

*The Effect of International Institutional Factors
on Properties of Accounting Earnings*

by

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Abstract

International differences in the demand for accounting earnings affect properties of earnings that are predictable and observable. First, we show that earnings are more timely in incorporating value-relevant information in common-law countries (we study Australia, Canada, U.S. and UK) than in code-law countries (France, Germany, Japan). We attribute this to differences in solving information asymmetry under “shareholder” corporate governance (public disclosure) versus “stakeholder” governance (private communication), and to code-law’s direct linkage of reported earnings to current payouts (to employees, managers, shareholders and governments). Second, earnings in most countries studied are conservative (tilted toward timely incorporation of bad news), due to information asymmetry. Third, common-law countries’ earnings are more conservative, due to greater: (1) information asymmetry between managers and debt and equity investors; (2) regulation; and (3) expected cost of investor litigation. Fourth, UK earnings are the least conservative among common-law countries, due to private debt, and lower regulation and litigation costs. Fifth, tax laws, legal restrictions on undistributed earnings and code-law institutional links between earnings and dividends reduce the timeliness of earnings, relative to dividends. Sixth, earnings are more timely than cash flows in all countries studied. Seventh, the asymmetric timeliness of earnings has increased substantially over time in most countries. The results have implications for security analysts, accounting standard-setters, regulators, and corporate governance.

1. Introduction

We show that the properties of earnings reported by corporations vary internationally, as a function of the institutional contexts in which earnings are used. Earnings numbers supplied by corporations are an observable function of the demand for earnings, and the demand for earnings is not homogeneous across countries.

The most important institutional factor influencing international differences in earnings properties is corporate governance. Under the “stakeholder” governance model that is typical in code-law countries, earnings directly determine current payouts of dividends to shareholders, bonuses to employees and managers, and taxes to governments. Agents for these parties are represented directly or indirectly in corporate governance, and insider communication with these agents solves the information asymmetry between managers and stakeholders. The desirable properties of earnings are determined more by the payout preferences of privately-informed agents of labor, capital and government, and less by the demand for public disclosure. Under the “shareholder” governance model that is typical of common-law countries, shareholders alone elect members of the governing board, payouts are less closely linked to current-period earnings, and public disclosure is a more likely solution for the information asymmetry problem. The desirable properties of earnings are determined primarily in the disclosure market.

The other institutional factors we study are regulation and litigation, which differ within common-law countries, and legal and tax factors that also cause short-term dividend policies to influence reported earnings.

The properties of earnings we address are timeliness (defined as the extent to which current earnings incorporate current value-relevant information) and conservatism (the extent to which current earnings asymmetrically incorporate current bad news, but not current good news). We study over 40,000 annual earnings reported during 1985-95, under the accounting rules of seven countries. The results are consistent with our general thesis, that properties of accounting earnings around the world are a function of the varying demands that earnings satisfy.

Our research design addresses the flow of value-relevant information into accounting earnings, under different international institutions. An important feature of this design is that we observe properties of earnings from the earnings themselves. This has several advantages over simply studying the different accounting rules used to calculate earnings internationally. First,

much accounting practice is not determined by rules, for reasons that include: practice is more detailed than rules; rules lag innovations in practice; and companies do not invariably follow the rules. Studying accounting rules *per se* is incomplete and potentially misleading, because the extent to which accounting practice is determined by formal rules varies internationally. Second, we report evidence that reported earnings are influenced by managers' operating, financing and investment decisions, as well as by accounting rules and practices. For example, managers can reduce the volatility of reported earnings by deferring discretionary expenditures (such as R&D) in bad earnings years. Because the use of reported earnings in corporate governance varies internationally, we expect managers' operating, financing and investment decisions to affect earnings differentially across countries. For both these reasons, we study international variation in properties of the earnings numbers that firms actually report.

Nevertheless, the research design has its disadvantages. In particular, it uses the change in stock price over a company's fiscal year (adjusted for dividends and capital transactions) as its measure of current-year value-relevant information. Thus, the research design studies the flow of *market-valued* income into *book-valued* income. Some undoubtedly would question the validity of stock price changes as a measure of current value-relevant information, particularly in the code-law countries which have endogenously lower market liquidity and public disclosure standards. This and other features of the research design are discussed in the concluding section.

The first hypothesis is that differences between common-law and code-law countries in the demand for disclosure to public markets – particularly debt and equity capital markets – affects the *timeliness* of reported earnings, defined as the extent to which current earnings incorporates current value-relevant information. We argue that in code-law countries the “stakeholder” model of corporate governance links reported earnings more closely to current payouts of bonuses to employees and managers, dividends to shareholders, and taxes to governments. Agents for these groups are involved in writing the accounting code and in corporate governance, and they generally are less diversified than individual stockholders. They have greater incentives to reduce volatility in corporate payouts and thus to reduce volatility in (i.e., “smooth”) reported earnings. Individual shareholders and lenders are a relatively insignificant source of capital, and hence there is a reduced demand for timely disclosure in

earnings. Information asymmetry is more likely to be solved by private communication between managers and agents for the suppliers of labor and capital, rather than by public disclosure.

