



# Accounting Choice, Home Bias, and U.S. Investment in Non-U.S. Firms

MARK T. BRADSHAW,\* BRIAN J. BUSHEE,†  
AND GREGORY S. MILLER\*

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## ABSTRACT

This paper examines the relation between accounting choice and U.S. institutional investor ownership in non-U.S. firms. We predict that U.S. investors exhibit home bias in their preference for accounting methods conforming to U.S. Generally Accepted Accounting Principles (GAAP) because such methods are more familiar, reduce information processing costs, and are perceived as higher quality. We find that firms exhibiting higher levels (changes) of U.S. GAAP conformity have greater levels (changes) of U.S. institutional ownership. Lead-lag regressions suggest that increases in U.S. GAAP conformity precede increases in U.S. investment, but changes in U.S. institutional holdings do not precede changes in accounting methods. We also find that the positive relation between U.S. GAAP conformity and U.S. investment holds regardless of a firm's visibility to U.S. investors (e.g., American Depositary Receipt listing, stock index membership, analyst following, firm size). However,

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we find that U.S. GAAP conformity has a significantly greater impact among firms already visible to U.S. investors.

### *1. Introduction*

This paper examines the relation between accounting method choice and investment by U.S. institutional investors in non-U.S. firms. This relation could be driven by at least two factors. First, prior research examining the relatively low level of investment made outside of domestic markets suggests that informational factors, such as low visibility of the firm to foreign investors and lower credibility of the financial information, are a potential source of this “home bias” (Ahearne, Grier, and Warnock [2004], Suh [2001]). As a primary source of information regarding the firm, the accounting system affects how outsiders perceive and use the firm’s financial information. Greater conformity with accounting practices familiar to foreign investors reduces information processing costs, which allows for more thorough analyses and increases the credibility of the financial information (Barth, Clinch, and Shibano [1997], Sunder [2002]). Second, many sources consider U.S. Generally Accepted Accounting Principles (GAAP) to be one of the highest quality sets of financial reporting standards in the world (Dye and Sunder [2001], Ashbaugh and Davis-Friday [2002], Bradshaw and Miller [2003], Krishnan [2003]). Thus, it is likely that investors, particularly those from the U.S., perceive firms that use a large number of accounting methods allowed under U.S. GAAP as having higher accounting quality. Based on these two factors, we predict that U.S. institutional investors exhibit a preference for firms using accounting methods that conform to U.S. GAAP.

We find a higher level of U.S. institutional ownership in non-U.S. firms that use a greater number of accounting methods conforming to U.S. GAAP. This association exists in both levels and changes. We partition the sample based on the visibility of the firm to U.S. investors (e.g., American Depositary Receipt [ADR] cross-listing) and find that the association holds regardless of firm visibility but is significantly stronger for more visible firms. Lead-lag regressions provide evidence that increases in conformity with U.S. GAAP are positively associated with future increases in U.S. institutional investment, but changes in U.S. institutional ownership do not lead to changes in accounting methods.

We collect data on accounting method choices for non-U.S. firms from the Worldscope database. We examine the 13 accounting choices identified by Bradshaw and Miller [2003] as having some options allowed under U.S. GAAP and some not. Note that we are interested in choices made within the set of permissible local standards that also conform to U.S. GAAP rather than the complete adoption of U.S. GAAP. We compute a U.S. GAAP conformity ratio as the fraction of accounting choices that conform to U.S. GAAP. To ensure that our results are not driven by lack of disclosure, we compute the conformity ratios based both on the total number of choices and on the number of *disclosed* choices. Because flexibility in accounting choices varies

across countries, we adjust individual firm ratios by the median level for the firm's country.

We use the Spectrum database to identify U.S. institutional investment in non-U.S. firms. We focus our analysis on institutional investors because they are less likely than retail investors to be affected by institutional frictions that inhibit international investing. Furthermore, U.S. institutions have become the largest source of capital in the world; extensive data exists on their holdings in non-U.S. firms; and, as sophisticated investors, they are the class of U.S. investors most likely to base their investment decisions on a detailed analysis of financial statements. We measure U.S. institutional investment three ways: (1) an indicator variable for the existence of any investment, (2) the log of the number of institutional owners, and (3) the percentage of ownership by institutions. We also country-adjust these variables and all control variables to ensure that country-specific factors do not drive the results. Thus, our analyses examine within-country relations between accounting choice and U.S. investment in non-U.S. firms.

We use cross-sectional levels and contemporaneous changes analyses to examine the relation between conformity with U.S. GAAP and U.S. institutional holdings in the firm. In all specifications, we find a significant positive association between the U.S. GAAP conformity ratios and investment by U.S. institutions. For contemporaneous changes, we find that increases in the conformity ratios are associated with increases in U.S. investment, but decreases in conformity are unrelated to changes in investment. This result suggests that U.S. GAAP conformity is an important factor in choosing to invest in a firm, but once a U.S. institution has invested in, and developed a familiarity with, a non-U.S. firm, its sales decisions are based on factors other than accounting choice, such as firm performance metrics. We also estimate lead-lag regressions to investigate the causality of the association. We provide evidence that increases in conformity with U.S. GAAP lead to future increases in U.S. institutional ownership, consistent with the results for contemporaneous changes, but that changes in U.S. institutional ownership do not influence future conformity with U.S. GAAP. Finally, we confirm that all of these results hold with industry-adjustments and with country fixed-effects models.

Clearly, for accounting choice to affect investment, potential investors must first be interested enough in the firm to analyze the company's financial statements. Prior research indicates that one of the primary causes of the home bias phenomenon is the inability of many foreign firms to attract the initial attention of investors. Proxies for greater firm visibility, such as firm size, inclusion in a stock index, analyst following, and having an ADR listing, have all been shown to increase U.S. investment in a firm (Kang and Stulz [1997], Covrig, Lau, and Ng [2001], Edison and Warnock [2003]). We examine the impact of each of these items on the association between accounting choice and U.S. investment. We find that each of these visibility attributes significantly increases the impact of U.S. GAAP conformity

on U.S. investment. Despite the requirement that cross-listed ADR firms provide a reconciliation of their home-country GAAP to U.S. GAAP, we find that listing an ADR and U.S. GAAP conformity act as complements. Additionally, we find that U.S. GAAP conformity ratios still have a statistically significant impact on U.S. investment for firms lacking these visibility attributes.

We also examine whether our within-country results are robust to country-level factors such as legal tradition (common law vs. code law), the level of overall disclosure, the degree of statutory flexibility in accounting choices, and earnings quality. We find that, in every partition of these factors, the relation between the level of U.S. institutional ownership and U.S. GAAP conformity is significant. Thus, the within-country association between U.S. investment and accounting choices is robust to these country-level factors.

Our findings contribute to the literature in several ways. First, we show that changes in accounting methods precede changes in investment, suggesting that accounting choice affects foreign investment decisions. This is the first study that we are aware of to directly examine this relation. Second, our evidence that diversity in accounting choice reduces international investment contributes to the substantial debate regarding the benefits of international harmonization of accounting standards. Our study suggests that reducing this diversity could reduce barriers to cross-country investment. Third, we show that accounting choice has greater impact once attention has been drawn to the firm through another mechanism. Although prior research attributes most of the informational issues of international underinvestment to a lack of knowledge that the firms exist (consistent with Merton [1987]), our results indicate that the informational issues that affect international investment choices are multileveled and at least partially due to reporting decisions made by the firm's managers.

Our findings and contributions are subject to several caveats. First, under rule 13(f), U.S. institutions are only required to list holdings in non-U.S. firms that trade as ADRs. We find that many institutions also list holdings in non-U.S. firms that are not traded in the U.S., but these disclosures are voluntary and almost certainly incomplete. Thus, we cannot determine the magnitude of home bias in our sample. As long as institutions are not strategic in their reporting, this incomplete data should add noise, but not bias, to our tests. To ensure that the incomplete reporting does not affect our results, we confirm that our results hold in both ADR and non-ADR subsamples. However, if institutions systematically report (omit) investments in firms that use (do not use) U.S. GAAP methods, our results would suggest that U.S. GAAP conformity is associated with a reporting bias rather than an investment preference. Second, our data limit us to studying investors in only one country—the United States. Single-country studies are common in the international investment literature (e.g., Kang and Stulz [1997] is based completely on Japanese data). Moreover, the U.S. is the most frequently studied country (e.g., Foerster and Karolyi [1999], Ahearne, Grier, and

Warnock [2004], Doidge, Karolyi, and Stulz [2004], and Dahlquist et al. [2003]). However, it is possible that our results do not generalize to investors in other countries, particularly if their local accounting standards are of low quality and our results simply reflect a general preference for higher quality standards, such as U.S. GAAP.

In the next section, we motivate our predictions about the relation between accounting choice and U.S. investment. Section 3 provides a description of the sample and variables used in the empirical tests and reports descriptive statistics. Section 4 reports results of our analyses, and section 5 provides a summary and conclusion.

## *2. Motivation and Hypotheses*

### 2.1 ACCOUNTING CHOICE AND HOME BIAS

Prior research documents a pervasive home bias in investment portfolios, in which investors overweight portfolios with firms domiciled in their home countries and underweight portfolios with firms located outside of their home countries (French and Poterba [1991], Cooper and Kaplanis [1994], Tesar and Werner [1995], Lewis [1999]). Although institutional factors such as restrictions on foreign investments account for a portion of the home bias, the literature concludes that most of the bias stems from informational issues, including lack of knowledge that the firm exists, an inability to monitor the firm, and poor quality or low credibility of financial information (Kang and Stulz [1997], Ahearne, Grier, and Warnock [2004], Covrig, Lau, and Ng [2001], Suh [2001], Edison and Warnock [2003]). This home bias indicates that non-U.S. firms attract relatively low investment from U.S. institutions. Given the magnitude of capital controlled by U.S. institutions, this lower level of available capital could have economic impacts on firms desiring external capital. For example, firms with fewer foreign investors typically face a higher cost of capital because the economy-specific risk is borne primarily by in-country investors (Foerster and Karolyi [1999], Doidge, Karolyi, and Stulz [2004]).

The prior literature finds that international differences in accounting standards are highly related to differences in information environments. For example, market-based tests indicate that German firms that prepare financial reports using either U.S. GAAP or international accounting standards (IAS), both of which are designed to communicate to external stakeholders, have lower information asymmetries than do firms that prepare their reports using German GAAP (Leuz and Verrecchia [2000]). Adopting U.S. GAAP or IAS also has been shown to make firms more likely to be a target for international mergers and acquisitions (Ashbaugh and Davis-Friday [2002]). In a study of international disclosure practices, Hope [2003a] shows that firms providing detailed disclosures of the accounting method choices used in preparing their financial statements have more accurate analysts' forecasts. These findings suggest that an understanding of the accounting choices

being employed can assist outsiders in interpreting the firm's accounting information.

Foreign investors are likely to find financial information more useful if a firm uses accounting methods that are familiar to these investors and discloses those choices prominently. Such conformity with foreign practice allows outside investors to use their current expertise to analyze and evaluate the accounting information.<sup>1</sup> A greater understanding of accounting choices underlying financial data reduces informational issues and thus could reduce home-bias frictions among investors familiar with the accounting methods being employed.

## 2.2 ACCOUNTING CHOICE AND PREFERENCES FOR HIGHER QUALITY FINANCIAL INFORMATION

Prior research suggests that institutional investors exhibit a preference for high-quality financial information when making international investments. Gillian and Starks [2003] argue that the decision by CalPERS to eliminate investments in Indonesia, Malaysia, and Thailand is due in part to financial transparency. Furthermore, Mitton [2002] provides evidence that firms with higher quality disclosures were less affected by the East Asian financial crises, suggesting that voluntary disclosures helped insulate them from concerns regarding their domestic institutional structures. As the accounting system is an important aspect of a firm's information environment, foreign investors likely prefer accounting choices perceived to be high quality.

Many sources consider U.S. GAAP to be among the highest quality sets of financial reporting standards in the world, frequently classifying them as one of the few globally accepted accounting standards (Dye and Sunder [2001], Ashbaugh and Davis-Friday [2002], Dechow and Schrand [2003], Glaum and Street [2003], Krishnan [2003]). Additionally, U.S. GAAP is widely accepted by non-U.S. exchanges around the world (Bradshaw and Miller [2003]). Given the high-quality status accorded to U.S. GAAP, U.S. investors are likely to perceive accounting choices allowed under U.S. GAAP as creating higher quality financial statements.

Practitioner surveys provide anecdotal evidence of such a preference. Gavin, Anderson & Company, an international investor relations consulting firm, interviewed 48 U.S. portfolio managers, analysts, and research associates from 37 institutions regarding factors that influence international investment. Every investor polled stated that U.S. GAAP is very important or important in making investment decisions (Bank of New York [2002]). Similarly, McKinsey's [2002] survey of factors affecting international investment stated that 90% of global investors surveyed would prefer one set of

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<sup>1</sup> Barth, Clinch, and Shibano [1997] make a similar argument when considering the impact of international variation in accounting standards. They provide a model showing that harmonizing accounting standards will reduce costs of acquiring foreign expertise, thus facilitating international investment.

global standards. Among North American respondents, 76% favored U.S. GAAP as this standard.<sup>2</sup>

Based on the discussion of accounting choice and home bias in section 2.1 and the discussion in this section regarding a preference for quality accounting, we predict that firms employing accounting methods that conform more closely to U.S. GAAP will have a higher level of investment from U.S. institutions:

*H1:* The amount of ownership by U.S. institutional investors in a firm is positively associated with the degree of conformity of the firm's accounting choices with U.S. GAAP.

### 2.3 ACCOUNTING CHOICE, VISIBILITY, AND ADRS

Although familiar accounting methods can make information more understandable to foreign investors, outside investors must first be interested in reviewing the firm's financial statements for accounting to influence investment decisions. Prior research suggests that firms that list an ADR, are included in a stock index, have large analyst following, or are simply large in size attract more foreign investment (Kang and Stulz [1997], Ahearne, Grier, and Warnock [2004], Covrig, Lau, and Ng [2001], Edison and Warnock [2003]). Accordingly, we expect that conformity of accounting method choice with U.S. GAAP will be more strongly associated with U.S. institutional investment for firms that have these attributes and thus are more likely to be reviewed by a large number of U.S. institutions:

*H2:* The positive association between the amount of ownership by U.S. institutional investors in a firm and the degree of its accounting choice conformity with U.S. GAAP will be greater for firms that are more visible to U.S. investors.

This hypothesis is potentially confounded for firms with ADRs. In addition to attracting attention to the firm, listing as an ADR affects the accounting information provided by the firm. ADR firms are required to file a form 20-F that reconciles their local GAAP information to U.S. GAAP for selected financial statement categories. This requirement provides U.S. investors with some accounting information that is similar to that which they normally use in making investment decisions. Moreover, after an ADR listing, firms' accounting information in their home-country financial statements exhibits properties more similar to U.S. GAAP firms than to non-ADR firms in their

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<sup>2</sup> It is interesting that although 59% of Latin American respondents favored U.S. GAAP, 78% of Western European and 65% of Asian respondents favored IAS. Similarly, a KPMG survey of European firms found that their assessment of the quality of IAS and U.S. GAAP depended on the type of GAAP they employ, leading KPMG to conclude that "it is likely that individual responses were influenced by a respondent's familiarity with their own adopted GAAP" (KPMG [2000, p. 11]). Combined, this survey evidence suggests that respondents are more favorably inclined toward the GAAP with which they are most familiar, consistent with the arguments made in section 2.1 regarding home bias.

home-country (Lang, Raedy, and Yetman [2003]). This finding suggests that listing an ADR results in changes in the accounting information environment similar to those that we predict will increase U.S. investment. Finally, an exchange-traded ADR listing also subjects the firm to Securities and Exchange (SEC) regulatory oversight, which can boost the confidence of investors using financial statement information.<sup>3</sup> Using this argument, Edison and Warnock [2003] provide evidence consistent with an absence of home bias in emerging market firms that list as an ADR. Thus, an ADR listing likely affects the quality of financial information provided (at least for U.S. investors) and the credibility of that information.

