parameter estimates.

The variables in the Jones model above are defined as follows:

Manip = dummy variable coded 1 for cross-listing periods (years -1 to 0), and 0 otherwise (pre- and post-listing years); earnings management is anticipated in years -1 and 0 because 75 percent of cross-border listing took place in quarters 1 (18 percent), 2 (30 percent) and 3 (27 percent) of cross-listing year; positive and significant coefficients on *Manip* indicate that the positive discretionary accruals of cross-listing years are significantly higher than post values;

(continued on next page)

TABLE 3 (continued)

ACCR = total accruals for each year scaled by lagged total assets (Compustat item 6);

CREV = change in sales each year scaled by lagged total assets;

CREC = change in accounts receivable each year scaled by lagged total assets; because credit sales are presumed to be discretionary, increases in account receivable at cross-listing period are backed out;

PPE = gross amount of property, plant, and equipment each year scaled by lagged total assets; and

n = numbers of firms-year observations for pooled model, while *n* for industry specification represents two-digit SIC year-observations.

Adjusted R^2 is reported in column 5.

backing out increases in accounts receivable only at cross-listing years to reflect the assumption that all changes in credit sales are discretionary. All variables are winsorized at the 1 percent tails of their respective distributions. The estimation of pooled-sample specification is reported in the first row, while the mean coefficient estimates for two-digit industry specification are reported in the second row. The coefficients for independent variables are reported in columns two, three, and four, respectively, with adjusted R^2 in the fifth column.

Consistent with prior studies, I find a positive and significant coefficient on *CREV* – *CREC* (sales change minus change in receivables) and a negative and significant coefficient on *PPE* (property, plant, and equipment) for both pooled (0.0620, $t = 6.65$; -0.0681 , $t = -10.40$) and industry (0.0182, $t = 6.43$; -0.0569 , $t = -3.21$) models, respectively. Consistent with earnings management, the coefficients on the dummy (*Manip*) are positive and significant, with coefficients of 0.0324 ($t = 4.17$) on pooled specification and 0.0241 ($t = 2.79$) on industry model. The positive coefficients suggest that cross-listing periods have significantly higher discretionary accruals than the later years. These results are qualitatively similar to the Panel A of Table 3 descriptive discretionary accruals results. Therefore, taken together, the findings provide further evidence that discretionary accruals are higher at the time of cross-listing than in later years.

Using a matched-firm research design to control for performance, industry, and U.S. stock exchange listings, I examine whether the high cross-listing years discretionary accruals are due to earnings management. Table 4 presents a direct test of the differences between 209 cross-border firms and their control firms, matched based on two-digit SIC, cross-listing year, year -2 *ROA*, and U.S. stock exchange listing. Performance matching reduces the sample to 277 firms that have year -2 *ROA* data, while other matching constraints reduce the number of sample firms to 209. Matching based on year -2 *ROA* rather than performance at cross-listing periods is likely to enhance the reliability of inferences because earnings management appears to correlate with performance in the cross-listing period. Also, Table 4 provides *p*-values from Mann-Whitney tests comparing differences in *ROA*, cash flows, total accruals, working capital accruals, and discretionary accruals between cross-border and matched firms.

I find that cross-border firms have significantly higher *ROA* (*p*-value = 0.00), cash flows (*p*-value = 0.02), current liability accruals (*p*-value = 0.00), and discretionary accruals (*p*-value = 0.00) than matched firms at the time of cross-listing (-1 to 0).¹⁷ Similar results are reported in cross-listing year 0, except that differences in cash flows between sample and matched firms are insignificant. However, differences in discretionary accruals

¹⁷ Because sample firms have higher cash flows than matched firms, the results are consistent with timing listing to a window of opportunities.