In contrast, the “shareholder” model of corporate governance in common-law countries creates a greater demand for timely earnings information, for purposes that include pricing securities, pricing new debt, enforcing debenture covenant restrictions, and stockholder voting. Stockholders, lenders, employees and other common-law users of earnings information are less likely to be represented by intermediaries or agents in the corporation’s governance, and are viewed in common law as being “at arm’s length” from the corporation, so information asymmetry is more likely to be solved by timely public disclosure. Conversely, earnings are comparatively free of the code-law demand to determine current payouts, there being a less direct link with current payments of dividends, employee and management compensation, and taxes.

Thus, we argue that the economic function of earnings differs between common-law and code-law countries, causing differences in demand for timely earnings. Consistent with this hypothesis, earnings in our sample code-law countries (France, Germany and Japan) are less timely than earnings in the common-law countries (Australia, Canada, US and UK).

The second hypothesis is that conservatism, defined as asymmetric timeliness in incorporating value-relevant information (Basu 1997), is a general property of accounting earnings.¹ Earnings conservatism is illustrated by new information about future cash flows from long-term assets. Upward revaluation has not been practiced in the US since the Securities and Exchange Commission (SEC) was established in 1934, following the Great Crash of 1929, so unrealized increases in asset values do not flow into earnings until the underlying cash flow increases occur. In contrast, unrealized decreases in asset values are more likely to cause immediate write-offs against earnings, without waiting for the cash flow decreases to be realized.² We propose that earnings are more likely to incorporate current bad news for two

¹ We describe asymmetric timeliness in incorporating news as “earnings conservatism”. The concept is different from, but related to, balance sheet conservatism, that is reporting low book values of equity by under-stating assets and/or over-stating liabilities. Incorporating bad news more quickly into earnings implies conservative book values of equity, but the reverse is not true. Code-law countries with typically low book-value balance sheets also practice transfers out of reserves to boost earnings in bad years. This practice *reduces* the asymmetric timeliness of reported earnings, and is difficult to describe as “conservative” in its effect on reported earnings. Asymmetric timeliness also is different from, but related to, the concept of conservatism in Gray (1980).

² Basu (1997). Another example is the “lower of cost or market” inventory rule, which incorporates bad news more quickly in earnings. The frequency of pre-SEC write-ups is reported in American Institute of Accountants (1940).

reasons: managers have asymmetric incentives to disclose specific information (Alchian 1984), so bad news is more credible; and accountants supply earnings (and correlated book values) to lenders with asymmetric loss functions (Watts and Zimmerman 1986). We report that earnings asymmetrically incorporate current value-relevant information in most countries studied.

We propose that the incentive to report conservative (asymmetrically timely) earnings increases in three institutional variables: use of earnings by “arm’s length” parties in markets, particularly debt and equity markets; expected cost of stockholder or bondholder litigation for non-disclosure of bad news; and extent of regulation. The third hypothesis thus is that common-law countries’ earnings are more conservative than code-law earnings, with more pronounced asymmetric timeliness in incorporating currently available value-relevant information. Consistent with this hypothesis, earnings in common-law countries are more timely in reflecting decreases in the market value of shareholders’ equity, but *less* timely in reflecting increases, relative to code-law earnings. That is, the additional timeliness of common-law earnings (our first hypothesis) is due to their greater timeliness in reflecting bad news more than offsetting their lesser timeliness in reflecting good news.

The fourth hypothesis is that, among common-law countries, the demand for earnings conservatism increases in the expected cost of stockholder litigation for alleged non-disclosure of bad news, and in regulation (which adds criminal penalties to the civil costs of non-disclosure). Consistent with this hypothesis, earnings in the UK, which has comparatively lower expected litigation costs and regulation (and also more private debt), exhibit less conservatism than earnings in the other common-law countries, but more than in the code-law countries.

The fifth hypothesis addresses the timeliness of earnings relative to dividends, defined as the relative proportions of currently value-relevant information they incorporate. Code-law institutional links between earnings and current dividends imply they incorporate similar information. However, in common-law countries the other demands on earnings are not compromised to the same degree by current dividend policies. Consistent with this hypothesis, we report that earnings are more timely than dividends in common-law countries but not in code-law countries. Earnings are *less* timely than dividends in two of the three sample code-law countries (Germany and Japan). We also test the hypothesis that, among common-law countries,

those with dividend tax “imputation” establish a further link between dividend policy and earnings reporting preferences, but we find only weak evidence for the hypothesis.