However, there are several reasons the form 20-F may not act as a substitute for accounting choice in the primary financial statements. First, the 20-F filed by ADR firms does not provide a full set of U.S. GAAP financial statements. Second, the reconciliations are only provided annually, whereas most firms provide quarterly or semi-annual financial reports. Third, the 20-F is frequently not provided in as timely a manner as the initial earnings announcement. Finally, management's supplementary disclosures, such as the Management Discussion and Analysis, will be focused on explaining trends and expectations for the information provided in the primary statements, not the 20-F. These features of the 20-F reconciliation suggest that it provides a partial and less timely solution for investors using accounting information to monitor ADR firms.

The preceding discussion indicates that our predicted relation between U.S. investment and accounting choice is likely affected by the presence of an ADR for the firm, but the exact direction of this effect is difficult to predict. If accounting choices are only effective in mitigating underinvestment once the ADR has garnered attention for the firm or increased the credibility of the information the firm is providing, the ADR listing and accounting method choice would serve as complements in attracting U.S. investment. On the other hand, if an ADR listing draws attention to the firm *and* the 20-F provides sufficient accounting information to overcome any remaining informational issues, the accounting choice in the domestic statements of ADR firms should not be associated with the magnitude of investment by U.S. institutions (i.e., accounting method choice and ADRs are substitutes). We investigate these various possibilities by performing separate analyses of firms with and without ADRs.

Combined, our summary of the prior literature and related predictions suggest the following investment model for U.S. institutions investing internationally. First, U.S. institutions choose a subset of firms to analyze. We expect that characteristics such as country, industry, size, and growth play

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<sup>3</sup> The degree to which such oversight actually occurs is an open empirical question. Siegel [2005] examines a group of Mexican firms cross-listed on U.S. exchanges and finds that "U.S. law enforcement neither deterred nor punished" the expropriation of billions of dollars. Furthermore, he provides evidence that very few SEC actions have ever been taken against foreign registrants. On the Stanford Securities listing of class action law suits, only 14 of the more than 1,500 lawsuits listed as of May 2002 involve foreign registrants.

an important role in identifying this subset. In addition, the home bias literature suggests the subset is related to informational factors that initially attract U.S. investor attention, such as an ADR listing, analyst following, and inclusion on a country index.

Regardless of how this initial subset is constructed, the second step is to analyze these companies. Accounting is a primary input into such analyses. Accordingly, the accounting choices that generate the financial statement information become important at this point in the investment process if the buy-side analyst views accounting choices more similar to U.S. GAAP as higher quality, more familiar, more credible, or lower cost to analyze. Even if the primary analyst is entirely comfortable with non-U.S. GAAP choices, accounting choice would still matter if the analyst knows he or she must provide the analysis to a superior, such as a U.S.-based fund manager, who is more comfortable with U.S. GAAP. In either case, accounting choice affects the ability to use accounting information in analyzing a firm and thus the final investment decision. Note that although we argue accounting choice plays a primary role in the analysis underlying that investment decision, we do not expect that accounting choice is the first-order determinant of investment in non-U.S. firms.

### *3. Sample and Descriptive Statistics*

#### 3.1 SAMPLE

Our sample consists of 89,078 firm-year observations between 1989 and 1999. This sample represents all firms with nonmissing market, financial statement, and accounting choice data that are not domiciled in either the United States or Canada.<sup>4</sup> We refer to this sample as the full sample. We are able to obtain U.S. institutional investor holdings data for 4,798 firm-year observations in this sample between 1989 and 1999. For the remainder of the firms in the full sample, we assume that U.S. institutional holdings are zero. To ensure that this assumption does not bias our results, we also perform our analysis on the sample of 4,798 observations with at least one U.S. institutional investor. We refer to this sample as the restricted sample.

We obtain market, financial statement, and accounting choice data from Worldscope. This database covers most large firms traded on the world capital markets and collects financial statement data from regulatory agencies (such as the Japanese Ministry of Finance) and from the companies directly.<sup>5</sup>

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<sup>4</sup> We exclude Canadian firms from our sample because of the Multijurisdictional Disclosure System in place between the U.S. and Canada during part of our sample period and because of the high level of conformity between U.S. and Canadian GAAP.

<sup>5</sup> As of 1999, Worldscope covered over 95% of the total value of worldwide capital markets, representing 22,000 companies in 53 countries. Worldscope employs multilingual corporate data analysts that meet accounting and financial qualifications. These analysts undergo extensive training prior to making substantive contributions to the actual database. As of 1999, Worldscope employed over 300 people in four primary collection centers (Bangalore, India; Holbury, U.K.; Shannon, Ireland; and Manila, Philippines).

Worldscope also retrieves some data from sources such as stock exchanges (e.g., market price information) and other data services such as ExShare (e.g., dividends, mergers, restructurings, etc.). The earliest data available on Worldscope are from 1980; however, we use data starting in 1989 because of limited data availability in earlier years.

We obtain data on analyst following from IBES. Worldscope provides IBES tickers, which allow us to download the number of analysts providing a one-year-ahead earnings forecast as of December and match the data to the Worldscope data. We obtain data on ADR securities from the May 2002 listing on the Bank of New York Depository Receipt Web site.

We collect data on U.S. institutional holdings from the Thomson Financial Spectrum database. We match the Spectrum data to the Worldscope data using CUSIP numbers when available on Worldscope. For firms with missing CUSIP numbers, we attempt to match with name-matching algorithms. Finally, we attempt to hand match the remaining firms.

The Spectrum data are based on the rule 13(f) quarterly holdings information filed with the SEC. Rule 13(f) requires institutions managing more than \$100 million in equity to file a quarterly report with the SEC of all equity holdings greater than 10,000 shares or \$200,000 in market value. This rule does not require firms to include securities traded on markets outside the United States. Thus, with the exception of exchange-traded ADR shares, institutions voluntarily report holdings in securities of non-U.S. firms.<sup>6</sup> As a result, our data likely understate institutional investment in some non-U.S. firms and thus cannot quantify the extent of home bias in our sample. However, the focus of our study is to explain the cross-sectional variation in reported investments to examine the relation between accounting choice and U.S. investment. Bias may occur only if the decision to report a security on a 13(f) is *systematically* related to the degree of U.S. GAAP conformity. For example, if institutions that ignore accounting choices systematically fail to report foreign holdings, whereas institutions that use accounting choice systematically report foreign holdings, our results would overweight the importance of accounting choice. Even in this case, accounting choice would still matter for many institutions and our conclusions would still hold. Alternatively, if institutions do not actually use accounting choice in making the investment decision, but for some reason only report holdings in firms with relatively high U.S. GAAP conformity in their accounting choices, our results would suggest that institutions believe accounting choice is important in justifying investments but not in actually making the investments. We do not believe either reporting bias is likely driving our results.

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<sup>6</sup> A review of the Spectrum data shows that 75% of the non-U.S. firms in our sample represent direct holdings in securities traded on foreign exchanges, as evidenced by CUSIP International Numbering System numbers (instead of CUSIPs) and the ORD indicator to denote ordinary shares (as opposed to ADR shares). In section 4.5, we verify that our results are present in both ADR and non-ADR subsample to ensure that voluntary reporting is not driving our results.

### 3.2 VARIABLES

Table 1 provides definitions of all variables used in the empirical tests. We use three measures of U.S. institutional ownership. First, we define an indicator variable, *DIH*, to equal 1 if a firm has at least one U.S. institutional owner and 0 if we were unable to find any U.S. institutional owner. Next, we measure the percentage ownership of U.S. institutions in the firm (*PIH*), defined as total market value of shares owned by U.S. institutions divided by the total market value of the firm. This construct is the most commonly used proxy for institutional ownership (e.g., see Bushee [1998, 2001], Gompers and Metrick [2001]). A drawback of this measure is that it requires data on total shares outstanding or total market value, which is missing for some firms in our sample.<sup>7</sup> Finally, we use the log of the number of U.S. institutional investors that have nonzero holdings in the stock (*LNIH*). This measure has also been used in prior research as a proxy for institutional following (e.g., O'Brien and Bhushan, [1990], Walther [1997]) and has the advantage that it does not require data on total shares outstanding. In addition, in the presence of restrictions on foreign ownership magnitudes, differing levels of free float across countries, or large block investments, this measure can provide a cleaner proxy for U.S. institutional interest in a stock than does *PIH*.

We measure conformity with U.S. GAAP based on accounting method choice data from Worldscope. Following Bradshaw and Miller [2003], we obtain data on 13 accounting method choices and identify whether each choice is allowable under U.S. GAAP. The appendix provides a listing of the 13 accounting choices we use, the method(s) classified as conforming with U.S. GAAP, and a tabulation of the overall conformity with U.S. GAAP for all non-U.S. and non-Canada firm-years from 1989 to 1999.<sup>8</sup> Our goal in using these 13 choices is to create a proxy for the overall conformity of the firm's accounting choices with those allowed in the United States. We do not view these 13 choices as representing either a comprehensive list of all choices or as the 13 choices that investors would view as most important. Rather, they

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<sup>7</sup> Computing this measure is confounded when firms have multiple share classes. If market value is available for all share classes, we simply sum the market value of all share classes as the denominator. If price is missing but shares outstanding is reported, we divide total shares held by U.S. institutions in all share classes by total shares outstanding in all classes. We must do this for approximately 10% of the sample. For 5% of sample firms, total shares outstanding is missing and we must delete the observation from the test. For ADRs, we use the appropriate translation factors, which are embedded in the Spectrum data on price and shares outstanding.

<sup>8</sup> The accounting method choices selected represent those for which there is at least one method that can be identified as inconsistent with U.S. GAAP. For example, we do not include the accounting method choice for depreciation because almost all possible depreciation methods coded by Worldscope are acceptable under U.S. GAAP. Unlike Bradshaw and Miller [2003], we do not consider price-level adjustments to be conformant with U.S. GAAP because, even though they are technically allowed in the case of a hyperinflationary period, they would not be observed in the United States during our sample period. However, our results are virtually identical if we consider these adjustments to be conformant with U.S. GAAP.

**TABLE 1**  
*Variable Definitions*

Variable	Definition
<i>DIH</i>	Indicator variable equal to 1 if the firm has at least one U.S. institutional investor during the year
<i>PIH</i>	Percentage ownership by U.S. institutions in the firm, defined as total market value of shares owned by U.S. institutions divided by the total market value of the firm (average of four quarters during the year)
<i>LN/H</i>	Log of the number of U.S. institutional investors that have nonzero holdings in the firm (average of four quarters during the year)
<i>RATIO1</i>	Number of accounting method choices consistent with U.S. GAAP divided by 13 (the total number of choices examined)
<i>RATIO2</i>	Number of accounting method choices consistent with U.S. GAAP divided by the total number of method choices disclosed
<i>ADR</i>	Indicator variable equal to 1 if there is a sponsored American Depository Receipt (ADR) trading on a U.S. exchange (level II or III)
<i>ADRTIME</i>	Log of the number of years the firm has had an exchange-traded ADR listed in the U.S. market
<i>DSI</i>	Indicator variable equal to 1 if the firm's stock is part of any stock market index (e.g., FTSE 100, Nikkei 225, Hang Seng, etc.)
<i>USSALES</i>	Indicator variable equal to 1 if the firm discloses U.S. segment sales and 0 if the firm does not disclose either segment sales or U.S. segment sales
<i>LNAL</i>	Log of number of analysts providing earnings forecasts during December
<i>LMVUS</i>	Log of market value of the company based on year-end price and shares outstanding, converted to \$US using the year-end exchange rate
<i>SGR</i>	The one-year growth in net sales, calculated as [(current year sales/last year sales) - 1]
<i>ROE</i>	Return on equity, calculated as (net income after preferred dividends/beginning common equity)
<i>DTA</i>	The debt-to-total assets ratio, calculated as [(long-term debt + short-term debt + current portion long-term debt)/total assets]
<i>EP</i>	Earnings-to-price ratio, calculated as (earnings per share/year-end market price)
<i>BP</i>	Book-to-market ratio, calculated as (book value per share/year-end market price)
<i>DP</i>	Dividend yield, calculated as (dividends per share/year-end market price)
<i>RET</i>	Total one-year raw return (including all dividends and other distributions)
<i>BIG5</i>	Indicator variable equal to 1 if the firm's auditor is one of the Big 5 (or their predecessors)

All variables except *DSI* are measured annually between 1989 and 1999. *DSI* is only available for the latest year in the sample; this value is applied to each year the firm is in the sample. *DIH*, *PIH*, and *LN/H* are obtained from the Thompson Financial Spectrum Database of institutional holdings. This database has all of the quarterly holdings of U.S. institutional investors required to file a Securities and Exchange Commission (SEC) form 13-F. In about 10% of the cases, market value data are not available for the computation of *PIH*, and total shares outstanding is used instead (which is an approximation in the case of multiple-share classes). For another 5% of the observations, total shares outstanding is also not available and *PIH* is coded as missing. In all cases, appropriate adjustments are made for the market value of ADR share classes. *NAL* is obtained from the IBES database of analyst forecasts. ADR listings are obtained from the Bank of New York Web site. All other variables are collected from the Worldscope database. These variables are defined by Worldscope, which, similar to other commercial databases, occasionally makes slight adjustments in certain countries or industries to properly incorporate country-specific differences in accounting practices.

are as comprehensive a set of accounting choices as the Worldscope data allow us to compute.

We compute two measures of conformity with U.S. GAAP. *RATIO1* is calculated as the percentage of the 13 accounting method choices that conform to U.S. GAAP. The numerator of this ratio includes only choices that are disclosed *and* consistent with U.S. GAAP. As a consequence, nondisclosure of any accounting choice is treated as not consistent with U.S. GAAP. Even if the firm were using methods consistent with U.S. GAAP, the lack of disclosure would result in U.S. investors being unaware of this choice. Accordingly, *RATIO1* equates nondisclosure with disclosure of a nonconsistent accounting method in measuring the degree to which the firm is conveying financial information that is familiar to U.S. investors. However, nondisclosure can result from nonapplicability (e.g., accounting for research and development). Moreover, Hope [2003a] finds disclosure of accounting choices per se can affect a firm's information environment. Thus, we compute a second conformity measure (*RATIO2*) that does not "penalize" for nondisclosure. *RATIO2* is calculated as the percentage of the *disclosed* accounting choices that conform to U.S. GAAP. Both ratios are bounded by the interval [0, 1], but *RATIO2* will mechanically have a higher sample mean because we are limiting the calculation to the number of *disclosed* accounting method choices rather than dividing by the full set of 13.