TABLE 4
Earnings and Accruals Differences (Diff) between Cross-Border (209) and Control Firms (209) Matched Based on Year –2 ROA, Industry, and Stock Exchange

Test Years	p-value for Difference (Diff) between Cross-border (C) and Matched (M) Firms									n
	ROA			Cash Flows			ACCR			
	C	M	Diff p-value	C	M	Diff p-value	C	M	Diff p-value	
–2	0.0808	0.0789	0.74	0.1062	0.1146	0.46	–0.0524	–0.0551	0.67	418
–1	0.0847	0.0736	0.01***	0.1148	0.0993	0.06*	–0.0464	–0.0459	0.92	418
0	0.0768	0.0654	0.03**	0.1068	0.0975	0.16	–0.0547	–0.0572	0.79	418
1	0.0745	0.0636	0.02**	0.1010	0.1014	0.82	–0.0458	–0.0586	0.13	418
2	0.0604	0.0644	0.86	0.0976	0.1053	0.39	–0.0611	–0.0684	0.43	418
–1 to 0	0.0813	0.0703	0.00***	0.1117	0.0984	0.02**	–0.0532	–0.0512	0.78	418
Test Years	CAAC			CLAC			DACC			
	C	M	Diff p-value	C	M	Diff p-value	C	M	Diff p-value	
	C	M	Diff p-value	C	M	Diff p-value	C	M	Diff p-value	
–2	0.3001	0.3358	0.38	0.1976	0.1831	0.60	–0.0124	–0.0227	0.16	418
–1	0.3122	0.3110	0.91	0.2178	0.1891	0.00***	0.0134	0.0001	0.50	418
0	0.3141	0.3043	0.46	0.2189	0.1672	0.00***	0.0414	–0.0034	0.00***	418
1	0.2692	0.2851	0.17	0.1863	0.1682	0.34	0.0095	–0.0335	0.00***	418
2	0.2466	0.2815	0.35	0.1836	0.1687	0.10*	0.0164	–0.0510	0.00***	418
–1 to 0	0.3129	0.3093	0.55	0.2184	0.1788	0.00***	0.0274	–0.0014	0.00***	418

(continued on next page)

TABLE 4 (continued)

*, **, *** Significant at the 0.10, 0.05, and 0.01 levels, respectively.

The test statistics are based on the differences (Diff) in median between sample and matched control firms (Mann-Whitney) with p-values reported. Unreported t-tests based on the differences in means are consistent.

Matched control firms have the same two-digit SIC, U.S. stock exchange listing, year, and the closest *ROA* in year -2 with the sample. Because earnings management and performance are likely correlated in cross-listing years (-1 to 0), matching is based on year -2 *ROA*. The matching restrictions reduce sample firms from 277 firms with *ROA* data in year -2 to 209 firms.

Total Accruals (*ACCR*) are the difference between net income before extraordinary items (Compustat item 18) and operating cash flow (Compustat item 308) scaled by lagged total assets (Compustat item 6). Discretionary accruals (*DACC*) are calculated as the difference between total accruals and nondiscretionary accruals (*NDA*), where *NDA* are estimated using modified Jones (1991) Model as follows:

$$ACCR = b_0 + b_1(CREV - CREC) + b_2PPE + e$$

where:

ACCR = total accruals scaled by lagged total assets;

CREV = change in net sale (Compustat item 12) for the year scaled by lagged total assets;

CREC = change in receivables (Compustat item 2) for the year scaled by lagged total assets; *CREC* is only subtracted from *CREV* in cross-listing years; and

PPE = gross amount of property, plant, and equipment (Compustat item 7) scaled by lagged total assets.

Current assets accruals (*CAAC*) are the sum of accounts receivable (Compustat item 2), inventory (Compustat item 3), and other current assets (Compustat item 68) scaled by beginning of the year total assets. Current liabilities accruals (*CLAC*) are the sum of accounts payable (Compustat item 70), taxes payable (Compustat item 71), and other current liabilities (Compustat item 72) scaled by beginning-of-year total assets. *Cash Flows* are operating cash flows as reported on the Statement of Cash Flows (Compustat item 308) scaled by average total assets. *ROA* is the return on assets defined as the sum of net income (Compustat item 172) and interest expense (Compustat item 15) scaled by total assets in each year. *n* is the number of sample and matched firms in each year.

between the two groups continue to be significant in years 1 (p-value = 0.00) and 2 (p-value = 0.00). Therefore, the findings appear to suggest that cross-border firms are managing earnings at the cross-listing period. The pre-listing year (-2) differences between sample and matched firms for *ROA*, cash flows, and all accruals variables are insignificant. This finding lends support to the matching algorithms implemented. Because cross-border and matched firms face similar business conditions, including performance, industry, year, and U.S. stock exchange regulatory hurdles, the significant differences in discretionary accruals between the sample and matched firms suggest that cross-listing firms manage earnings.