Finally, we benchmark earnings against cash flows from operations. We report that in every country studied, earnings are more timely than cash flows, incorporating a greater proportion current value-relevant information. That is, accounting accruals are universally informative, despite differences in accounting methods across countries. This generalizes a well-known result for U.S. earnings versus cash flows (Ball and Brown 1968, Dechow 1994). We also report that common-law countries’ earnings exhibit more timeliness *relative to cash flows* than code-law countries’ earnings, which is consistent with common-law accounting accruals being oriented more to timely earnings disclosure. In addition, we investigate international differences in properties of cash flows from operations. The demand for earnings properties such as timeliness or conservatism can be satisfied by accounting accruals (as in the case of asset write-downs against earnings, discussed above) and/or by managers adapting operating, investment and financing decisions to influence operational cash flow. For example, a code-law demand for less volatile earnings could be satisfied by managers decreasing discretionary expenditures such as R&D and advertising in bad earnings years, and increasing them in good years. Managers also can structure transactions so as to move earnings across time. We report that operating cash flows generally are asymmetrically sensitive to news in common-law but not code-law countries. Thus, earnings can acquire their demanded properties by both cash flow and accounting means.

We contribute to a growing literature on the effects of international accounting differences, including Jacobson and Aaker (1993), Alfred et al. (1993), Amir et al. (1993), Bandyopadhyay et al. (1994), Harris et al. (1994), Joos and Lang (1994), Barth and Clinch (1996), and Pope et al. (1996). We also contribute to the literature on international corporate governance, including Baums et al. (1994) and La Porta et al. (1996).

The following section surveys salient institutional facts and develops hypotheses on the effects of institutional variables on earnings properties. The third section presents the model we utilize to test the hypotheses. Remaining sections describe the data, results and conclusions.

2. Hypotheses: International Institutional Determinants of Earnings Properties

We develop eight hypotheses concerning the influence of institutional variables on the two earnings properties our research design can measure: timeliness and conservatism (or

asymmetric timeliness). There have been numerous attempts to classify nations' accounting systems, based on a variety of institutional variables, but little empirical research has been directed at determining which variables explain differences in important earnings properties.³

2.1 Demand for Timely Earnings in Code versus Common Law Corporate Governance. Perhaps the most fundamental difference in accounting standards and practices internationally lies in the extent to which they originate in the public versus the private sector: that is, whether they exist under codified law or common law.⁴ We hypothesize that the demand for timely reported earnings differs substantially between the code-law "stakeholder" and the common-law "shareholder" models of corporate governance.

Common law emerged in England after the Norman Conquest in 1066. Common law arises from individual action in the private sector, rather than from collective planning in the public sector. It emphasizes following legal procedure over rules (David and Brierley 1985, p.24; Posner 1996). Common laws – including accounting standards used to prepare financial information – evolve by becoming commonly accepted in practice. If an accounting practice becomes sufficiently generally (commonly) accepted, then it becomes common law because a reasonable person relying on accounting information would presume that commonly-accepted practice has been followed in preparing it. While it might be efficient for private-sector bodies such as UK's Accounting Standards Board to codify generally-accepted accounting rules and make them binding their members, such standards arise in an accounting market, not in government.⁵ Common law is found in UK and many former British colonies. Those represented in our sample are Australia, Canada, UK and US.

Because common law arises in the private sector, it is adapted to contracting in markets. Contracting parties are presumed to be individuals "at arm's length" from the firm and thus who

³The American Accounting Association classified accounting systems using eight variables: political system (traditional oligarchy, totalitarian oligarchy, modernizing oligarchy, tutelary democracy, political democracy), economic system, stage of political development, financial reporting objectives, source of accounting standards, education and licensing of accountants, mechanism to enforce standards, and accounting client (public or private). Nobes (1992) and Nobes and Parker (1995, ch.4) survey classification schemes. How these variables affect important properties of accounting information internationally is largely untested. International texts typically list variables to justify classifications, without correlating them with the national accounting standards listed in subsequent chapters, let alone with properties of the financial statements prepared under those standards.

⁴David and Brierley (1985) provide a survey.

⁵Code and common law also differ in rule enforcement. This is a private matter under common law, involving civil litigation. Code-law enforcement an administrative function, involving criminal prosecution for code violation.

rely on disclosure of information relevant to their decisions. The “shareholder” model of corporate governance predominates in common-law countries. Shareholders alone elect the governing board, they are less likely to hold sufficiently large blocks to obtain direct board membership, and both lenders and employees seldom have board representation. There is greater monitoring of managers by external board members, and by external debt and equity markets (including analysts). We hypothesize that, because they operate at greater “arm’s length,” parties contracting with firms in common-law countries demand more timely public disclosure.

The origin of code law is attributed to the Roman *ius civile* developed by Justinian in the sixth century AD. Code-law accounting systems prescribe regulations that range from abstract principles (e.g., “prudence”) to detailed procedures (e.g., the format of financial statements). Most countries in continental Europe have codified accounting. The most detailed code is the French *Plan comptable général*, adapted under German occupation from Goering’s 1937 standardization of German accounting for wartime planning (Standish 1997, p.60). Code-law accounting typically is administered by a governmental or quasi-governmental body, such as France’s *Conseil National de la Comptabilité* or Japan’s Business Accounting Deliberation Council, a body advising the Ministry of Finance. Japan operates a code-law system, having adopted elements of the German legal system and the French accounting system during the Meiji Era (1868-1910). Code-law countries in our sample are France, Germany and Japan.