We confirm the validity of our U.S. GAAP conformity ratios by examining ADR reconciling items. Firms sponsoring ADRs on U.S. exchanges are required to reconcile local GAAP to U.S. GAAP, and Worldscope provides both sets of data. If *RATIO1* and *RATIO2* capture the closeness of non-U.S. firms' local financial reporting to U.S. GAAP, firms with higher (lower) conformity ratios should exhibit lower (higher) ADR reconciling adjustments. For all firms with available data on Worldscope, we compute the absolute value of the reconciling adjustments for operating income, net income, and total assets as the difference between each line item from the local GAAP financial statements and the amount from the ADR filing, scaled by the firm's market value (all amounts in US\$). All correlations between the conformity ratios and the reconciling adjustments are negative and significant, confirming that our ratio variables capture meaningful differences in financial statements between non-U.S. and U.S. GAAP.<sup>9</sup> Moreover, Bradshaw and Miller [2003] examine a sample of non-U.S. firms that voluntarily adopt U.S. GAAP for local reporting. Using the same 13 accounting choices, they document a significant increase in the conformity ratios upon adoption of U.S. GAAP. They also document a structural shift in the behavior of accounting system

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<sup>9</sup> The Spearman (Pearson) correlations of the *RATIO* variables with the absolute value of reconciling adjustments for operating income, net income, and total assets range between -0.17 and -0.22 (-0.05 and -0.21). All of the correlations except one are significant at or below the .001 level.

outputs for U.S. GAAP adopters. They demonstrate that, before adoption of U.S. GAAP, the sample firms exhibit large negative correlations between accruals and cash flows, statistically equivalent to correlations for matched foreign firms. However, after adoption of U.S. GAAP, the large negative correlations attenuate for the sample firms, becoming statistically equivalent to those of matched U.S. firms. These findings further validate the accounting choice data.

We include several variables to control for other factors that likely explain U.S. institutional ownership in non-U.S. firms. We use five variables to proxy for the degree of visibility and richness of the information environment of non-U.S. firms. We include an indicator variable (*ADR*) for whether the firm has an ADR listed on a U.S. exchange (i.e., level II or III ADRs), which make these firms more visible to U.S. investors than non-U.S. firms not listed in the United States and which subject these firm to SEC review (Ahearne, Grier, and Warnock [2004]). We also include the log of the number of years the firm has had a level II or III ADR listed on a U.S. exchange (*ADRTIME*). We add an indicator variable for whether a firm is listed on any stock index (*DSI*), either on its home-country exchange or on another non-U.S. exchange (e.g., FTSE 100, Nikkei 225, Hang Seng). Presumably, U.S. investors seeking to invest in a certain country will begin their search with firms listed on a major stock index in the country (Covrig, Lau, and Ng [2001]).<sup>10</sup> Because Khanna, Palepu, and Srinivasan [2004] find that U.S. disclosure practices are associated with U.S. product market interactions, we include an indicator variable for the presence of U.S. sales (*USSALES*) using Worldscope segment data. If a firm does not disclose segment data, we assume the firm has no U.S. sales.<sup>11</sup> Finally, we include the log of the number of analysts providing forecasts of the firm's earnings (*LNAL*). Prior research finds that this measure is associated with institutional following both in the United States and in the international community because of the contribution of analysts to a firm's visibility and

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<sup>10</sup> This variable is only available for the most current year of Worldscope data. We set this indicator equal to 1 (0) for all years a firm is in the sample if it is listed (not listed) on an index in the most recent year. Thus, this measure is likely a noisy measure of index membership in the early sample years. However, our main results are not sensitive to the inclusion of this variable.

<sup>11</sup> Geographic segments are only identifiable for 11% of the Worldscope segment sales data. We assume that any identifier including the U.S. comprises U.S. sales, but this is a noisy measure because the United States is often combined with other areas in the segment definition, such as Canada, Mexico, South America, Australia, and even Thailand. For this reason, we do not use the magnitude of U.S. sales; however, if we do use this measure, the *RATIO* variables remain significant. The results also are not sensitive to our assumption that no segment disclosures mean no U.S. sales; if we restrict the sample to only firms disclosing segment data, the *RATIO* variables remain significant. Finally, in addition to using a U.S. sales measure, research also examines an indicator for U.S. assets (Khanna, Palepu, and Srinivasan [2004]). In the Worldscope data, only 15 firms report U.S. assets but no U.S. sales; therefore, the U.S. assets measure is subsumed by U.S. sales in our sample.

information environment (O'Brien and Bhushan [1990], Covrig, Lau, and Ng [2001]).<sup>12</sup>

We also include variables to control for well-documented preferences of institutional investors for size, growth, performance, and risk characteristics among U.S. firms. Institutions tend to invest more in larger firms because of liquidity, information environment, and fiduciary concerns (Kang and Stulz [1997], Bushee [2001], Gompers and Metrick [2001]). We proxy for firm size using the log of the firm's market value of equity in U.S. dollars (*LMVUS*). Fiduciary concerns also can lead institutions to have preferences for firms with better accounting performance and lower risk (Bushee [2001]). We proxy for accounting performance with sales growth over the prior year (*SGR*) and with return on equity (*ROE*). We proxy for risk with the leverage ratio, debt to assets (*DTA*). We use this measure instead of beta or systematic risk because of their limited availability on Worldscope. Institutions tend to adopt consistent investment styles based on growth and income attributes; therefore, we also include three proxies for firm fundamentals: the earnings-price ratio (*EP*), the book value–price ratio (*BP*), and dividend yield (*DP*) (Bushee [2001]).<sup>13</sup> Prior research documents an institutional investor preference for firms with recent strong market performance (Bushee [2001], Gompers and Metrick [2001]); therefore, we include the firm's raw return over the prior year (*RET*). Finally, we include an indicator for whether the firm is audited by a Big 5 auditing firm or their predecessors (*BIG5*) to control for U.S. investor preferences for assurance services from auditing firms with strong reputations in the United States (Aggarwal, Klapper, and Wysocki [2002]).

### 3.3 DESCRIPTIVE STATISTICS

Panel A of table 2 presents mean and median values of the variables used in our empirical analyses.<sup>14</sup> Column 1 presents values for the full sample. In our sample, 5.4% of the firm-year observations have some U.S. institutional ownership, and the mean number of institutions per firm is 1.12. Conformity with U.S. GAAP is fairly low across the full sample. The mean value of *RATIO1* shows that only 42.1% of the accounting choices, on average, are

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<sup>12</sup> O'Brien and Bhushan [1990] model the number of analysts and the number of institutions as a simultaneous system of equations. We do not use such an approach because analyst following is not our main focus and because the limited set of financial variables available on Worldscope would make simultaneous equations modeling problematic. We exclude *LNAL* from the analysis and find no differences in inferences for our main variables.

<sup>13</sup> These three ratios, as well as *ROE* and *DTA*, are likely to be affected by both a firm's economics and its accounting choices. In the latter case, including these ratios potentially biases against our finding a relation between U.S. institutional ownership and a firm's accounting choices.

<sup>14</sup> For variables with extreme outliers (e.g., *LMVUS*, *SGR*, *ROE*, *DTA*, *EP*, *BP*, *DP*, *RET*), we winsorize the extreme 1% of each tail. We also estimated all of the models using ranked values of all continuous variables. The *RATIO* variables remained statistically significant in each model using this specification.

**TABLE 2**  
*Descriptive Statistics*

Panel A: Means and medians		Full Sample	$NH = 0$	$NH > 0$	Diff	No.ADR	ADR	Diff
Variable								
<i>DIH</i>	Mean	0.054	0.000	1.000	n/a	0.040	0.874	***
	Median	0.000	0.000	1.000	n/a	0.000	1.000	***
<i>NIH</i>	Mean	1.115	0.000	20.698	n/a	0.480	38.076	***
	Median	0.000	0.000	4.000	n/a	0.000	16.000	***
<i>PIH</i>	Mean	0.002	0.000	0.034	n/a	0.001	0.055	***
	Median	0.000	0.000	0.003	n/a	0.000	0.013	***
<i>RATIO1</i>	Mean	0.421	0.413	0.549	***	0.418	0.570	***
	Median	0.385	0.385	0.538	***	0.385	0.538	***
<i>RATIO2</i>	Mean	0.712	0.707	0.787	***	0.710	0.800	***
	Median	0.714	0.714	0.800	***	0.714	0.800	***
<i>ADR</i>	Mean	0.017	0.002	0.274	***	0.000	1.000	n/a
	Median	0.000	0.000	0.000	***	0.000	1.000	n/a
<i>ADRTIME</i>	Mean	0.027	0.001	0.483	***	0.000	1.621	***
	Median	0.000	0.000	0.000	***	0.000	1.609	***
<i>DSI</i>	Mean	0.523	0.504	0.856	***	0.515	0.978	***
	Median	1.000	1.000	1.000	***	0.000	1.000	***
<i>USSALES</i>	Mean	0.011	0.009	0.031	***	0.010	0.043	***
	Median	0.000	0.000	0.000	***	0.000	0.000	***

<i>NAL</i>	Mean	5.277	15.767	***	5.674	15.594	***
	Median	3.000	15.000	***	3.000	15.000	***
<i>LMVUS</i>	Mean	5.035	7.389	***	5.120	7.561	***
	Median	5.081	8.062	***	5.148	8.276	***
<i>SGR</i>	Mean	0.101	0.113	***	0.101	0.148	***
	Median	0.057	0.075	***	0.057	0.095	***
<i>ROE</i>	Mean	0.083	0.112	***	0.084	0.133	***
	Median	0.075	0.105	***	0.075	0.124	***
<i>DTA</i>	Mean	0.245	0.259	***	0.246	0.259	***
	Median	0.221	0.251	***	0.222	0.252	***
<i>EP</i>	Mean	0.029	0.038	***	0.029	0.045	***
	Median	0.043	0.047	***	0.043	0.050	***
<i>BP</i>	Mean	0.858	0.685	***	0.862	0.646	***
	Median	0.666	0.529	***	0.670	0.507	***
<i>DP</i>	Mean	0.021	0.022	**	0.021	0.022	*
	Median	0.016	0.018	***	0.015	0.019	***
<i>RET</i>	Mean	0.070	0.123	***	0.068	0.202	***
	Median	0.011	0.073	***	0.009	0.146	***
<i>BIG5</i>	Mean	0.693	0.886	***	0.689	0.947	***
	Median	1.000	1.000	***	1.000	1.000	***
Number of firm-years		89,078	4,798		87,573	1,505	
Number of firms		12,934	982		12,628	306	

TABLE 2 — *Continued*

	Panel B: Descriptive statistics by country										
	Mean										
	N	DIH	NIH	PIH	ADR	DSI	RATIO1	RATIO2	RATIO1	RATIO1	RATIO2
Argentina	216	0.301	11.171	0.028	0.125	0.296	0.382	0.789	0.136	0.789	0.160
Australia	2,661	0.123	1.559	0.003	0.039	0.179	0.423	0.730	0.137	0.730	0.152
Austria	753	0.037	0.070	0.000	0.000	0.101	0.366	0.741	0.188	0.741	0.186
Belgium	1,209	0.010	0.024	0.000	0.000	0.009	0.407	0.775	0.196	0.775	0.201
Brazil	934	0.073	0.988	0.003	0.022	0.202	0.443	0.735	0.126	0.735	0.105
Chile	525	0.173	4.392	0.011	0.152	0.276	0.499	0.784	0.154	0.784	0.131
China	385	0.078	0.436	0.001	0.026	0.096	0.452	0.861	0.107	0.861	0.113
Colombia	146	0.089	0.664	0.002	0.068	0.205	0.376	0.719	0.142	0.719	0.158
Czech	181	0.033	0.116	0.001	0.000	0.033	0.367	0.673	0.148	0.673	0.196
Denmark	1,725	0.014	0.467	0.001	0.006	0.009	0.343	0.639	0.147	0.639	0.169
Egypt	11	0.364	0.818	0.013	0.000	0.636	0.189	0.522	0.126	0.522	0.260
Finland	899	0.053	1.584	0.003	0.026	0.065	0.396	0.681	0.161	0.681	0.171
France	5,844	0.034	0.728	0.001	0.013	0.051	0.451	0.764	0.189	0.764	0.184
Germany	4,885	0.036	0.476	0.000	0.002	0.045	0.396	0.778	0.173	0.778	0.157
Greece	837	0.005	0.125	0.000	0.004	0.018	0.211	0.730	0.098	0.730	0.215
Hong Kong	2,296	0.121	0.887	0.001	0.002	0.180	0.395	0.662	0.116	0.662	0.116
Hungary	115	0.130	1.478	0.003	0.017	0.270	0.352	0.739	0.258	0.739	0.264
India	1,719	0.049	0.167	0.001	0.002	0.026	0.236	0.507	0.097	0.507	0.147
Indonesia	702	0.017	0.479	0.000	0.010	0.026	0.482	0.848	0.157	0.848	0.130
Ireland	629	0.084	3.132	0.011	0.083	0.137	0.349	0.627	0.118	0.627	0.125
Israel	156	0.333	8.833	0.044	0.115	0.269	0.590	0.896	0.143	0.896	0.061
Italy	2,114	0.051	0.461	0.000	0.016	0.063	0.559	0.804	0.144	0.804	0.117
Japan	22,605	0.044	0.345	0.000	0.010	0.070	0.476	0.706	0.170	0.706	0.190
Luxembourg	151	0.113	2.755	0.008	0.033	0.060	0.324	0.724	0.205	0.724	0.230

Mexico	586	0.353	11.454	0.027	0.193	0.454	0.403	0.712	0.133	0.128
Morocco	8	0.125	0.125	0.000	0.000	0.125	0.288	0.714	0.178	0.120
Malaysia	2,634	0.023	0.052	0.000	0.000	0.042	0.470	0.711	0.122	0.096
Norway	1,070	0.064	1.377	0.005	0.029	0.101	0.400	0.760	0.170	0.170
Netherlands	1,744	0.127	8.596	0.010	0.054	0.153	0.423	0.730	0.156	0.163
New Zealand	436	0.057	1.528	0.002	0.023	0.055	0.478	0.814	0.125	0.129
Pakistan	485	0.000	0.000	0.000	0.000	0.016	0.286	0.620	0.097	0.158
Peru	156	0.167	4.615	0.011	0.038	0.250	0.350	0.711	0.150	0.159
Philippines	547	0.084	1.272	0.005	0.015	0.168	0.458	0.941	0.140	0.109
Poland	179	0.067	0.196	0.001	0.000	0.112	0.380	0.819	0.167	0.149
Portugal	548	0.044	1.192	0.003	0.031	0.044	0.421	0.707	0.176	0.200
Russia	39	0.333	4.179	0.016	0.103	0.333	0.201	0.614	0.207	0.393
South Africa	1,802	0.099	0.860	0.002	0.022	0.148	0.360	0.677	0.132	0.121
South Korea	1,831	0.018	0.535	0.001	0.007	0.067	0.483	0.640	0.132	0.125
Slovakia	38	0.053	0.132	0.000	0.000	0.132	0.306	0.699	0.229	0.192
Singapore	1,468	0.037	0.373	0.002	0.000	0.069	0.475	0.719	0.133	0.103
Spain	1,467	0.051	2.607	0.002	0.014	0.059	0.429	0.734	0.168	0.175
Sri Lanka	76	0.013	0.013	0.000	0.000	0.066	0.350	0.652	0.149	0.187
Sweden	1,532	0.061	1.751	0.003	0.031	0.081	0.311	0.719	0.166	0.188
Switzerland	1,887	0.022	0.619	0.000	0.008	0.055	0.432	0.679	0.256	0.242
Taiwan	1,018	0.041	0.337	0.000	0.009	0.116	0.576	0.935	0.104	0.103
Thailand	1,340	0.009	0.129	0.002	0.000	0.037	0.363	0.897	0.138	0.154
Turkey	339	0.012	0.027	0.000	0.000	0.103	0.192	0.618	0.150	0.288
U.K.	16,041	0.051	1.682	0.002	0.021	0.061	0.352	0.635	0.104	0.111
Venezuela	84	0.345	4.155	0.009	0.024	0.702	0.524	0.856	0.127	0.115
Zimbabwe	25	0.000	0.000	0.000	0.000	0.000	0.357	0.690	0.138	0.156
Min	8	0.000	0.000	0.000	0.000	0.000	0.189	0.507	0.097	0.061
Max	22,605	0.364	11.454	0.044	0.193	0.702	0.590	0.941	0.258	0.393