IPO and Non-IPO Subsamples

A closer look at the evidence of earnings management leaves open the question of whether the high discretionary accruals is due to cross-listing per se or incentives to maximize cash infusion for IPO firms raising new equity capital. These firms receive a cash infusion at cross-listing and are required to comply with the more-transparent U.S. GAAP in Form 20-F, Item 18. In contrast, non-IPO firms cross-list their existing home public shares and are allowed to report less transparently in Form 20-F, Item 17. Teoh et al. (1998), Lang et al. (2006), and Hunton et al. (2006) point out that greater reporting transparency mitigates earnings management.¹⁸ The differences between the two groups of cross-listing firms and their implications for earnings management are summarized in Exhibit 1. Based on the comparative analysis, I argue that IPO firms have greater incentives than non-IPO firms to manage earnings, list in a window of opportunity, and maximize share prices and cash infusions by seeking higher levels of investor recognition at listing. Nevertheless, by comparing IPO and non-IPO cross-border firms, I provide insight into the impact of the differences identified in Exhibit 1 on firms' incentives to manage earnings in the cross-listing period.

Table 5 presents the results of comparing IPO and non-IPO firms. Panel A of Table 5 presents median values for IPO firms, while Panel B of Table 5 reports on non-IPO firms. In both panels, *ROA*, cash flows, working capital accruals, and discretionary accruals increase from the pre-listing year (-2) to peak in cross-listing years (-1 to 0) and then fall significantly in subsequent years (1 to 2). The consistency of results across IPO and non-IPO subsamples lends support to the theory that cross-listing alone, rather than their differences in Exhibit 1, provides the incentives to manage earnings. Because discretionary accruals offer managers more flexibility to manage earnings, I summarize their median values. The median discretionary accruals for IPO firms (non-IPO firms) peak at approximately 0.0602 (0.0375) at cross-listing years and decline to an insignificant level in year 2, -0.0002 (-0.0038) by 100 percent (110 percent), respectively. In spite of their differences reported in Exhibit 1, both IPO and non-IPO firms appear to have a similar pattern of discretionary accruals, with a peak in cross-listing years.

By comparing IPO and non-IPO firms, Panel C of Table 5 presents direct evidence that cross-listings per se affect incentives to manage earnings. I find that the differences between IPO and non-IPO firms in year 0 for current assets accruals (0.0664 p-value = 0.01) and current liability accruals (0.0339 p-value = 0.05) are significant, with IPO firms having higher values. In both cross-listing periods (years 0 and -1 to 0), IPO firms also have

¹⁸ Reese and Weisbach (2001) find that cross-border firms with more transparency report conservatively. Hunton et al. (2006) report that greater transparency in reporting formats and comprehensive income facilitate the detection of earnings management. Lang et al. (2006) provide circumstantial evidence indicating that the more stringent regulatory oversight of Form 20-F, Item 18 is associated with reduced earnings management.

TABLE 5
Differences in Earnings Management between IPO and Non-IPO Firms

Panel A: Median Earnings and Accruals Variables for IPO Firms

<u>Test Years</u>	<u>ROA</u>	<u>Cash Flows</u>	<u>ACCR</u>	<u>CAAC</u>	<u>CLAC</u>	<u>DACC</u>	<u>n</u>
-2	0.0644	0.0579	-0.0146	0.3317	0.2422	0.0324	76
-1	0.0876	0.0717	-0.0596	0.3871	0.2862	0.0048	171
0	0.0838	0.0884	-0.0469	0.4697	0.3097	0.0602	174
1	0.0737	0.0819	-0.0440	0.2842	0.1818	0.0032	186
2	0.0601	0.0878	-0.0639	0.2651	0.1860	-0.0002	179

Panel B: Median Earnings and Accruals Variables for Non-IPO firms

-2	0.0577	0.0978	-0.0645	0.3052	0.2074	-0.0094	201
-1	0.0649	0.0877	-0.0561	0.3424	0.2565	0.0122	300
0	0.0563	0.0792	-0.0591	0.3683	0.2596	0.0375	320
1	0.0527	0.0699	-0.0508	0.2651	0.1895	-0.0044	334
2	0.0406	0.0744	-0.0662	0.2654	0.1897	-0.0038	315