A fundamental difference between common-law and code-law countries is the closeness of the relation assumed between the firm and parties contracting with it (debt and equity investors, employees, managers, suppliers and customers). Code-law corporate governance tends to be conducted by a small number of agents for intermediaries such as banks, pension plans and employee groups or labor unions, and for major customers and suppliers. These agents are informed “insiders” with private access to information. Labor and stockholders each elect 50% of the supervisory board of German *Aktiengesellschaft* (stock corporations).⁶ Stock voting typically is dominated by banks.⁷ The supervisory board appoints and monitors the managerial

⁶ Labor elects one third in AGs with less than 2,000 employees (Nobes and Parker 1995, ch.12; Roe 1994). Miwa (1996) concludes that employees control Japanese governance, with *antei-kabunushi* (“friendly shareholders”) being rewarded for voting with incumbent managers, for example by receiving profitable business opportunities.

⁷ Concentration of stock voting is due to banks’ block holdings and to their practice of voting individuals’ stocks as agents (Kandgen 1994). Banks are directly influenced by government policy when they vote stock.

board, and approves the financial statements. For the system to be tractable, the number of contracting parties must be small, so companies have close relations with a small number of banks and other financial institutions, as well as with their major customers and suppliers, labor unions and governments. There is no presumption that parties operate at a distance. In Japan, for example, managers typically pay little attention to the comparatively small number of individual shareholders, but have close working relations with the banks, investment houses and related companies that comprise the majority of equity investors.⁸ Consequently, the demand for public disclosure in code-law countries is not as great as in common-law countries. We propose that this reduces the demand for timely incorporation of value-relevant information in reported earnings.

Conversely, the stakeholder model views earnings as like a common “pie” to be divided: bonuses to employees and managers, dividends to shareholders and taxes to governments. Agents for these groups are poorly diversified relative to individual shareholders, and have additional incentives to reduce volatility in payouts. The portfolio weights of managers and employees typically are skewed toward their employer firms. Regulation of bank leverage ratios penalizes volatility in bank earnings and thus in the dividends and earnings on their equity investments. Code-law banking systems typically are hierarchical, so bank representatives are well aware of governments’ incentives to reduce volatility of tax receipts. Employee representatives typically are re-elected annually. Overall, code-law corporate governance creates additional incentives to reduce volatility in earnings, which directly determine a variety of payouts.⁹

We conclude that code-law countries exhibit both higher demand for earnings volatility reduction and lower demand for timely incorporation of value-relevant information in earnings. Both demands can be satisfied by accounting methods that “smooth” earnings over time, incorporating value-relevant information at a more gradual rate. Accounting practices in most countries smooth earnings’ incorporation of value changes over time, but code-law accounting gives considerably more latitude. In good years, it is code-law practice to decrease earnings by asset write-downs (e.g., excessive allowances for bad debts), excessive provisions (e.g., for

⁸ Nobes and Parker (1995, ch.13) conclude of Japan: “Although domestic reporting requirements and practices may have improved recently, they are generally considered to be of a lower overall quality for the purposes of investors than are those of countries such as the United Kingdom, the United States and the Netherlands.”

⁹ Incentives to reduce earnings volatility exist in common-law countries (e.g., Healy 1985), but code-law governance features amplify them.

future losses or expenses) and transfers to reserves. In bad years, reversing these accounting adjustments increases earnings.¹⁰ Because earnings and value changes converge over long periods (Easton, Harris and Ohlson 1992), accounting methods that smoothing value changes over time to reduce the *volatility* of earnings necessarily reduce earnings' *timeliness* in incorporating value changes. We therefore predict that code-law earnings incorporate a lower proportion of currently-available value-relevant information by "smoothing" its incorporation over time.

H1: Code-law countries' earnings are more "smoothed" and less timely in incorporating current information than common-law countries' earnings.

Universal Demand for Conservative Earnings. We propose that accountants contract to supply users with conservative financial statements for two reasons. First, managers have asymmetric incentives to disclose information that is specific (Alchian 1984) or private, and thus costly for users to produce themselves (not independently "verifiable"), making bad news more credible. Second, lenders are important users of accounting information, including earnings and book values (positively correlated with earnings), and they have asymmetric loss functions (Watts and Zimmerman 1986). We therefore predict that accounting is earnings-conservative in all countries, in the Basu (1997) sense that earnings asymmetrically incorporate current bad news.¹¹

H2: All countries' earnings are conservative, that is more timely in incorporating current bad news than current good news.

2.3 Demand for Greater Earnings Conservatism under Common-law Governance. We propose that common-law earnings are more asymmetrically conservative than code-law earnings, due to greater demand for timely disclosure of bad news. The closer code-law relation between managers and agents for contracting groups (banks, labor unions) reduces the cost of verifying managers' information and thus reduces information asymmetry, one source of demand for conservatism. In common-law countries, where contracting parties rely more on "arm's length" disclosure of information, the demand for asymmetrically timely earnings is greater.

H3: Common-law earnings are more conservative than code-law earnings, that is even more timely in incorporating current bad news relative to current good news.