TABLE 2—Continued

**Panel C: Correlation matrix**

	L <sub>NIH</sub>	PIH	RATIO1	RATIO2	ADR	ADR-TIME	DSI	US-SALES	L <sub>NAL</sub>	L <sub>MVUS</sub>	SGR	ROE	DTA	EP	BP	DP	RET	BIG5
L <sub>NIH</sub>	1	0.55	0.18	0.09	0.62	0.57	0.13	0.05	0.20	0.28	0.01	0.05	0.03	0.01	-0.09	-0.01	0.04	0.09
PIH	0.99	1	0.08	0.05	0.31	0.26	0.04	0.02	0.04	0.08	0.03	0.03	0.01	0.00	-0.04	-0.02	0.02	0.04
RATIO1	0.17	0.17	1	0.70	0.13	0.12	0.19	0.09	0.33	0.31	0.04	0.04	0.12	0.00	-0.09	-0.04	0.03	0.09
RATIO2	0.10	0.10	0.69	1	0.07	0.07	0.07	0.05	0.16	0.16	0.04	0.01	0.08	-0.01	-0.02	-0.02	0.01	0.06
ADR	0.49	0.48	0.11	0.07	1	0.80	0.12	0.04	0.12	0.18	0.02	0.03	0.02	0.01	-0.05	-0.01	0.03	0.07
ADRTIME	0.47	0.46	0.10	0.06	0.88	1	0.10	0.04	0.11	0.16	0.00	0.02	0.01	0.01	-0.04	-0.01	0.02	0.06
DSI	0.16	0.16	0.18	0.06	0.12	0.11	1	0.02	0.28	0.40	0.03	0.10	-0.03	0.06	-0.15	0.00	0.08	0.10
USSALES	0.05	0.05	0.08	0.05	0.04	0.04	0.02	1.00	0.07	0.07	0.00	0.02	0.01	0.00	-0.02	0.00	0.00	0.02
L <sub>NAL</sub>	0.23	0.23	0.32	0.15	0.13	0.11	0.31	0.06	1	0.60	0.03	0.17	0.02	0.09	-0.22	0.07	0.06	0.09
L <sub>MVUS</sub>	0.28	0.28	0.30	0.16	0.16	0.14	0.42	0.06	0.62	1	0.10	0.27	-0.05	0.18	-0.37	0.04	0.22	0.17
SGR	0.02	0.02	0.06	0.05	0.02	0.01	0.06	0.00	0.08	0.14	1	0.24	0.01	0.16	-0.14	-0.02	0.18	0.00
ROE	0.05	0.04	0.06	0.01	0.04	0.03	0.10	0.02	0.21	0.27	0.30	1	-0.22	0.73	-0.33	0.29	0.31	0.01
DTA	0.04	0.04	0.15	0.08	0.02	0.02	-0.02	0.02	0.04	-0.05	0.00	-0.20	1	-0.22	0.07	-0.12	-0.11	0.00
EP	-0.02	-0.02	0.00	-0.01	-0.01	-0.01	0.01	0.01	0.07	0.05	0.16	0.67	-0.17	1	-0.11	0.45	0.22	-0.02
BP	-0.10	-0.09	-0.10	-0.02	-0.06	-0.05	-0.14	-0.02	-0.24	-0.35	-0.19	-0.42	0.02	0.07	1	0.08	-0.32	-0.04
DP	0.00	0.00	-0.02	-0.02	-0.01	-0.01	0.00	0.00	0.07	0.04	0.00	0.26	-0.11	0.53	0.16	1	-0.02	0.00
RET	0.04	0.04	0.02	0.01	0.03	0.03	0.09	0.00	0.07	0.23	0.21	0.31	-0.11	0.12	-0.31	-0.02	1	0.00
BIG5	0.10	0.10	0.09	0.05	0.07	0.07	0.10	0.02	0.10	0.16	0.01	0.01	0.00	-0.01	-0.04	0.00	0.00	1

Panel A presents means and medians of all variables defined in table 1. The full sample includes all firms with nonmissing Worldscope data for all of the variables obtained from that source. Any observation not found on Spectrum or IBES is assumed to have zero U.S. institutional ownership or analyst following, respectively. The  $NIH = 0$  ( $NIH > 0$ ) column represents the subsample of firms with zero (nonzero) ownership by U.S. institutional investors. The No. ADR (ADR) column represents the subsample of firms without (with) an American Depositary Receipt (ADR) listed on a U.S. exchange (i.e., level II or III ADR). The Diff column indicates whether the means or medians are significantly different from each other across the two subsamples. The significance test is two-tailed and is based on a  $t$ -statistic for the means and a  $z$ -statistic for the medians. Panel B presents the number ( $N$ ) of firm-year observations from each country in the full sample as well as means for each of the variables listed in the top row. Panel C presents correlations among the variables defined in table 1. Pearson (Spearman) correlations are reported above (below) the diagonal. Because the full sample has 89,078 observations, all correlation coefficients greater than .01 in absolute value are significantly different from zero at or below the 5% level.

\*\*\*Significant at the 1% level (two-tailed).

\*\*Significant at the 5% level (two-tailed).

consistent with U.S. GAAP. The mean value of *RATIO2* is 71.2%, suggesting that nondisclosure of accounting choices explains a significant part of the low mean for *RATIO1*. Only 1.7% of the full sample has an exchange-listed ADR, and 52.3% are listed on a non-U.S. stock index. These full sample statistics indicate that Worldscope covers a broad set of firms and does not overtly skew its coverage toward firms with a significant U.S. presence.

Columns 2 and 3 of panel A compare firms without any U.S. institutional ownership with our restricted sample (i.e., firms with at least one U.S. institutional investor). The mean (median) number of U.S. institutions per non-U.S. firm is 21 (4), which is far below the comparable number for U.S. firms: 113 (58) (from Walther [1997]). Similarly, the mean percentage of U.S. institutional ownership is only 3.4% in non-U.S. firms, compared with 36% to 39% in the United States (as reported in Walther [1997] and Bushee [2001]). Although some of these differences may be attributable to the voluntary nature of non-ADR reporting on form 13(f), the large magnitude of the differences is consistent with the common finding of relatively low foreign investment by U.S. investors.<sup>15</sup> The degree of conformity with U.S. GAAP is significantly higher in the restricted sample than in the sample with no U.S. institutional ownership, providing univariate support for the prediction that U.S. investors prefer firms with higher conformity with U.S. GAAP. U.S. institutions also invest more heavily in ADR firms, firms listed on a stock index, and firms with Big 5 auditors. Finally, U.S. institutions exhibit preferences for firms with greater analyst following, larger market capitalization, higher sales growth and ROE, and higher stock returns, consistent with evidence from U.S. data.

The last two columns of panel A compare firms that have exchange-listed ADRs with firms that only trade on non-U.S. exchanges. ADR firms attract significantly more U.S. institutional ownership, with 87% (4%) of ADR (non-ADR) firms having at least one U.S. institutional investor. The U.S. GAAP conformity ratios are significantly higher for ADR firms, but still far below one. These two findings indicate the importance of controlling for ADRs when examining the relation between U.S. institutional ownership and U.S. GAAP conformity. Almost all ADR firms are listed on a stock index and audited by Big 5 firms. They also have significantly greater analyst following, firm size, accounting performance, and market performance.

Panel B of table 2 presents the number of firms in each country represented in our full sample, as well as statistics on mean institutional ownership, percentage of firms with ADRs and stock index membership, mean U.S. GAAP conformity ratios, and the standard deviation of conformity ratios for each country. Japan and the United Kingdom have the largest representation in the sample, followed by France, Germany, and Australia. Average

<sup>15</sup> Given the lack of mandatory reporting of U.S. holdings in non-U.S. firms, it is difficult to find reliable data on how much U.S. investment there is in non-U.S. firms. However, Dahlquist et al. [2003] report that 91.3% of all equity investment by U.S. investors is in U.S. firms, and in 1999, only 7% of mutual funds on Spectrum reported international as an investment objective. Thus, it is likely that the percentage of non-U.S. firms with some U.S. investment is not a great deal higher than what we report in our sample.

U.S. GAAP conformity varies significantly across countries, from a low of 19% (51%) for *RATIO1* (*RATIO2*) to a high of 59% (94%). Similarly, there is a high degree of variation in the standard deviation of the *RATIO* variables across countries, reflecting differences in flexibility of accounting choices across countries. We examine the impact of these differences on our tests in a later section.

Panel C of table 2 presents a correlation matrix for the variables used in our analysis. There are a few highly correlated pairs of variables in our data, namely, *ADR* – *ADRTIME*, *LMVUS* – *DSI*, *LMVUS* – *LNAL*, *ROE* – *EP*, and *EP* – *DP*. Multicollinearity diagnostics using variance inflation factors on yearly regressions suggest that these correlations do not adversely affect our analyses (i.e., all variance inflation factors are less than three).

## 4. Results

### 4.1 LEVELS ANALYSIS

We test the hypothesis that U.S. investment in non-U.S. firms is associated with a higher degree of U.S. GAAP conformity by regressing our measures of U.S. institutional investment on the U.S. GAAP conformity ratios and control variables. We use the following model for our tests:

$$\begin{aligned}
 IH_{it} = & \alpha_t + \beta_{1t}RATIO_{it} + \beta_{2t}ADR_{it} + \beta_{3t}ADRTIME_{it} + \beta_{4t}DSI_{it} \\
 & + \beta_{5t}USSALES_{it} + \beta_{6t}LNAL_{it} + \beta_{7t}LMVUS_{it} + \beta_{8t}SGR_{it} \\
 & + \beta_{9t}ROE_{it} + \beta_{10t}DTA_{it} + \beta_{11t}EP_{it} + \beta_{12t}BP_{it} + \beta_{13t}DP_{it} \\
 & + \beta_{14t}RET_{it} + \beta_{15t}BIG5_{it} + \varepsilon_t,
 \end{aligned} \tag{1}$$

where *IH* = indicator for U.S. institutional ownership (*DIH*), log of number of U.S. institutional investors (*LNIH*), or percentage of U.S. institutional ownership (*PIH*); *RATIO* = *RATIO1* or *RATIO2*; *i* = firm; and *t* = year.

When *DIH* is the dependent variable, we estimate equation (1) using a logistic regression; for *LNIH* and *PIH*, we use ordinary least squares. We estimate each regression twice: once with *RATIO1* and once with *RATIO2*. To mitigate the influence of cross-sectional correlation, we estimate the regressions yearly and report mean coefficients across years, with significance levels based on a standard error computed from the distribution of the yearly coefficients (Fama and Macbeth [1973]). We adjust the standard errors using the serial correlation adjustment in Abarbanell and Bernard [2000]. For the *RATIO* variables, the significance tests are based on one-tailed *p*-values. Two-tailed tests are used for all other variables. As a control for correlated omitted variables associated with legal, economic, or cultural factors, we adjust every continuous variable for the median level of the variable within the country (dropping any country-year with fewer than three observations). Thus, our results should be interpreted as explaining cross-sectional variation *within* countries rather than *across* countries.<sup>16</sup>

<sup>16</sup> We also estimated all of our analyses using unadjusted variables with fixed or random effects for country. Our results are significant at similar levels under these approaches.

Table 3 presents results for our levels analysis. The first six columns present results for the full sample, in which firms with no Spectrum data are assumed to have no U.S. institutional investment. For all three measures of U.S. institutional ownership—indicator, number, and percent—and for both U.S. GAAP conformity measures, the coefficient on the U.S. GAAP conformity ratio is positive and significant, with five (one) coefficients significant at the .01 (.05) level. These results strongly support our first hypothesis that U.S. investors prefer to invest in firms exhibiting greater conformity with U.S. GAAP in their accounting choices.

The control variables indicate that this result is robust to several significant determinants of U.S. institutional investment. The results show that U.S. institutions invest more heavily in non-U.S. firms that trade as ADRs and have been listed as such for a long time. U.S. institutions also prefer larger firms with higher ROE, higher leverage (*DTA*), lower EP ratio, lower recent raw returns, and a Big 5 auditor. In addition, the number of U.S. institutions is associated with the presence of U.S. sales. It is interesting that the relation between institutional following and analyst following is positive for the indicator variable and the number of institutions, consistent with O'Brien and Bhushan [1990], but negative for the percentage of institutional ownership (a similar pattern is found for sales growth). This result suggests that U.S. institutions take larger positions in firms with lower analyst following, perhaps as a result of specialized or focused information-gathering activities by institutions. The coefficient on stock index membership also changes sign based on the specification, which could be due to the fact that this variable is only available for the most recent year. To confirm that these results are not driven by multicollinearity with the *RATIO* variables, we omit them from the regression and find no significant differences in results (not reported).

One potential drawback with the full sample results is that the relation between U.S. GAAP conformity and U.S. institutional ownership could be driven solely by the presence, rather than the magnitude, of U.S. institutional ownership because of the large number of zero observations for U.S. institutional following. As a result, we estimate equation (1) with *LNIIH* and *PIH* as dependent variables in the restricted sample, which consists of firms with at least one U.S. institutional investor.<sup>17</sup> The last four columns of table 3 present results from this regression. Consistent with the full sample results, the four coefficients on the U.S. GAAP conformity ratios are all positive and highly significant ( $p$ -value < .01). The coefficient of 0.9884 (0.0809) on *RATIOI* in the *LNIIH* (*PIH*) regression indicates that a change of six accounting choices (i.e., a change of 0.46 in the ratio) would result in a 1.6 (3.8%) increase in the number (percentage) of U.S. institutional owners. These numbers are small in absolute terms but represent a meaningful

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<sup>17</sup> We perform the median adjustment of the variables based on the full sample of firms, rather than within the restricted sample, because of the dramatically smaller number of firms per country in this sample. Because of this approach, the intercept is larger in magnitude in the restricted sample than in the full sample.