Panel C: Differences between IPO and Non-IPO Firms at Cross-Listing Periods

-1	0.0223***	-0.0131	0.0010	0.0324	0.0334	-0.0127	471
(p-value)	(0.00)	(0.44)	(0.95)	(0.32)	(0.12)	(0.62)	
0	0.0253***	0.0101	0.0142	0.0664***	0.0339**	0.0231	494
(p-value)	(0.00)	(0.44)	(0.28)	(0.01)	(0.05)	(0.14)	
-1 and 0	0.0236***	0.0024	0.0101	0.0553***	0.0342***	0.0159	965
(p-value)	(0.00)	(0.82)	(0.34)	(0.00)	(0.01)	(0.23)	

(continued on next page)

TABLE 5 (continued)

*, **, *** Significant at the 0.10, 0.05, and 0.01 levels, respectively.

In Panel C, the test statistics for differences between IPO and non-IPO cross-border firms is the Mann-Whitney test with p-values reported. Results based on t-tests are consistent. IPO firms receive a cash infusion at cross-listing, while non-IPO firms do not.

Total Accruals (*ACCR*) are the difference between net income before extraordinary items (Compustat item 18) and operating cash flow (Compustat item 308) scaled by lagged total assets (Compustat item 6). Discretionary accruals (*DACC*) are calculated as the difference between total accruals and nondiscretionary accruals (*NDA*), where *NDA* are estimated using modified Jones (1991) Model as follows:

$$ACCR = b_0 + b_1(CREV - CREC) + b_2PPE + e$$

where:

ACCR = total accruals scaled by lagged total assets;

CREV = change in net sale (Compustat item 12) for the year scaled by lagged total assets;

CREC = change in receivables (Compustat item 2) for the year scaled by lagged total assets; this variable is subtracted during cross-listing years; and

PPE = gross amount of property, plant, and equipment (Compustat item 7) scaled by lagged total assets.

Current assets accruals (*CAAC*) are the sum of accounts receivable (Compustat item 2), inventory (Compustat item 3), and other current assets (Compustat item 68) scaled by beginning of the year total assets. Current liabilities accruals (*CLAC*) are the sum of accounts payable (Compustat item 70), taxes payable (Compustat item 71), and other current liabilities (Compustat item 72) scaled by beginning-of-year total assets. *Cash flows* are operating cash flows as reported on the Statement of Cash Flows (Compustat item 308) scaled by average total assets. *ROA* is the returns on assets defined as the sum of net income (Compustat item 172) and interest expense (Compustat item 15) scaled by total assets in each year. The cross-listing period includes one year before and the year of cross-border listing, in which earnings management is anticipated because 75 percent of the sample cross-border listed in quarters 1 (18 percent), 2 (30 percent), and 3 (27 percent) of year 0 (cross-border listing year). The post-listing period include years 1 and 2 after cross-border listing year.

significantly higher median *ROA* (0.0253 $p = 0.00$, 0.0236 $p = 0.00$) than non-IPO firms. However, the differences in discretionary accruals, accruals, and cash flows between IPO and non-IPO firms are insignificant at the cross-listing period. Because of the importance of discretionary accruals in demonstrating earnings management, the finding suggests that it is cross-listing rather than the differences between IPO and non-IPO reported in Exhibit 1 that affects incentives to manage earnings.

The pattern of insignificant difference in cash flows, accruals, and discretionary accruals between IPO and non-IPO firms in Table 5 is also evident in the firm-specific returns in Table 6. This table provides cross-listing years as well as future years size-adjusted returns and sales growth for the cross-border sample, IPO, non-IPO, and the differences between subsamples. Consistent with the previous results, I find that cross-border firms have median size adjusted returns (0.1775) that appear to peak in cross-listing years (-1 to 0) and fall significantly in subsequent years (-0.0562). The cross-listing year returns are significantly higher than their future values (p -value = 0.00). The poor future stock performance supports earnings management. Because of insufficient returns data for IPO firms in years -2 and -1 , no comparison between IPO and non-IPO firms is conducted in the periods. However, the differences in all test periods for which data are available between IPO and non-IPO firms are insignificant.