¹⁰ In the notorious 1993 Daimler-Benz case, German-rule earnings were reported as DM168 million but US GAAP disclosure revealed that a loss of DM969 million had been hidden by various accounting adjustments (Ball 1998).

¹¹ Conservatism was practiced in medieval Europe and the lower-of-cost-or-market rule appeared by 1675 (Basu 1997), predating taxation and regulation, so conservatism is a fundamental property of accounting information.

2.4 Regulation, Litigation and Debt Differences among Common-law Countries. The distinction between common-law and code-law countries provides useful insights, but the classes are by no means homogeneous. We consider two important institutional differences within the class of common-law countries: the method and extent of their regulation of accounting; and the extent to which their securities litigation rules favor plaintiffs.

Regulation. We propose that, among common-law countries, earnings conservatism increases with regulation of accounting standard-setting and enforcement. Building on Peltzman (1976), Watts and Zimmerman (1986, pp.229-231) argue that the political process, and the SEC as agent, has an incentive to avoid voter perception of responsibility for investor losses. We argue that responsibility is attributed more to managers, and less to the political process, if losses are disclosed in the financial statements in a more timely fashion. Consequently, regulation adds criminal penalties (fines, incarceration) to the common-law civil remedy of damages for untimely disclosure of materially bad news. Accounting is regulated to some degree in all common-law countries, but the extent varies. For reasons summarized below, we characterize UK as having the least regulated accounting market among our sample common-law countries.

The Securities Act 1933 and the Securities Exchange Act 1934 established the current US regulatory framework. They created the SEC as a US Government agency authorized to mandate and administer accounting rules. The SEC delegated this role to the accounting profession in 1938, but retained a close supervisory role. It has intervened in standard-setting on many occasions, as has the US Congress. Nobes and Parker (1992, p.105) conclude: "The highly-detailed nature of US GAAP, the ultimate governmental sanctions behind it, and the intervention of the SEC and Congress in crucial areas, justify the appellation of 'legalism' [to US accounting]." In addition to its influence on GAAP, the SEC regulates disclosure under Rule 10b-5 of the 1934 Act, which states: "It shall be unlawful ... to make any untrue statement of a material fact or to omit to state a material fact." Section 32 imposes criminal penalties for willful violation of the Act, and Rule 10b-5 has been used as a basis for civil litigation (Coopers & Lybrand 1997, p.17). We conclude that the US operates a closely-regulated common-law system, with compounded criminal and civil penalties for non-disclosure of bad news.

Australia and Canada are widely-viewed as having evolved from the loosely-regulated UK model (described below) to the US regulatory model. Both commenced with a largely self-

regulating profession, initially adopted provincial (rather than federal) regulation, and then moved to a system in which national accounting standards are set by governmental or semi-governmental bodies. Australia created a regulatory body (now constituted as the Australian Securities Commission) “obviously modeled on the SEC” (Nobes and Parker, 1992, p.106). It also removed standard-setting from the private sector, assigning it to a government-appointed authority, the Australian Accounting Standards Board, whose accounting standards can be overturned only by the Australian Parliament. Choi and Mueller (1992, p. 86) describe the shift in Australian accounting regulation in these terms: “It is remarkable indeed that within a period of no more than twenty-five years, Australia has moved from a void of formally set accounting standards to professional recommendations, then to formal standards, and now to legally approved and statutorily mandated standards. This progression from the first professional recommendation in 1946 to the 1984 amendments to the Companies Act mandating ‘approved accounting standards’ (which are compulsory for companies) is one of the most substantive changes ever to occur without political revolution” These changes predate our sample period, so we characterize Australian accounting as highly regulated.

Canada has evolved to a regulated federal model in a similar, if not quite so rapid, fashion. Accounting has become increasingly regulated with the establishment of the provincial securities commissions, and the enactment of provincial and federal securities laws. Various revisions of the Ontario Companies Act have been particularly influential. Nobes and Parker (1992, p.108) conclude: “The influence of American practice is shown by the Ontario Securities Act 1966, which designated the Ontario Securities Commission (OSC) as the body to oversee the Toronto Stock Exchange and gave the OSC powers not unlike those of the SEC.” Since 1975, federal securities legislation has required financial statements to comply with the accounting standards promulgated in the Canadian Institute of Chartered Accountants’ *CICA Handbook*.

Among the common-law countries in our sample, the UK historically has experienced the least regulated accounting market. Some indicators are:¹²

- There is no UK regulatory body comparable to the SEC in the US.¹³

¹²Choi and Mueller (1992, ch.3), Nobes and Parker (1992, ch.6) and Radebaugh and Gray (1997, ch.5).

¹³Nobes and Parker (1992, p.103) compare UK with the other sample common-law countries as follows: “Unlike legislators in the United States, Australia and Canada, British legislators have never been persuaded of the need to set up a securities commission with a strong interest in the regulation of corporate financial reporting.”