**TABLE 3**  
*Regression of U.S. Institutional Ownership on U.S. GAAP Conformity Ratios and Control Variables*

$$IH_{it} = \alpha_t + \beta_1 RATIO_{it} + \beta_2 ADR_{it} + \beta_3 ADRTIME_{it} + \beta_4 DSI_{it} + \beta_5 USSALES_{it} + \beta_6 LNAL_{it} + \beta_7 LMVUS_{it} + \beta_8 SGR_{it} + \beta_9 ROE_{it} + \beta_{10} DTA_{it} + \beta_{11} EP_{it} + \beta_{12} BP_{it} + \beta_{13} DP_{it} + \beta_{14} RET_{it} + \beta_{15} BIG5_{it} + \varepsilon_{it}$$

	Full Sample			Restricted Sample		
	DIH	LNHI	PIH	LNHI	LNHI	PIH
Intercept	-5.2540***	0.0417***	0.0395***	0.0008**	0.4086***	0.0270*
RATIO	1.5343***	0.1226***	0.0052***	0.0000	0.9884***	0.0809***
RATIO2						
ADR	4.2723***	1.9383***	0.0305**	0.0032***	0.8279***	0.0798***
ADRTIME	1.8593***	0.2797***	0.2823***	0.0467***	1.0352***	0.0366**
DSI	0.1008	0.1246	-0.0297***	0.0011***	-0.0389	-0.0013
USSALES	0.3071	0.3732	0.0826**	-0.0008***	-0.4331***	-0.0264**
LNAL	0.2364***	0.2725***	0.0121***	0.0017	0.1060	0.0032
LMVUS	0.7699***	0.7803***	0.0152***	-0.0005*	-0.0114	-0.0159***
SGR	-0.2945	-0.3148	0.0426***	0.0004***	0.3254***	-0.0053
ROE	0.5691***	-0.0160**	0.0154**	0.0015**	0.1138	0.0334***
DTA	0.0051***	0.1215***	0.1220***	0.0059***	1.6309***	0.0917***
EP	-1.2943**	0.0060**	0.0004***	0.0000	-0.0038**	-0.0001
BP	0.1360	0.1312	-0.1644***	-0.0056***	-1.8081**	-0.0387
DP	-1.5101	-1.9047	0.0118**	0.0000	0.1768	0.0005
RET	-0.4157***	-0.0423	-0.0850	-0.0212***	-6.3687**	-0.5945**
BIG5	0.5661***	-0.0146**	-0.0146**	-0.0005**	-0.0494	-0.0047
		0.0171***	0.0182***	0.0004**	0.0287	0.0054

This table presents results from regressions of U.S. institutional ownership variables (*DIH*, *LNHI*, *PIH*) on U.S. GAAP conformity ratios and control variables. All variables are defined in table 1. All continuous variables are adjusted for the median value of the variable in the firm's country. Logistic (ordinary least squares) regressions are used when *DIH* (*LNHI*, *PIH*) is the dependent variable. Regressions are estimated for each year in the sample (1989–1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *RATIO* and *RATIO2*. Two-tailed tests are used for all of the control variables. The full sample (89,078 observations) includes all firms with nonmissing *Worldscope* data for all of the variables obtained from that source. Any observation not found on *Spectrum* or *IBES* is assumed to have zero U.S. institutional ownership or analyst following, respectively. The restricted sample (4,798) only includes firms with at least one U.S. institutional owner.

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level. One-tailed for other variables.

increase in U.S. institutions relative to the means and medians in table 2. Thus, the degree of conformity with U.S. GAAP in accounting choices has a significant influence not only on the presence but on the magnitude of investment by U.S. institutional investors.

Although many of the control variables exhibit the same relation with U.S. institutional ownership in the restricted sample, there are some notable differences. The relations between the number of U.S. institutions and number of analysts, sales growth, and leverage change signs in the restricted sample. A similar reversal exists for the relation between the percentage of institutional ownership and firm size. Thus, conditional on a non-U.S. firm having some basic attribute that attracts U.S. institutional investors (such as an ADR), U.S. institutions favor less followed, lower dividend yield firms among this set. Regressions omitting the U.S. GAAP conformity ratios reveal that these relations still hold, indicating that the differences between samples are not driven by the inclusion of the conformity ratios (not reported).

We perform a number of robustness checks to examine how pervasive these results are across countries and years (not reported). First, we examine whether countries with a small number of observations influence the results. We drop all countries with fewer than 200 observations and continue to find a significant relation between the *RATIO* variables and U.S. institutional ownership. Moreover, this relation is significant and positive in each of the five largest countries in the sample: Japan, United Kingdom, France, Germany, and Australia. The results are also significant when these five countries are dropped. In examining the coefficients from the yearly regressions, we find that the relation between the *RATIO* variables and U.S. investment is positive in all 11 years for all specifications. It is interesting that the magnitude and significance of the coefficients on the conformity ratios are stronger in the latter half of the sample (1995–1999). This finding suggests that deviations from U.S. GAAP have become more important as accounting systems have moved toward greater harmonization.

To ensure that no single accounting choice is driving the results, we sequentially estimate the regressions dropping 1 of the 13 items from *RATIO1* and *RATIO2* each time. For *RATIO2*, the item is removed from both the numerator and denominator. We estimate these regressions on both the full and restricted samples for both *LN1H* and *PIH*, yielding a total of 104 regressions. In only 2 of the 104 regressions is the coefficient on the *RATIO* variable not significantly greater than zero at the .05 level, and in one of those 2 cases, the coefficient is significant at the .10 level. Thus, the evidence suggests that the *RATIO* variables are not driven by one specific accounting choice.

We also investigate whether analyses using individual accounting choices or subsets of choices would be feasible. In the full sample, the mean (median) bivariate correlation between individual choices is 0.71 (0.70) and all bivariate correlations are greater than 0.50. Moreover, the Cronbach's alpha for the *RATIO1* index is 0.96, substantially above Nunnally's [1978] suggested value of 0.70 for a reliable index. Thus, the high multicollinearity among individual items would prevent us from obtaining meaningful results

by including all 13 choices separately. Based on this, we estimate a factor analysis on the 13 choices to explore whether there are any common factors among the choices. The first eigenvalue is 4.72 and the second eigenvalue is 0.76, suggesting there is one factor. The scree plot also suggests one factor. The proportion of the variance explained by the first factor is 89%, which leaves the possibility open for a second factor. We force a two-factor solution and examine both an orthogonal and oblique rotation. In both cases, the groups of the items in each factor seem essentially arbitrary and suggest no obvious underlying construct. Thus, the data strongly suggest that there are not meaningful subsets of choices within the *RATIO* variables.

Next, we estimate the *LNIH* and *PIH* models in the full and restricted samples replacing *RATIO1* with each accounting choice individually. In 45 of the 52 regressions, the coefficient on the individual accounting choice is positive and significant at the .05 level; in only two regressions is a coefficient negative. We ranked these coefficients within each model to check whether U.S. investors consistently place higher weights on any given choice. The ranking differed greatly by sample and dependent variable, suggesting that U.S. investors are not fixating on one accounting choice. Rather, because of the high correlations among the accounting choices, each one proxies, to some extent, for the closeness of the firm's accounting to U.S. GAAP.

We also examine two additional controls that are available only for small subsets of the Worldscope data. First, we include the percentage of a firm's stock that is closely held. Second, we proxy for financing requirements using the absolute value of the net external financing cash flows during the year, which include both debt and equity flows. We include these variables as controls in the regressions for the full sample only. Both measures of U.S. institutional ownership (*LNIH* and *PIH*) are negatively related to the level of closely held ownership, as expected. *LNIH* is negatively related to the external financing variable, suggesting that this variable is a proxy for debt, rather than equity, activity. In each case, the *RATIO* variables retain their significance levels after the inclusion of these two controls. Thus, our results are robust to several other potential explanations.

Finally, a firm's decision to adopt a given accounting method is likely driven by many factors, some of which may be related to doing business in the United States or other issues that would affect U.S. investment. This suggests that an analysis that jointly models accounting choice and U.S. investment would be useful. Unfortunately, it is difficult to create a functional form for the decision regarding even 1 accounting choice, let alone the 13 included in this article. As an alternative, we appeal to the findings in Bradshaw and Miller [2003], who examine the more extreme decision of non-U.S. firms formally adopting U.S. GAAP. They compare U.S. GAAP firms with a matched sample of firms from their home country and find the U.S. GAAP firms are more likely to have a U.S. security, are larger, and are more likely to be audited by a Big 5 firm. We include all characteristics Bradshaw and Miller find significant as either control variables in the main analyses or as a portion of the sensitivity tests mentioned earlier. In all cases, our results regarding the U.S. GAAP conformity ratio remain significant.

## 4.2 CHANGES ANALYSIS

To provide additional assurance that our levels results are not driven by a correlated omitted variable and to gauge the sensitivity of U.S. investment to changes in accounting choices, we test the relation between contemporaneous changes in U.S. GAAP conformity and in U.S. institutional investment using the following model:

$$\begin{aligned} CIH_{it} = & \alpha_t + \beta_{1t}CRATIO_{it} + \beta_{2t}CADR_{it} + \beta_{3t}ADRTIME_{it-1} + \beta_{4t}DIH_{it} \\ & + \beta_{5t}CUSSALES_{it} + \beta_{6t}CLNAL_{it} + \beta_{7t}CLMVUS_{it} + \beta_{8t}CSGR_{it} \\ & + \beta_{9t}CROE_{it} + \beta_{10t}CDTA_{it} + \beta_{11t}CEP_{it} + \beta_{12t}CBP_{it} + \beta_{13t}CDP_{it} \\ & + \beta_{14t}CRET_{it} + \beta_{15t}CBIG5_{it} + \beta_{16t}CSHARES_{it} + \varepsilon_t, \end{aligned} \quad (2)$$

where all variables starting with *C* represent one-year changes in the variable; *CIH* = change in log of number of U.S. institutional investors (*CLNIH*) or change in percentage of U.S. institutional ownership (*CPIH*); *CRATIO* = *CRATIO1* or *CRATIO2*; *DIH* = 1 if the firm has at least one institutional investor, and 0 otherwise; *i* = firm; and *t* = year.

We again estimate the regression separately for *CRATIO1* and *CRATIO2*. All regressions are estimated yearly with country-adjusted continuous variables, and the standard errors are adjusted for serial correlation using the Abarbanell and Bernard [2000] approach.<sup>18</sup> We drop the stock index indicator variable because it is identical for all years. We replace it with an indicator for at least one U.S. institutional investor (*DIH*) to control for the numerous zero changes that are due to zero ownership. *DIH* is dropped in the restricted sample results. Because the yearly change in *ADRTIME* would not be meaningful, we use the prior level of the variable to proxy for any effect of listing time. Finally, we add the change in shares outstanding (*CSHARES*) as a proxy for new equity issuances. Managers wishing to raise new equity may have incentives to expand the supply of potential investors by conforming their accounting to U.S. GAAP to attract more U.S. investors.<sup>19</sup>

Panel A of table 4 presents results for changes in the variables for both samples and for both conformity ratios. The requirement of an extra year of data reduces the sample size to 79,644 (4,616) for the full (restricted) sample. In the full sample, the coefficients on the changes in U.S. GAAP

<sup>18</sup> In the presence of significant negative serial correlation among yearly coefficients, which occasionally occurs with changes variables, this approach can lead to downward-biased standard errors. As a check, we estimated every model without the adjustment for serial correlation. In every case, the coefficients on the *CRATIO* variables that are significant with the correction are also significant without the correction. Thus, there is no case in which an insignificant *CRATIO* coefficient is made significant through the serial correlation adjustment.

<sup>19</sup> The number of yearly observations with changes in ADR listing, U.S. sales, and Big 5 status are generally less than 5%. To ensure that this extreme imbalance in values does not affect our results, we estimate the regressions with the change variables omitted and with them replaced by levels indicators (i.e., *ADR*, *USSALES*, *BIG5*). We also drop *ADRTIME* from the specification because it changes sign between contemporaneous and future changes, and we replace the signed *CSHARES* variable with the absolute value measure. None of these alternative specifications changes any of our inferences on the U.S. GAAP conformity ratios.

**TABLE 4**  
*Regression of Changes in U.S. Institutional Ownership on Changes in U.S. GAAP Conformity Ratios and Control Variables*

$$\begin{aligned}
 CH_{it} = & \alpha_t + \beta_1 CRATIO_{it} + \beta_2 CADR_{it} + \beta_3 ADRTIME_{it-1} + \beta_4 DIH_{it} + \beta_5 CUSSALES_{it} + \beta_6 CLNAL_{it} + \beta_7 CLMVUS_{it} + \beta_8 CSGR_{it} + \beta_9 CROE_{it} \\
 & + \beta_{10} CDTA_{it} + \beta_{11} CEP_{it} + \beta_{12} CBP_{it} + \beta_{13} CDP_{it} + \beta_{14} CRET_{it} + \beta_{15} CBIG5_{it} + \beta_{16} CSHARES_{it} + \varepsilon_t
 \end{aligned}$$

**Panel A: Continuous change in conformity ratios**

	Full Sample			Restricted Sample		
	CLNIH	CPIH	CPIH	CLNIH	CPIH	CPIH
Intercept	-0.0016	-0.0018*	0.0000	0.2241**	0.2228**	0.0010
CRATIO	0.0133**	0.0007***	0.0000	0.4084	0.0119***	0.0091**
CRATIO2		0.0131**	0.0005**		0.4219*	-0.0026
CADR	-0.0368	-0.0354	-0.0012	0.0377	0.0306	-0.0004
ADRTIME	-0.0594***	-0.0531***	-0.0005**	-0.0435*	-0.0407	
DIH	0.2945***	0.2922***	0.0015			
CUSSALES	-0.0021	-0.0020	-0.0004	-0.0122	-0.0094	-0.0015
CLNAL	0.0057***	0.0059***	0.0000	0.1876***	0.1956***	0.0013
CLMVUS	0.0095***	0.0100***	0.0004***	0.2219***	0.2293***	0.0067***
CSGR	-0.0016	-0.0014	0.0000	-0.0715	-0.0507	0.0014
CROE	0.0000	-0.0013	-0.0004*	0.2499	0.2281	-0.0052*
CDTA	0.0000	0.0000	0.0000**	0.0002	-0.0003	0.0001**
CEP	-0.0001	-0.0008	-0.0005**	-0.2060	-0.4409	-0.0129***
CBP	0.0040**	0.0043**	0.0001	0.1757**	0.1720**	0.0034
CDP	-0.0031	-0.0237	0.0048**	-2.1431	-1.5049	0.0273
CRET	-0.0019	-0.0022	-0.0003***	-0.0217	-0.0293**	-0.0048***
CBIG5	0.0006	0.0003	-0.0001	-0.0165	-0.0256	-0.0010
CSHARES	0.0142	0.0126	0.0003	0.2954	0.1648	0.0167

Panel B: Piecewise change in conformity ratios

Intercept	-0.0019**	-0.0018*	0.0000	0.2178**	0.2169**	0.0009	0.0010
<i>CRATIO</i> <sup>+</sup>	0.0254***	0.0008***	0.0000	0.4630	0.0151***	0.0034	
<i>CRATIO</i> <sup>-</sup>	-0.0079	0.0003	0.0006**	0.1483	0.4284*		0.0143**
<i>CRATIO</i> <sup>+</sup>		0.0128**	0.0000		0.3881		-0.0044
<i>CRATIO</i> <sup>-</sup>		-0.0096	0.0000		0.0306		-0.0027
<i>CADR</i>	-0.0356	-0.0340	-0.0012	0.0442	-0.0393	-0.0025	-0.0004
<i>ADRTIME</i>	-0.0539***	-0.0515***	-0.0005**	-0.0401		-0.0004	
<i>DIH</i>	0.2921***	0.2897***	0.0015				
<i>CUSSELLS</i>	-0.0017	-0.0015	-0.0004	-0.0122	-0.0109	-0.0014	-0.0013
<i>CLNAL</i>	0.0057***	0.0060***	0.0000	0.1891***	0.1931***	-0.0003	0.0013
<i>CLMYUS</i>	0.0092***	0.0098***	0.0004***	0.2137***	0.2249***	0.0060***	0.0066***
<i>CSGR</i>	-0.0020	-0.0017	0.0000	-0.0722	-0.0511	0.0005	0.0015
<i>CROE</i>	0.0000	-0.0013	-0.0004*	0.2550	0.2376	-0.0053*	-0.0037
<i>CDTA</i>	0.0000	0.0000	0.0000***	0.0007	0.0001	0.0001**	0.0001**
<i>CEP</i>	-0.0012	-0.0018	-0.0004**	-0.1821	-0.4638	-0.0122***	-0.0155***
<i>CBP</i>	0.0036**	0.0038**	0.0001	0.1784*	0.1680**	0.0036	0.0031
<i>CDP</i>	-0.0237	-0.0153	0.0048**	-2.3168	-1.4661	0.0231	0.0357
<i>CRET</i>	-0.0018	-0.0022	-0.0003***	-0.0134	-0.0279	-0.0041***	-0.0048***
<i>CBIG5</i>	0.0005	0.0003	-0.0001	-0.0053	-0.0185	-0.0005	-0.0010
<i>CSHARES</i>	0.0139	0.0121	0.0002	0.2916	0.1727	0.0166	0.0142

This table presents results from regressions of changes in U.S. institutional ownership variables (*CLNIH*, *CPH*) on changes in U.S. GAAP conformity ratios and control variables. All variables (except *DIH*) are one-year changes in the variables defined in table 1. *CRATIO*<sup>+</sup> (*CRATIO*<sup>-</sup>) equals *CRATIO* if it is positive (nonpositive), and 0 otherwise. All continuous variables are adjusted for the median value of the variable in the firm's country. Regressions are estimated for each year in the sample (1989-1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *CRATIO* and *CRATIO*<sup>+</sup>. Two-tailed tests are used for all of the control variables. The full sample (79,644 observations) includes all firms with nonmissing Worldscope data for all of the variables obtained from that source. Any observation not found on Spectrum or IBES is assumed to have zero U.S. institutional ownership or analyst following, respectively. The restricted sample (4,616 observations) only includes firms with at least one U.S. institutional owner.