The results for sales growth are somewhat similar to returns results and are reported in Table 6. The median sales growth in cross-listing years 0 (0.3039) and -1 and 0 (0.2856) is higher than the future years 1 and 2 (0.1652). These differences between the two periods are significant (p -value = 0.00). I find that IPO firms have significantly higher sales growth than non-IPO firms in cross-listing years 0 (p -value = 0.06) and -1 and 0 (p -value = 0.04). The differences in sales growth provide a partial explanation as to why IPO firms are associated with higher working capital accruals in Table 5 than non-IPO firms. This finding by itself is not surprising since Dechow et al. (1998) indicate that a firm invests in working capital accruals to increase forecasted sales growth and earnings. However, the sales results do not appear to induce a difference in discretionary accruals between IPO and non-IPO firms, as reported in Table 5.

V. CONCLUSIONS

This study examines whether a sample of foreign firms which cross-border listed on U.S. stock exchanges during 1985–2003 manages earnings at cross-listing years or times listing to a window of opportunity. Because 48 percent and 75 percent of the sample firms, respectively, cross-list before quarters three and four of their cross-border year, I presume that years -1 and 0 are potentially earnings-manipulation years and refer to them as cross-listing years. I find that *ROA*, cash flows, and discretionary accruals peak in cross-listing periods and fall significantly in subsequent years. The cross-listing period discretionary accruals and cash flows are significantly higher than in later years. These results support either earnings management or timing listing to a window of opportunity.

To provide further evidence, I use a matched-firm research design to control for performance, industry, and U.S. stock exchange listings. I find that cross-border firms have significantly higher discretionary accruals at the cross-listing period than matched firms. Because cross-border and matched firms have similar business conditions including performance, the findings are suggestive of earnings management.

Finally, to examine whether the high discretionary accruals are associated with the differences between IPO and non-IPO firms identified in Exhibit 1, I compare IPO and non-IPO firms. I find that IPO and non-IPO firms have similar levels of cash flow, accruals, and discretionary accruals at cross-listing periods. The findings suggest that differences

TABLE 6
Future and Cross-Border Years Stock Returns and Sales Growth for Sample Firms, IPO Compared to Non-IPO firms

Test Years	Size-Adjusted Returns						Sales Growth				
	Sample		Differences between IPO and Non-IPO				Sample Median	Differences between IPO and Non-IPO			
	Mean	Median	IPO	Non-IPO	Diff	p-value		IPO	Non-IPO	Diff	p-value
-2	0.1407	0.1228 (26)					0.2010 (121)	0.0632	0.1690	-0.1561	0.00
-1	0.1799	0.1718 (47)					0.2543 (283)	0.1108	0.1415	0.0276	0.49
0	0.0220	0.0027 (121)	0.0354	-0.0302	0.0655	0.92	0.3039 (483)	0.2797	0.2175	0.0624	0.06
1	-0.0323	-0.0173 (140)	0.1274	-0.0627	0.1899	0.11	0.1875 (520)	0.1108	0.1415	-0.0058	0.83
2	-0.0356	-0.0542 (121)	-0.0871	-0.0539	-0.0332	0.15	0.1461 (498)	0.1203	0.1231	-0.0148	0.58
-1 to 0	0.1853	0.1775 (168)					0.2856 (766)	0.2465	0.1981	0.0518	0.04
1 to 2	-0.0509	-0.0562 (261)	-0.0764	-0.0599	-0.0164	0.69	0.1654 (1018)	0.1142	0.1372	-0.0105	0.58

The test statistics that median is different (Diff) between IPO and non-IPO firms are obtained from Mann-Whitney tests with median p-values reported. Numbers of firms-observation are in parentheses below the sample median values.

Size-adjusted returns are computed following Bradshaw et al. (2006). Specifically, stock returns, inclusive of dividends and other distributions, are obtained from CRSP tape. The size-adjusted returns are calculated from the start of the fourth month subsequent to the fiscal year-end. To adjust cross-listing firms' returns by size, each firm's return is deducted from the average domestic firm return in the same size matched decile, where size is measured as the market value at the beginning of the return cumulation period. Because of insufficient returns data on IPO firms, results for IPO and non-IPO for year -2, -1, and -1 to 0 are not reported. Sales growth is current period sales minus prior year scaled by prior year. For each variable, total sample median along with differences in median between IPO and non-IPO cross-border firms with p-values are reported. The results are provided for cross-listing period (-1 to 0), in which earnings management is anticipated and the post-listing period including years 1 and 2 after cross-border listing year (future).

between the two groups do not appear to influence earnings management at cross-listing. Therefore, cross-listing per se rather than incentives to maximize the cash infusion received from new equity capital appears to induce high discretionary accruals at cross-listing periods.

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