- The City of London is viewed as primarily “self-regulating.”
- The UK parliament seldom intervenes in accounting matters.
- There are four separate professional bodies representing independent accountants in the UK, making the profession unusually decentralized by international standards.
- There are comparatively few formalized accounting standards in the UK, thus leaving more to the discretion to individual accountants. (Approximately 25 FRSs have been issued to date, compared with approximately 125 SFASs in the US).
- Formal accounting standards typically are less detailed and allow more choices in the UK, accentuating the decentralization of discretion to individual accountants.
- The UK accountant attests that the accounts are “true and fair,” a common-law judgmental opinion, whereas the US accountant attests that they “present fairly ... in accordance with generally accepted accounting principles” – i.e., that they also conform to a formalized body of accounting standards (GAAP).

Government intervention was avoided in 1970, but 1990 legislation established the Accounting Standards Board (ASB), modeled on the US FASB and accountable to a newly-created Financial Reporting Council. Standard-setting thereby was taken out of the exclusive hands of the accounting profession. The ASB was authorized to issue Financial Reporting Standards (FRSs) that are backed by law (Radebaugh and Gray 1997, pp.91-92; Choi and Mueller 1992, pp.116-118). Nevertheless, the law does allow a company to deviate from FRSs if it discloses the effect of the deviation on its accounts. Even these changes did not take place until near the end of our sample period. We therefore conclude that during the sample period 1985-95, UK accounting was less regulated than in other sample common-law countries (Australia, Canada and US).

Litigation. Among common-law countries, we also propose that earnings conservatism increases in the expected costs to accounting firms and their clients arising from securities litigation. Securities lawsuits induce a demand for conservatism because the payoff function is asymmetric. Suits almost invariably allege investor losses from disclosures inducing over-valuation of and investment in securities; few allege that disclosure was too conservative.

Expected litigation costs are a function of lawsuit probability, award size and legal fees. Disclosure decisions by managers and accountants take expected litigation costs into account (Kothari, Lys, Smith and Watts 1988). Consistent with this hypothesis, Basu (1997) shows that the asymmetric conservatism of U.S. earnings increased concurrently with increased expected litigation costs arising from changes in U.S. litigation rules. We expect a similar effect across countries. Those with higher expected litigation cost of non-disclosure are more likely to evolve

practices – including accounting standards – that disclose bad news in a more timely fashion. Examples include charges against earnings for asset impairment or for plausible future liabilities. Less attention is likely given to unrealized increases in asset values, or decreases in liabilities.

Our assumption is that expected litigation costs are lower in UK than in Australia, Canada and US. Relevant UK institutional facts include: punitive damages are more difficult to obtain; juries are seldom used in civil litigation; absence of class action suits; and the so-called “English rule,” under which losing plaintiffs pay part of defendants’ costs.¹⁴ In code-law countries, civil litigation is comparatively rare and the size of awards is comparatively small.

Private Debt. UK corporate debt is predominantly private. We conjecture there is less information asymmetry between managers and private lenders than in the case of public debt, and that this reduces the demand for timely incorporation of bad news in UK earnings.

Regulation, Litigation and Private Debt Considered Jointly. Because UK has lower regulatory and litigation costs and predominantly private debt, we predict less UK earnings conservatism than in other common-law countries. Nevertheless, relative to code-law countries, UK is expected to be more earnings conservative.

H4: U.K. earnings are less conservative than other common-law countries’ earnings and more conservative than code-law earnings.

2.5 Laws and Practices Linking Earnings to Current Dividends. Various laws and institutional practices cause reported earnings to be influenced by current dividend decisions. These include laws on the taxation of both corporate income and dividend distributions.¹⁵

Code-law Links between Dividends and Earnings. In the code-law “stakeholder” model of corporate governance, governments frequently are viewed as stakeholders, with tax payments being government’s share of the same earnings “pie” as dividends and bonuses. Politics requires reported and taxable earnings to converge, which governmental involvement in writing both the

¹⁴The English rule is applied in UK, Australia, and most of Western Europe (Posner 1986, p.537), though not uniformly. It affects expected litigation costs via the frequency of litigation and the legal costs of the defendant, but not the size of awards, with unclear net effect. Katz (1987) argues: “While it is conceivable that the English rule would lower the total number of cases brought to trial, it would likely increase the average expenditure per case. ... Even if the number of cases were to fall by as much as 30 percent, total expenditure could rise by more than 50 percent under the English rule.” Katz’ analysis does not take account of one institutional detail, however: English courts award only *reasonable* costs of successful defendants, thus reducing the incentive to spend. See also Shavell (1982), Posner (1986, pp. 534-540), Hughes and Snyder (1995), Posner (1996) and Miceli (1997).

tax and accounting codes essentially ensures. Tax rules in the three sample code-law countries allow a deduction against taxable income only if also taken against reported earnings (Choi and Mueller 1992, p.104). In code-law countries generally, it thus is considered imprudent to report earnings in excess of those required to justify dividends and bonuses, to minimize corporate tax. The consequence is that reported earnings are influenced by short-term dividend policy.