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level. One-tailed for *CRATIO* and *CRATIO*<sup>+</sup>, two-tailed for other variables.

conformity ratios are positive and significant at or below the .05 level for both ratios and both measures of institutional ownership. In addition, the coefficients on the changes in conformity ratios for the restricted sample are positive and significant in all but one regression (the relation between *CLNIH* and *CRATIO1*). These results suggest that U.S. institutions change their holdings in response to changes in the degree of conformity with U.S. GAAP, providing additional strong support for our hypothesis that U.S. investors are attracted to firms using accounting choices consistent with U.S. GAAP.<sup>20</sup>

The results for the control variables suggest that few of the significant relations found in levels hold in one-year changes. The notable exceptions are analyst following and firm size, both of which are significantly and positively related to U.S. institutional ownership in contemporary changes. Again, unreported results indicate that the control variable relations exist in the absence of the *CRATIO* variables.

Next, we examine whether these results are present for both increases and decreases in U.S. GAAP conformity ratios. This analysis is based on the presumption that buying and selling decisions are intrinsically asymmetric; the decision to buy involves assessing a large population of potential firms and choosing among them, whereas the decision to sell is based on assessing the much smaller population of firms currently in the investment portfolio. We expect accounting choice to be one factor among many (growth, liquidity, returns, etc.) that affects the initial decision of U.S. institutions to invest in a non-U.S. firm. However, a change in this accounting choice is not as likely to precipitate the selling of a currently held stock unless the other items that led to the original purchase have changed in the same manner. Furthermore, it is likely that the U.S. institution has developed some familiarity with the non-U.S. firm while holding the company's stock, and the additional information provided by conforming accounting choices may no longer be as important in monitoring the firm. Prior research provides evidence of this asymmetry. Bushee and Noe [2000] find that institutions exhibit asymmetric reactions to changes in disclosure practices: increases in institutional ownership accompany increases in disclosure quality, but decreases in disclosure quality are not associated with decreases in institutional ownership.

Panel B of table 4 presents results of a piecewise regression in which the change in the U.S. GAAP conformity ratio is decomposed into positive and negative changes in the ratio.  $CRATIO1^+$  ( $CRATIO1^-$ ) is set equal to *CRATIO1* if it is greater than (less than or equal to) zero and set equal to 0 otherwise (*CRATIO2* is decomposed similarly). Thus, the coefficients can be interpreted as the slopes for positive and negative values of the variables, respectively. The results indicate that increases in U.S. GAAP conformity are positively associated with changes in U.S. institutional ownership in all

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<sup>20</sup> We also estimated these regressions with two-year changes in all of the variables and found similar results.

specifications, with the coefficient significantly different from zero in seven of the eight specifications. Conversely, decreases in U.S. GAAP conformity are positively associated with changes in U.S. institutional ownership in only five of the eight specifications, with none of the coefficients significantly different from zero. Thus, U.S. institutions appear to use U.S. GAAP conformity as a screen in their investment decisions but do not significantly reduce their holdings in response to a later reduction in U.S. GAAP conformity.

One potential explanation for this result is that we include the zero changes with the negative changes in U.S. GAAP conformity. We estimate the regression with the zero changes included with the positive changes in U.S. GAAP conformity and find that the increases in conformity continue to be significant and the reductions remain insignificant. Another potential explanation is that we use country-adjusted variables (although the decomposition into positive and negative changes is based on the raw change). Using unadjusted variables yields virtually identical results. Finally, we examine two-year changes in the variables and find the same results. Thus, the asymmetric response of U.S. institutions to changes in U.S. GAAP conformity ratios appears to be a robust result.

#### 4.3 LEAD-LAG ANALYSES

Our maintained hypothesis is that U.S. institutional investors respond to accounting choices made by non-U.S. firms. The evidence in the levels and changes analyses supports this prediction. However, it is possible that the prior results reflect managers of non-U.S. firms changing their accounting choices in response to investment by U.S. institutional investors, or that the results reflect both effects. In either case, it would still indicate that U.S. investors prefer U.S. GAAP. To provide evidence on causality, we examine lead-lag regressions to test whether changes in conformity ratios lead to future changes in U.S. institutional ownership and whether changes in U.S. institutional ownership lead to future changes in conformity ratios. Following the results in panel B of table 4, we decompose changes in U.S. GAAP conformity ratios into positive and negative changes.

Panel A of table 5 presents results of regressions of one-year future changes in the number and percentage of U.S. institutional ownership on prior one-year changes in the U.S. GAAP conformity ratios and control variables. For parsimony, we report only results from the full sample; results for the restricted sample are similar. The requirement of an extra year of data for this test reduces the sample size to 67,264. The results indicate that increases in both conformity ratios are significantly and positively related to future changes in both the number of institutional investors and the percentage of institutional ownership.<sup>21</sup> Thus, changes in accounting choices lead to future changes in the following of U.S. institutional investors.

<sup>21</sup> If we use the continuous *CRATIO* variables instead of the piecewise specification, the coefficients on both *CRATIO1* and *CRATIO2* continue to be significant in the future change in percentage ownership regressions but are no longer significant in the future change in number of institutions regressions.

**TABLE 5**  
*Lead-Lag Regressions of Changes in U.S. Institutional Ownership on Changes in U.S. GAAP Conformity Ratios and Control Variables*

Panel A: Future changes in institutional ownership			Panel B: Future changes in conformity ratios		
	<i>FCLNIH</i>	<i>FCPIH</i>		<i>FCRATIO1</i>	<i>FCRATIO2</i>
Intercept	0.0075***	0.0000	Intercept	0.0116***	0.0104***
<i>CRATIO1+</i>	0.0289**	0.0016**	<i>CLNIH+</i>	-0.0006	0.0024
<i>CRATIO1-</i>	-0.0949	-0.0037	<i>CLNIH-</i>	0.0035	0.0043
<i>CRATIO2+</i>	0.0188**	0.0013**	<i>GPH+</i>	-0.1752	-0.1573
<i>CRATIO2-</i>	-0.0228	-0.0001	<i>GPH-</i>	-0.0711	0.0646
<i>CADR</i>	0.1841	0.0067	<i>CADR</i>	0.0010	-0.0015
<i>ADRTIME</i>	0.0388***	0.0001	<i>ADRTIME</i>	0.0000	-0.0005
<i>DIH</i>	-0.0241	0.0000	<i>DIH</i>	-0.0003	-0.0022
<i>CUSSALES</i>	-0.0016	0.0003	<i>CUSSALES</i>	-0.0024	-0.0035**
<i>CLNAL</i>	0.0071*	0.0000	<i>CLNAL</i>	0.0024	0.0016
<i>CLMVUS</i>	0.0044	0.0002	<i>CLMVUS</i>	0.0036**	-0.0001
<i>CSGR</i>	0.0021	-0.0001	<i>CSGR</i>	0.0000	0.0011
<i>CROE</i>	0.0210*	0.0003	<i>CROE</i>	0.0046	0.0072
<i>CDTA</i>	0.0001	0.0000	<i>CDTA</i>	0.0000	-0.0001
<i>CEP</i>	-0.0182	0.0005	<i>CEP</i>	0.0080**	0.0077
<i>CBP</i>	-0.0083***	-0.0002	<i>CBP</i>	-0.0014	-0.0029
<i>CDP</i>	-0.0376	-0.0007	<i>CDP</i>	0.0179	-0.0372*
<i>CRET</i>	-0.0043*	0.0000	<i>CRET</i>	-0.0018**	-0.0002
<i>CBIG5</i>	0.0014	0.0005**	<i>CBIG5</i>	0.0043**	0.0028
<i>CSHARES</i>	-0.0198	-0.0004	<i>CSHARES</i>	0.0004	0.0121**

Panel A presents results from regressions of one-year-ahead future changes in U.S. institutional ownership variables (*FCLNIH*, *FCPIH*) on prior one-year changes in U.S. GAAP conformity ratios and control variables. Panel B presents results from regressions of one-year-ahead future changes in U.S. GAAP conformity ratios (*FCRATIO1*, *FCRATIO2*) on prior one-year changes in U.S. institutional ownership and control variables. All variables are one-year changes in the variables defined in table 1. *CRATIO+* (*CRATIO-*) equals *CRATIO* if it is positive (nonpositive), and 0 otherwise. All continuous variables are adjusted for the median value of the variable in the firm's country. Regressions are estimated for each year in the sample (1989-1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *CRATIO1* and *CRATIO2*. Two-tailed tests are used for all of the control variables. The regressions are estimated for the full sample (67,264 observations), which includes all firms with nonmissing Worldscope data for all of the variables obtained from that source.

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level. One-tailed for *CRATIO1* and *CRATIO2*, two-tailed for other variables.

Panel B of table 5 presents results of regressions of one-year future changes in the U.S. GAAP conformity ratios on prior one-year changes in the number and percentage of U.S. institutional ownership. We use the same control variables as in the future change in institutional ownership regression, as Bradshaw and Miller [2003] use similar variables to explain the adoption of U.S. GAAP. To be consistent with panel A, we decompose changes in institutional following into positive and negative changes. In these regressions, all of the coefficients on the changes in U.S. institutional ownership are insignificantly different from zero. If we use continuous changes in institutional following rather than the piecewise specification, the coefficients are all insignificant (not reported). Thus, we find no evidence of a positive relation between changes in U.S. institutional ownership and future changes in U.S. GAAP conformity ratios, suggesting that managers do not change accounting choices in response to changes in the presence of U.S. institutional investors. This finding is not surprising given the evidence in table 2 that U.S. institutions generally have a very small ownership position in non-U.S. firms and hence are not in a strong position to enact changes in policy through corporate governance activities.<sup>22</sup>

#### 4.4 INDUSTRY-ADJUSTED ANALYSES

Another possible alternative explanation for a positive relation between U.S. GAAP conformity and U.S. institutional investment is that U.S. institutions tend to invest only in certain industries in foreign countries, and these industries use accounting methods that more closely conform to U.S. GAAP. To check this explanation, we define industries at the two-digit Standard Industrial Classification (SIC) code level and estimate all of the regressions with all continuous variables adjusted by the median for the firm's industry, instead of the firm's country. Table 6 presents results for the industry-adjusted analysis for the full sample. Because the coefficients on the control variables are virtually identical when *RATIO2* is included instead of *RATIO1*, we present the full model for *RATIO1* and only the coefficient on *RATIO2*. The first two columns replicate the levels analysis in table 3. Consistent with table 3, both *RATIO1* and *RATIO2* are significantly and positively associated with the level of U.S. institutional ownership. The next two columns replicate the contemporaneous changes analysis in panel B of table 4, and the last two columns replicate the future changes in U.S. institutional ownership analysis of table 5. Again, the industry adjustment does not affect our primary conclusions, as increases in the U.S. GAAP conformity ratios are

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<sup>22</sup> It is possible that changes in conformity ratios lead to future changes in analyst following or ADR listing, which contemporaneously attract more U.S. institutions. To ensure that the use of lagged control variables is not driving the results, we estimate all of the tests in table 5 using future changes in control variables (i.e., changes in control variables concurrent with the changes in dependent variables). The *CRATIO* variables continue to explain future changes in U.S. institutional ownership at the same significance levels. The changes in U.S. institutional ownership variables remain insignificant in the *FCRATIO* regressions.

**TABLE 6**  
*Industry-Adjusted Regressions of U.S. Institutional Ownership on U.S. GAAP Conformity Ratios and Control Variables in Full Sample*

	Levels (Table 3)			Contemporary Changes (Table 4)			Lead-Lag Changes (Table 5)		
	<i>LN IH</i>	<i>PIH</i>		<i>CLNIH</i>	<i>CPH</i>		<i>FCLNIH</i>	<i>FCPH</i>	
Intercept	0.0424***	0.0006**	Intercept	-0.0026*	0.0000		0.0072***	0.0000	
<i>RA TIO1</i>	0.0664***	0.0029**	<i>CRATIO1+</i>	0.0289***	0.0009***		0.0291***	0.0017***	
<i>ADR</i>	1.8930***	0.0438***	<i>CRATIO-</i>	-0.0169	-0.0001		-0.0348	-0.0015	
<i>ADRTIME</i>	0.5773***	0.0043***	<i>CADR</i>	-0.0375	-0.0012		0.1812	0.0067	
<i>DSI</i>	-0.0353***	-0.0008**	<i>ADRTIME</i>	-0.0543***	-0.0005**		0.0391***	0.0001	
<i>USSALES</i>	0.0789**	0.0018	<i>DH</i>	0.2926***	0.0015		-0.0246	0.0000	
<i>LNAL</i>	0.0243***	-0.0002	<i>CUSALES</i>	-0.0016	-0.0004		-0.0018	0.0003	
<i>LMVUS</i>	0.0339***	0.0003*	<i>CLNAL</i>	0.0069**	0.0000		0.0101***	0.0001**	
<i>SGR</i>	0.0004	0.0018*	<i>CLMVUS</i>	0.0105***	0.0003***		0.0084*	0.0002	
<i>ROE</i>	0.1535***	0.0065***	<i>CSGR</i>	-0.0032	0.0000		0.0006	-0.0001	
<i>DTA</i>	-0.0001	0.0000	<i>GROE</i>	-0.0012	-0.0004*		0.0200*	0.0003	
<i>EP</i>	-0.2104***	-0.0059***	<i>CDTA</i>	0.0001	0.0000**		0.0001	0.0000	
<i>BP</i>	0.0255***	0.0005**	<i>CEP</i>	-0.0043	-0.0004*		-0.0221	0.0004	
<i>DP</i>	0.5473***	-0.0133**	<i>CBP</i>	0.0047***	0.0001		-0.0049	-0.0002	
<i>RET</i>	0.0009	0.0000	<i>CDP</i>	-0.0115	0.0037**		-0.0145	-0.0007	
<i>BIG5</i>	0.0108***	0.0004***	<i>CRET</i>	-0.0019	-0.0003***		-0.0046**	0.0001	
			<i>CBIG5</i>	0.0005	-0.0001		0.0013	0.0005**	
			<i>CSHARES</i>	0.0119	0.0002		-0.0224	-0.0004	
<i>RA TIO2</i>	0.0381*	0.0046**	<i>CRATIO2+</i>	0.0137**	0.0007***		0.0168*	0.0011**	
			<i>CRATIO2-</i>	-0.0007	-0.0010		-0.0175	-0.0002	

This table presents results from regressions of U.S. institutional ownership variables on U.S. GAAP conformity ratios and control variables with all continuous variables adjusted for the median value of the variable in the firm's industry, defined with two-digit Standard Industrial Classification codes. No adjustment is made for the firm's country. *LN IH*, *CLNIH*, and *FCLNIH* (*PIH*, *CPH*, *FCPH*) are the level, one-year change, and future one-year change in the log number of institutional investors (percentage of institutional ownership), respectively. All variables are defined in table 1, and all variables starting with Care one-year changes in the variables. *CRATIO+* (*CRATIO-*) equals *CRATIO*:fit is positive (nonpositive), and 0 otherwise. Regressions are estimated for each year in the sample (1989-1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *RA TIO1*, *RA TIO2*, and the *CRATIO* variables. Two-tailed tests are used for all of the control variables. The full sample includes all firms with nonmissing Worldscope data for all the variables obtained from that source. Any observation not found on Spectrum or IBES is assumed to have zero U.S. institutional ownership or analyst following, respectively. The sample sizes are as follows: 89,078 observations in the levels test, 79,644 observations in the contemporaneous changes test, and 67,264 observations in the lead-lag changes test. \*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level. One-tailed for *RA TIO* variables, two-tailed for other variables.

significantly and positively associated with current and future increases in U.S. institutional ownership. These results also hold in the restricted sample (not reported).