The influence is particularly strong in Germany. The *Handelsgesetzbuch* ("commercial code") includes the *Massgeblichkeitsprinzip* ("authoritative principle") that tax accounting be based on the firm's *Handelsbilanz* ("commercial balance sheet").¹⁶ Choi and Mueller (1992, p.96) conclude of Germany: "The dominance of tax accounting rules means that there is literally no difference between financial statements prepared for tax purposes and financial statements published in financial reports. ... Financial reports reflect tax laws – not primarily the information needs of investors and other financial market participants." The relation between earnings and dividends is tightened in Germany by two additional institutional factors. First, Federal law forbids management from paying dividends less than 50% of earnings without stockholders voting approval. Second, undistributed profits are taxed at a higher rate than distributed profits (currently 45% versus 30%, excluding the "solidarity surcharge").

These code-law institutional factors impose an additional role on the (already reduced) public-disclosure role of earnings: corporate policy on current payouts to "stakeholders," including governments (via taxation), shareholders (via dividends) and managers and employees (via bonuses). If these distributions *per se* are uninformative, then the testable implication is that code-law countries' earnings are noisier and less oriented to incorporating current value-relevant information, relative to dividends, than common-law countries' earnings.

H5: Code-law earnings are timely relative to dividends than common-law earnings, incorporating a lesser proportion of current value-relevant information.

Common-law Tax Imputation Link between Dividends and Earnings. Among common-law countries, there is considerable variation in the taxation of dividend distributions. We focus on "imputation" systems, which penalize corporations for reporting taxable earnings in excess of distributed dividends. Tax imputation provides incentives to structure transactions and use

¹⁵ Except as indicated, taxation facts are from annual editions of Coopers & Lybrand *International Tax Summaries*.

¹⁶ Nobes and Parker (1995, pp.269-72).

accounting standards that generate taxable earnings consistent with dividend policies, and the correlation between taxable and reported earnings is high enough for reported earnings to be affected. Dividend imputation systems are operated by Australia, Canada and UK (Coopers & Lybrand 1982-95), but not US.¹⁷ Provided dividends *per se* are uninformative, the testable implication is that US earnings exhibit greater timeliness relative to dividends.¹⁸

H6: The differential timeliness of earnings relative to dividends is greater in the U.S. than in common-law countries with dividend imputation (Australia, Canada and UK).

2.6 Earnings and Cash Flows from Operations. Comparing earnings and operating cash flows provides several insights into the sources of earnings timeliness and conservatism internationally. First, we propose that cash flows are noisier than earnings in reflecting contemporaneous value-relevant information (Dechow 1994) in all countries. The logic of this proposition is as follows. Cash flow from operations is the identical sum of accounting earnings and operating accruals. With operating accruals, accountants attempt to undo the effects of managers' operational financing and investment decisions (such as changes in accounts payable, accounts receivable and inventories) on operating cash flows. For example, variation over time in inventory levels causes variability in cash flow, other things remaining equal, whereas earnings is insulated from such variation by accruing Cost of Goods Sold from inventory usage rather than cash outlays.¹⁹ Provided accounting accruals are positively correlated with the effects on operational cash flows of operational financing and investment decisions, they partially remove these effects. Operating cash flow thus can be viewed as a noisy earnings variable. Provided there is no new information in managers' current financing and investment decisions, cash flow therefore is noisier than earnings in reflecting contemporaneous value-relevant information (Dechow 1994). This logic holds under the accrual-accounting systems of all countries, so we test the following hypothesis:

H7: For all countries, earnings are more timely than cash flow from operations, incorporating more current value-relevant information.

¹⁷The Australian imputation system is described in Hamson and Ziegler (1990). The Canadian system is dividend credits, not full imputation; and the marginal Canadian investor could pay US tax and thus not receive credits.

¹⁸ We expect this to be reinforced in US by stock repurchases to distribute cash to investors. Repurchases contain information about future earnings (Dann, Masulis and Mayers 1991), likely reducing information in dividends.

¹⁹ Accruals therefore allow managers to make efficient operational financing and investment decisions, without them influencing reported earnings (Watts and Zimmerman 1986). Conversely, accruals allow earnings to fulfill a timely public-disclosure role, without being contaminated by managers' financing and investment policies.

A second reason for studying cash flows is that the incremental timeliness of earnings (relative to cash flows) measures the extent to which accruals are oriented toward the timely incorporation of value-relevant information. We predict that common-law accruals reflect a greater demand for timely earnings, and hence that the incremental timeliness of common-law earnings (relative to cash flows) exceeds that of code-law earnings.

H8: Common-law countries' earnings are more timely relative to their operating cash flows than code-law countries' earnings.

Third, we study cash flows because international differences in earnings properties could arise from managers adjusting operating, investment and financing decisions to produce desired earnings outcomes. For example, volatility reduction could be achieved by managers reducing discretionary expenditures (e.g., R&D or advertising) in bad earnings years and increasing them in good years, or by structuring transactions to have the same effect. More timely incorporation of bad news could be achieved by common-law managers by a lower propensity to defer discretionary expenditures in bad times. To the extent that the demand for earnings properties is satisfied by managers' operating, financing and investment decisions, those properties should be observed in cash flow from operations, as well as in earnings. The behavior of operating cash flow thus could provide interesting insight into corporate governance differences internationally.