We also check whether our results are robust to joint adjustment for country and industry. First, we include industry fixed effects in addition to the country-adjusted variables. In a separate analysis, we adjust all variables for the median level of firms in the same industry in the same country, dropping any country industries with fewer than three observations. We perform this analysis only on the full sample because of the large loss in observations. In every case, our results for the U.S. GAAP conformity ratios remained significant at or below the .10 level. Thus, industry investment patterns do not explain our results.

#### 4.5 ANALYSES ON SUBSAMPLES OF FIRMS BASED ON ADR STATUS AND ON VISIBILITY PROXIES

In this section we examine the relation between U.S. GAAP conformity ratios and U.S. institutional investment in subsamples of firms based on ADR status and on proxies for the visibility of the non-U.S. firms to U.S. investors. Given the importance of visibility to U.S. investors in mitigating home bias, we expect that the relation between accounting choice and U.S. investment will be stronger for samples of firms that are more visible to U.S. investors and hence more likely to be in U.S. investors' potential investment set. We perform subsample analyses on four partitions to proxy for visibility: (1) ADR versus no ADR, (2) listing on a stock index versus no listing, (3) high analyst following (top decile in a given year) versus low following, and (4) large firms (top decile in a given year) versus small firms.<sup>23</sup> We estimate regressions of U.S. institutional ownership on *RATIO1* and the controls (see equation (1)) for both subsamples in each partition and report the coefficients and tests of significant differences from zero in table 7. Then, we estimate a seemingly unrelated regression model to test whether the coefficients are significantly different from each other in the two subsamples. This significance test is reported in the Diff column. We repeat this procedure for *RATIO2* and again report only the coefficient on this variable instead of repeating all of the controls. To ensure a sufficient number of observations in each subsample in our yearly regressions, we perform this estimation on the full sample.

Panel A of table 7 presents results for the partition based on ADR status. For both the *LN1H* and *PIH* regressions, the coefficients on the U.S. GAAP conformity ratio are significant and positive, suggesting that accounting choices are related to U.S. institutional investment regardless of whether the firm trades in the United States as an ADR. Moreover, the coefficients

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<sup>23</sup> Because the distribution of analyst following and firm size is highly skewed, we use only the top decile as a proxy for high analyst following and large firms to ensure meaningful differences between the two groups.

**TABLE 7**  
*Regressions of U.S. Institutional Ownership on U.S. GAAP Conformity Ratios and Control Variables in Firm Visibility Subsamples*

	Panel A: Partition based on ADR listing				Panel B: Partition based on stock index membership			
	LNHI		PIH		LNHI		PIH	
	ADR	No ADR	ADR	No ADR	Index	No Index	Index	No Index
Intercept	2.5083**	0.0484***	0.1886*	0.0007***	-0.0133***	0.0440***	0.0001	0.0008**
RATIO	2.1342	0.1453***	0.1165***	0.0036***	0.1744***	0.0761***	0.0073***	0.0034**
ADR					1.8780***	2.0624**	0.0428***	0.1873*
ARDTIME					0.5872	0.2823***	0.0038***	0.0016**
DSI	-1.0687*	-0.0125***	-0.1499*	-0.0005***				
USSALES	0.1148	0.0981**	0.0022	0.0020	0.0775**	0.1099	0.0010	0.0035
LNAL	-0.0849	0.0161***	-0.0204***	-0.0003*	0.0107***	0.0099***	-0.0007***	-0.0005
LMVUS	0.3209***	0.0489***	0.0063	0.0005***	0.0559***	0.0308***	0.0004*	0.0005***
SGR	-0.3970*	-0.0249***	0.0427*	0.0004**	-0.0182	-0.0189**	0.0020**	0.0007
ROE	1.8309**	0.0597***	0.1435**	0.0029***	0.1018**	0.1326***	0.0070***	0.0039***
DTA	-0.0127**	0.0005***	-0.0001	0.0000	0.0003***	0.0002	0.0000	0.0000
EP	-1.7337*	-0.1104***	-0.1452**	-0.0029***	-0.1843***	-0.1469***	-0.0099***	-0.0024*
BP	0.1132	0.0152***	-0.0027	0.0001	0.0197**	0.0050*	0.0000	0.0000
DP	2.4292	-0.1382	-0.7696*	-0.0093***	0.2220	-0.2545**	-0.0199*	-0.0191***
RET	-0.2746*	-0.0166***	-0.0150*	-0.0004*	-0.0112	-0.0178**	-0.0005	-0.0004
BIG5	0.0270	0.0188***	-0.0105	0.0005***	0.0333***	0.0077***	0.0003*	0.0004**
RATIO2	1.6275**	0.0567**	0.1004***	0.0027***	0.0554**	0.0270**	0.0037***	0.0031**

	Panel C: Partition based on analyst following					Panel D: Partition based on firm size						
	LNHI			PHI		LNHI			PHI			
	High	Low	Diff	High	Low	Diff	Large	Small	Diff	Large	Small	Diff
Intercept	0.0827	0.0208***		0.0070	0.0006***		-0.1836	0.0167***		0.0018	0.0006***	
<i>RATIO1</i>	0.6872***	0.0566***	**	0.0218***	0.0035***	***	0.7211***	0.0329***	***	0.0301**	0.0029***	**
<i>ADR</i>	1.9335***	1.6858***	**	0.0458***	0.0463***		1.8431***	1.6438***	***	0.0354***	0.0594***	***
<i>ARDTIME</i>	0.3579***	0.2325***	**	0.0011	0.0010***		0.2573***	0.2401***		-0.0002	0.0037***	*
<i>DSI</i>	-0.1559*	-0.0096***	*	-0.0034*	-0.0006**	**	-0.1189	-0.0082***		-0.0022	-0.0007***	
<i>USSALES</i>	0.1731	0.0371**		0.0000	0.0024		0.3132**	0.0270	**	0.0057	0.0006	
<i>LNAL</i>	-0.0846***	-0.0033	***	-0.0041***	-0.0006*	***	0.0758***	0.0023**	***	-0.0039	-0.0003***	
<i>LMVUS</i>	0.1763***	0.0207***	***	0.0015*	0.0002*		0.1357*	0.0138***		0.0015	0.0002***	
<i>SGR</i>	-0.0701	0.0023		0.0030	0.0015*		-0.0718	0.0040		0.0051	0.0012***	
<i>ROE</i>	1.0002***	0.0127	***	0.0413***	0.0023*	***	1.6001***	0.0162***	***	0.0507***	0.0029***	***
<i>DTA</i>	0.0005	0.0002***		0.0000	0.0000		-0.0004	0.0002***		0.0000	0.0000	
<i>EP</i>	-1.3448***	-0.0383***	***	-0.0478***	-0.0019	***	-1.7945***	-0.0439***	***	-0.0788***	-0.0020***	***
<i>BP</i>	0.0897	0.0008		0.0033***	-0.0002	***	0.0039	0.0005		-0.0020	0.0000	
<i>DP</i>	1.4641	-0.0657		-0.0465***	-0.0167***	**	5.2194**	-0.0842	**	0.0233	-0.0186***	
<i>RET</i>	-0.0219	-0.0129***		-0.0005	-0.0005		-0.0622	-0.0142***		-0.0022*	-0.0004*	
<i>BIG5</i>	0.0526**	0.0106***	*	-0.0007	0.0003*		0.1455***	0.0103***	***	-0.0003	0.0004*	
<i>RATIO2</i>	0.3525**	0.0299***	**	0.0178***	0.0025***	***	0.3207***	0.0180***	***	0.0199**	0.0023***	**

This table presents results from regressions of U.S. institutional ownership variables (*LNHI*, *PHI*) on U.S. GAAP conformity ratios and control variables. All variables are defined in table 1. All continuous variables are adjusted for the median value of the variable in the firm's country. Regressions are estimated for each year in the sample (1989–1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *RATIO1* and *RATIO2*. Two-tailed tests are used for all of the control variables. The Diff column presents tests of significant differences between coefficients across the two subsamples, based on the distribution of coefficients from yearly seemingly unrelated regression models. Only the coefficients on *RATIO2* are reported for regressions using that variable; coefficients on all other variables are similar to the reported *RATIO1* specification. All regressions are estimated on the full sample, which includes all firms with nonmissing Worldscope data for all of the variables obtained from that source. Panel A partitions the sample based on firms with exchange-listed American Depository Receipts (ADRs) (1,505 observations, 306 firms) and firms without ADRs (87,573 observations, 12,628 firms). Panel B partitions the sample based on firms listed on a stock index (46,601 observations, 6,612 firms) and firms not listed (42,477 observations, 6,322 firms). Panel C partitions the sample based on firms with high analyst following (top decile in each year) (9,385 observations, 2,072 firms) and all other firms (79,693 observations, 12,474 firms). Panel D partitions the sample based on large firms (top decile in each year) (7,336 observations, 1,420 firms) and all other firms (81,742 observations, 12,445 firms).

\*\*\*Significant at the 1% level. \*\*Significant at the 5% level. \*Significant at the 10% level. One-tailed for *RATIO1* and *RATIO2*, two-tailed for other variables.

on the conformity ratios are significantly *greater* in the ADR firm subsample, indicating that the relation between accounting choice and U.S. investment is stronger when the firm lists as an ADR in the United States. The coefficient of 2.1342 (0.1165) on *RATIO1* in the *LNIH* (*PIH*) regression in the ADR subsample indicates that once an institution has become highly visible to U.S. investors, a change of six accounting choices would result in a 2.7 (5.4%) increase in the number (percentage) of U.S. institutional owners. Consistent with our second hypothesis, these results suggest that accounting choices complement the visibility, accounting reconciliation, or SEC review aspects of the ADR listing in attracting more U.S. institutional investment.<sup>24</sup>

Panels B, C, and D of table 7 report results for the partitions based on listing on a stock index, high analyst following, and large firm size, respectively. For each of these visibility proxies, the coefficients on the U.S. GAAP conformity ratios are significant and positive in both subsamples for both measures of U.S. institutional investment. Thus, conformity with U.S. GAAP is an important determinant of U.S. investment regardless of how visible the firm is to U.S. investors. Moreover, for each of the visibility proxies, the coefficient on the conformity ratios is again significantly greater in the higher visibility subsample, supporting our second hypothesis that accounting choice complements visibility in attracting U.S. investment.<sup>25</sup>

Overall, the results suggest that the degree of conformity with U.S. GAAP in a non-U.S. firm's accounting choices is an important, incremental factor in mitigating home bias and attracting a higher level of investment by U.S. institutional investors. Moreover, accounting choice conformity provides a larger incremental effect for firms that are already visible to U.S. investors through an ADR, listing on a stock index, high analyst following, or large size.

#### 4.6 ANALYSES ON SUBSAMPLES OF FIRMS BASED ON COUNTRY-LEVEL FACTORS

Prior research documents significant differences across countries in terms of legal traditions, levels of disclosure, and amount of earnings management

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<sup>24</sup> About 3% of the firm-year observations in the non-ADR subsample are firms that have a non-exchange-traded ADR security offered in the U.S. market. These securities include level I ADRs, which are not reviewed by the SEC, and rule 144A and regulation S private placements. If we exclude these firms from the non-ADR subsample, we obtain similar results. If we include these firms in the ADR subsample, all of the coefficients on the *RATIO* variables remain significant, but the magnitudes are smaller. This suggests that non-exchange-traded ADRs provide less visibility to U.S. institutions than exchange-traded ADRs.

<sup>25</sup> We also estimate the changes specification (equation (2)) for all of these partitions. For both one- and two-year changes in all variables, the coefficients on the *CRATIO* variable in the high-visibility subsample are always significantly greater than the coefficients in the low-visibility subsample at the .10 level (not reported).

(La Porta et al. [1998], Leuz, Nanda, and Wysocki [2003]). In addition, countries differ in the degree to which their statutory accounting rules allow conformity to U.S. GAAP. Our within-country analysis should control for these differences. Nevertheless, we estimate our regressions within subsamples of countries partitioned on these dimensions. These analyses are primarily descriptive as it is not obvious how these country-level factors should affect the within-country relation between U.S. investment and U.S. GAAP conformity. However, it is important to document that our within-country results are robust to these important country-level differences.

First, we divide our sample countries into code law versus common law legal traditions using the classification in La Porta et al. [1998]. Ball, Kothari, and Robin [2000] argue that common law systems are more shareholder based, solving information asymmetries by public disclosure, whereas code law systems are more stakeholder based, providing a larger role for private communication. In our setting, greater U.S. GAAP conformity could improve timeliness of information in code law countries, whereas in common law countries, U.S. GAAP conformity would be more of a familiarity issue for U.S. investors. Table 8 reports results of our levels analysis in the code and common law partitions. For parsimony, we only report results for the full sample with *LNIIH* as the dependent variable; similar results are obtained in the restricted sample and with *PIH* as the dependent variable. The coefficients on both *RATIO1* and *RATIO2* are significant in all subsamples in both partitions. Thus, U.S. institutional ownership is associated with U.S. GAAP conformity regardless of the country's legal tradition.

Second, we divide our sample countries into those with high and low disclosure regimes, based on the mean Center for Financial Analysis and Research (CIFAR) score (as reported in Hope [2003b]). It is possible that transparency is a substitute for accounting choice so that the U.S. GAAP conformity ratios are less (more) important in countries that have more (less) transparent mandatory and voluntary disclosure regimes. Table 8 shows that the coefficients on *RATIO1* and *RATIO2* are positive and significant in both partitions. It is interesting that the *RATIO* variables have significantly greater coefficients in the high-disclosure countries, suggesting that accounting choice complements other forms of corporate transparency in attracting U.S. investment.

Third, we partition countries based on differences in statutory GAAP flexibility, which could influence the potential degree of conformity with U.S. GAAP. Hope [2003a] provides some evidence that disclosure of accounting choice is more useful to analysts when more potential choices exist. To proxy for statutory flexibility, we classify any country with a standard deviation of *RATIO1* above the median level for all countries to be a high-flexibility country. Table 8 reports that the coefficients on both *RATIO1* and *RATIO2* are again significant in both partitions. We repeat the analyses based on the standard deviation of *RATIO2* and on country means of *RATIO1* and *RATIO2*

**TABLE 8**  
*Regressions of Number of U.S. Institutional Investors on U.S. GAAP Conformity Ratios and Control Variables in Country Subsamples*

	Country Legal Tradition			Country Mean CIFAR Score			Country Variance of <i>RA7101</i>			Country Earnings Management		
	Code	Law	Diff	High	Low	Diff	High	Low	Diff	High	Low	Diff
Intercept	0.0298**	0.0677***	***	0.0743***	0.0314***	***	0.0332***	0.0617***	***	0.0291***	0.0858***	***
<i>RA7101</i>	0.1315***	0.1472***	***	0.2268***	0.0951***	***	0.1402***	0.1119**	***	0.0997***	0.2275***	***
<i>ADR</i>	2.0631***	1.6783***	***	1.7626***	2.1707***	***	2.0500***	1.6593***	**	2.0005***	1.7989***	*
<i>ARDTIME</i>	0.2624***	0.3359***	***	0.4046***	0.2550***	**	0.2482***	0.3955***	**	0.2682***	0.4196***	***
<i>DSI</i>	-0.0189**	-0.0474***	***	-0.0399**	-0.0222***	**	-0.0215**	-0.0457***	**	-0.0252**	-0.0443**	***
<i>USSALES</i>	0.0723*	0.0759	***	0.0269	0.2316*	**	0.0840*	0.0388	***	0.0895**	0.0433	***
<i>LNAL</i>	0.0121***	0.0083**	***	0.0078***	0.0116***	***	0.0101***	0.0123**	***	0.0148***	0.0119**	***
<i>LMVUS</i>	0.0336***	0.0577***	***	0.0580***	0.0291***	***	0.0364***	0.0539***	***	0.0345***	0.0545***	***
<i>SGR</i>	-0.0010	-0.0361***	***	-0.0205**	-0.0039	***	-0.0086	-0.0227*	***	-0.0156***	-0.0340***	***
<i>ROE</i>	0.0336	0.1771***	***	0.1723***	0.0149	***	0.0606	0.1471***	***	0.0555*	0.1595***	***
<i>DTA</i>	0.0000**	0.0010***	***	0.0006***	0.0002***	*	0.0001	0.0009***	**	0.0000	0.0012***	***
<i>EP</i>	-0.0862	-0.1953***	***	-0.2111***	-0.0616*	**	-0.1087***	-0.1770***	***	-0.0673**	-0.1982***	**
<i>BP</i>	0.0156**	0.0006	**	0.0012	0.0135*	***	0.0192***	-0.0062*	***	0.0113**	0.0089***	***
<i>DP</i>	0.2394*	-0.4121	***	-0.4872*	0.5199**	***	0.1607	-0.3044	**	0.0909	-0.5217***	***
<i>RET</i>	-0.0041	-0.0314**	***	-0.0270**	-0.0055	**	-0.0029	-0.0310**	***	-0.0008	-0.0282**	**
<i>BIG5</i>	0.0210***	0.0020	***	0.0015	0.0197***	**	0.0223***	0.0019	***	0.0220***	-0.0176***	***
<i>RA7102</i>	0.0224**	0.0799**	*	0.1036**	0.0172**	*	0.0281*	0.0733**	***	0.0155*	0.0719***	**

This table presents results from regressions of the log number of U.S. institutional investors (*LNII*) on U.S. GAAP conformity ratios and control variables. All variables are defined in table 1. All continuous variables are adjusted for the median value of the variable in the firm's country. Regressions are estimated for each year in the sample (1989–1999) and mean coefficients are reported for each variable. Significance tests are based on a standard error computed from the distribution of yearly coefficients, adjusted for serial correlation. One-tailed tests are used to test the significance of the hypothesized positive sign on *RA7101* and *RA7102*. Two-tailed tests are used for all of the control variables. The Diff column presents tests of significant differences between coefficients across the two subsamples, based on the distribution of coefficients from yearly seemingly unrelated regression models. Only the coefficients on *RA7102* are reported for regressions using that variable; coefficients on all other variables are similar to the reported *RA7101* specification. All regressions are estimated on the full sample, which includes all firms with nonmissing Worldscope data for all of the variables obtained from that source. Panel A partitions the sample based on firms in code law countries (57,310 observations, 8,073 firms) and firms in common law countries (31,768 observations, 4,861 firms), using the La Porta et al. [1998] classification. Panel B partitions the sample based on firms in countries with high mean Center for Financial Analysis and Research (CIFAR) disclosure scores (42,452 observations, 6,815 firms) and firms in countries with low mean CIFAR disclosure scores (35,366 observations, 5,967 firms), using the 1993–1995 average scores in Hope [2003b]. Panel C partitions the sample based on firms in countries with a high standard deviation of *RA7101* (46,062 observations, 8,091 firms) and firms in countries with a low standard deviation of *RA7101* (43,016 observations, 10,046 firms). Panel D partitions the sample based on the median country-level aggregate earnings management score reported in Leuz, Nanda, and Wysocki [2003]. The high (low) partition has 46,679 observations and 6,397 firms (37,613 observations, 5,430 firms); the sample for this test is smaller because the Leuz, Nanda, and Wysocki score is not available for all countries.

\*\*\* Significant at the 1% level. \*\* Significant at the 5% level. \* Significant at the 10% level. One-tailed for *RA7101* and *RA7102*, two-tailed for other variables.

and find identical results. Thus, U.S. institutional ownership is associated with U.S. GAAP conformity regardless of the degree of flexibility allowed by the countries' local GAAP.

Finally, we examine whether country-level properties of accounting quality, specifically the amount of earnings management, influence the sensitivity of U.S. investors to accounting choice. Leuz, Nanda, and Wysocki [2003] argue that the pervasiveness of earnings management in a country is decreasing in the amount of outside investor protection. Thus, U.S. GAAP conformity could be a proxy for the ability of non-U.S. managers to extract private control benefits through earnings management. We use the aggregate country-level earnings management scores from Leuz, Nanda, and Wysocki [2003] to split our sample countries at the median into high- and low-earnings-management countries. Table 8 reports that *RATIO1* and *RATIO2* are significant in both partitions. The coefficients on the *RATIO* variables are significantly larger in the low-earnings-management countries, suggesting that accounting choices are more important where the accounting numbers are more reliable.

## 5. Conclusions

In this article we investigate the relation between accounting method choice and investment by U.S. institutions for a group of non-U.S. firms. We find that firms employing accounting methods that are consistent with U.S. GAAP attract more U.S. institutional investors and have a higher level of investment by U.S. institutions. This relation exists for a broad cross-section of firms after controlling for items previously documented as being related to investment. However, its magnitude is greater once some other mechanism, such as an ADR listing, being part of a stock index, high analyst following, or large size, attracts U.S. investors' attention to the firm. Finally, we find evidence that a change toward accounting choices consistent with U.S. GAAP leads to a subsequent increase in investment by U.S. institutions, but we find no evidence that U.S. institutional investment leads to a change in accounting choices.

Our analyses are subject to several caveats. First, SEC rule 13(f) does not require firms to report holdings in non-U.S. securities traded on non-U.S. exchanges. We believe that a significant number of funds voluntarily report their non-U.S. holdings and that the voluntary reporting choice is random, which simply adds noise to our tests. However, it is possible that institutional investors condition their voluntarily reporting decision on the accounting choices of the company issuing the security. In that case, our results would suggest that, although investing decisions are not sensitive to accounting choices, reporting decisions are. Second, our study examines only U.S. investors. As with any study using only one country to study international effects, it is possible that our results do not generalize to investors in other countries. This threat to generalizability is likely even higher

because of the feeling by many that U.S. GAAP is among the highest quality sets of accounting standards, which suggests U.S. investors are more biased in favor of their home standards than would be investors in other countries. This suggests that it would be interesting for future researchers to undertake similar studies both in countries where the home GAAP is considered high quality (such as the United Kingdom or Sweden) and in those where the home GAAP is not designed to provide high-quality external equity valuation information (such as the Germany or France). Finally, it is possible that some firms choose U.S. GAAP accounting as part of a more comprehensive strategy to attract U.S. institutional investors (i.e., targeted disclosure, road shows, etc.) and that some of the investment we observe is due to the omitted disclosure strategy variable. Ideally, we would control for these other targeting mechanisms in our regressions, but we are unable to observe many of these activities given their private nature and the lack of archival data. However, if true, this argument suggests that managers view accounting choices as a key part of attracting U.S. investors, consistent with our arguments.

Our findings contribute to the literature in several ways. First, we show that accounting method choices lead U.S. investment, suggesting that accounting choice affects foreign investment decisions. This is the first study that we are aware of to directly examine this relation. Second, our finding that diversity in accounting choices affects the level of foreign investment provides information to the debate regarding whether attempts to harmonize internationally accounting will affect cross-border capital flows. Third, we contribute to the home-bias literature by demonstrating that the accounting choice of managers affects the ability of firms to attract international capital. We expand on this contribution by showing that accounting method choice is more effective at affecting international investment once attention has been drawn to the firm through another mechanism. Although prior research attributes most of the informational issues of home bias to a lack of knowledge that the firm exists, our results indicate that the informational issues that affect home bias are multilevel and at least partially due to reporting decisions made by the firm's managers.

**APPENDIX**  
*Accounting Method Choices and Overall Conformity of Non-U.S. Firm Choices with U.S. GAAP (1988–1999)*

Accounting Method Choice	Consistent with U.S. GAAP	Not Consistent with U.S. GAAP	% Consistent	% Not Consistent	% Not Disclosing
1. Accounting for goodwill	<ul style="list-style-type: none"> <li>• Amortized</li> <li>• Amortized and/or taken to reserves</li> </ul>	<ul style="list-style-type: none"> <li>• Not amortized, expensed when incurred</li> <li>• Written off at management discretion</li> <li>• Taken to reserves</li> </ul>	27.8%	21.2%	51.0%
2. Accounting for other intangibles/deferred charges	<ul style="list-style-type: none"> <li>• Amortized</li> </ul>	<ul style="list-style-type: none"> <li>• Capitalized, not amortized</li> <li>• Expensed when incurred</li> <li>• Capitalized, written off at management discretion</li> <li>• Taken to reserves</li> </ul>	54.6%	4.5%	40.9%
3. Accounting for long-term financial leases	<ul style="list-style-type: none"> <li>• Capitalized and amortized</li> </ul>	<ul style="list-style-type: none"> <li>• Expensed</li> <li>• Some capitalized and some expensed</li> </ul>	20.6%	1.5%	77.9%
4. Accounting method for long-term investments less than 20%	<ul style="list-style-type: none"> <li>• Cost</li> <li>• Lower of cost and intrinsic value</li> </ul>	<ul style="list-style-type: none"> <li>• Equity</li> <li>• Market value</li> </ul>	55.9%	2.3%	41.8%
5. Accounting method for long-term investments 21% to 50%	<ul style="list-style-type: none"> <li>• Equity</li> <li>• Equity but consolidated where significant influence</li> <li>• Equity and cost depending on significant influence</li> </ul>	<ul style="list-style-type: none"> <li>• Cost</li> <li>• Cost but consolidated where significant influence</li> <li>• Equity and proportional consolidation</li> </ul>	38.7%	22.0%	39.3%

APPENDIX — *Continued*

Accounting Method Choice	Consistent with U.S. GAAP	Not Consistent with U.S. GAAP	% Consistent	% Not Consistent	% Not Disclosing
6. Accounting method for long-term investments greater than 50%	<ul style="list-style-type: none"> <li>All subsidiaries are consolidated</li> <li>Consolidation for significant subsidiaries; others are on an equity basis</li> <li>Consolidation for significant subsidiaries; others are on a cost basis</li> </ul>	<ul style="list-style-type: none"> <li>Domestic subsidiaries consolidated; others on a cost basis</li> <li>Domestic subsidiaries consolidated; others on an equity basis</li> <li>Foreign subsidiaries consolidated; others on a cost basis</li> <li>Foreign subsidiaries consolidated; others on an equity basis</li> <li>No consolidation; cost basis (parent company only)</li> <li>No consolidation; equity basis (parent company only)</li> </ul>	74.4%	23.4%	2.2%
7. Deferred taxes recorded	<ul style="list-style-type: none"> <li>Yes</li> </ul>	<ul style="list-style-type: none"> <li>No; taxes paid as incurred</li> </ul>	53.1%	23.2%	23.7%
8. Treasury stock location on balance sheet	<ul style="list-style-type: none"> <li>Deduction from shareholders' equity</li> </ul>	<ul style="list-style-type: none"> <li>Long-term investment</li> <li>Other asset</li> <li>Current assets</li> </ul>	17.4%	11.8%	70.8%
9. Financial statements cost basis	<ul style="list-style-type: none"> <li>Historical cost entirely</li> </ul>	<ul style="list-style-type: none"> <li>Historical cost with price-level adjustment or revaluation of specific accounts</li> <li>Historical cost with supplementary current cost financial information</li> <li>Current cost statements entirely</li> <li>Modified historical cost with supplemental current cost financial information</li> <li>Current cost with supplemental historical cost financial information</li> </ul>	74.9%	11.4%	13.7%

<p>10. Funds definition on statement of changes in financial position</p>	<ul style="list-style-type: none"> <li>• Cash</li> <li>• Modified cash</li> <li>• Before 1989, other definitions acceptable under APB 19</li> </ul>	<ul style="list-style-type: none"> <li>• Working capital</li> <li>• Modified working capital</li> <li>• Unique definition</li> <li>• Net borrowings</li> <li>• Net liquid assets</li> </ul>	<p>29.0%</p> <p>36.4%</p> <p>34.6%</p>
<p>11. Marketable securities valuation</p>	<ul style="list-style-type: none"> <li>• Lower of cost or market</li> <li>• Historical cost</li> <li>• After 1993, current market value and cost with periodic valuation acceptable under SFAS 115</li> </ul>	<ul style="list-style-type: none"> <li>• Current market value</li> <li>• Moving average</li> <li>• Weighted average</li> <li>• Periodic average</li> <li>• Cost with periodic revaluation</li> </ul>	<p>34.8%</p> <p>11.7%</p> <p>53.5%</p>
<p>12. Research and development costs</p>	<ul style="list-style-type: none"> <li>• Expensed currently</li> <li>• For computer companies in SIC codes 5054, 7371, or 7372, capitalized and amortized later or some expensed some capitalized are consistent with U.S. GAAP</li> </ul>	<ul style="list-style-type: none"> <li>• Capitalized and amortized later</li> <li>• Expensed and capitalized later</li> <li>• Some expensed, some capitalized</li> </ul>	<p>20.8%</p> <p>5.2%</p> <p>74.0%</p>
<p>13. Starting line of statement of changes in financial position</p>	<ul style="list-style-type: none"> <li>• Net income, bottom line</li> <li>• Before 1989, net income before minority interest, net income before extraordinary items, and other definitions were acceptable under APB 19.</li> </ul>	<ul style="list-style-type: none"> <li>• Net income before net allocations to reserves</li> <li>• Net income before minority interest and taxes</li> <li>• Unique</li> <li>• Sales</li> <li>• Sales plus other operating income</li> <li>• Operating income</li> <li>• Net income before interest</li> <li>• Cash receipts</li> <li>• Operating income before depreciation</li> <li>• Other</li> </ul>	<p>23.9%</p> <p>41.3%</p> <p>34.8%</p>

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