3. Tests: A Model of Incorporation of Value-relevant Information in Earnings

The research design infers earnings properties from the way earnings incorporate changes in market value of equity (measured as fiscal-year changes in share prices).²⁰ The model identifies three fundamental earnings properties: earnings lags and noise, which are separately-identifiable determinants of earnings timeliness; and earnings conservatism.

The first property our model incorporates is that earnings value incorporate changes over time. Equivalently, earnings reflect current and past value changes and thus lag returns (Ball and Brown 1968, Beaver, Lambert and Morse 1980, Easton, Harris and Ohlson 1992, Kothari and Sloan 1992). The second property is that accounting earnings incorporate market-valued earnings with noise due, for example, to imperfections in accounting accruals. These two features imply:

$$Y_t = f(\Delta V_t, \Delta V_{t-1}, \Delta V_{t-2}, \Delta V_{t-3}, \dots, v_t) \quad (1)$$

²⁰ Ball and Brown (1968), Beaver, Lambert and Morse (1980) and Basu (1997) are steps in developing this model.

where Y , V and v denote net income, market value of equity and accounting-induced noise.

Assuming that ΔV is independent over time, this can be simplified as:

$$Y_t = g(\Delta V_t, \varepsilon_t) \quad (2)$$

The disturbance ε_t incorporates two earnings components: old value-relevant information, that is lagged changes in market values ($\Delta V_{t-1}, \Delta V_{t-2}, \Delta V_{t-3}, \dots$); and accounting-induced noise (v_t).

The independent variable (annual change in market value of equity) is relatively free of short-term microstructure or mispricing effects. When scaled by opening market value, the variables become annual rate of return ($R_t \equiv \Delta V_t/V_{t-1}$) and earnings yield ($NI_t \equiv Y_t/V_{t-1}$):

$$NI_t = \beta_0 + \beta_1 R_t + \varepsilon_t \quad (3)$$

If timely information incorporation was the sole property demanded of accounting earnings, then ΔV_t (change in market value of equity, or “economic income”) would be the optimal earnings variable Y_t . Because there is demand for reported earnings with properties other than timeliness, accountants incorporate only a subset of available value-relevant information in current earnings. Notably, information asymmetry creates a demand for earnings with the property of observability independently of managers. Accountants thus attempt to incorporate in earnings only the subset of available value-relevant information that is independently observable. For example, the Revenue Realization Rule incorporates only the earnings on sales verified independently of managers as made to date, excluding information about expected future sales, new product announcements, customer loyalty, intellectual capital, forecasts and other “unrealized” revenues. An independently-observed earnings variable can be used to compensate managers, in debt contracts, or for tax purposes, free of self-interested strategic manipulation by managers. Furthermore, precommitment to periodic disclosure of independently-observable earnings reduces managers’ incentives for strategic behavior on other disclosures, such as optimistic forecasts. In contrast, economic income, ΔV_t , incorporates information that is not independent of managers, such as plans and forecasts. Thus, accountants do not incorporate all current value-relevant information into earnings, and earnings lag prices.

The second earnings property captured by the model is accounting noise. Accounting accruals are negatively correlated with the effects on cash flows of operational financing and

investment decisions, but the correlation is not perfect because accounting is costly. Hence, earnings do not remove all the noise in operating cash flows.

Specifying earnings as the dependent variable allows us to differentiate between accounting-induced noise and lags in incorporating value-relevant information in earnings. Consider an accounting rule or practice that “smooths” value-relevant information ΔV_t by incorporating an amount $L^{-1}\Delta V_t$ in earnings Y_t evenly over L periods (e.g., a change in customer goodwill, which generates changes in future cash flows and earnings over time). In a regression of NI_t on R_t the predicted slope then is L^{-1} . This measures the inverse of the lag in earnings incorporating value-relevant information, that is the degree of income “smoothing.” Lags also reduce the earnings-returns RSQ.²¹ Thus, a low slope and RSQ implies a low demand for timeliness in incorporating information and a high demand for earnings volatility reduction.²² In contrast, earnings noise is a component of the disturbance ε_t and thus reduces the regression RSQ, but it does not reduce β_1 , the slope on scaled ΔV_t . Earnings timeliness is reduced both by lags (which smooth value changes over time) and noise (which takes time to reverse).

The third earnings property we study is conservatism, incorporated by modifying (3) to allow different incorporation of “bad news” and “good news” (Basu 1997):

$$NI_t = \beta_{0j} + \beta_{1j} RD_t + \beta_{2j} R_t + \beta_{3j} R_t RD_t + \varepsilon_t \quad (4E)$$

The return dummy RD_t equals one if return R_t is negative (the net fiscal year change in value reflects “bad news”), and zero otherwise. The coefficient β_{2j} on fiscal-year return measures the incorporation of current “good” value-relevant information in country j earnings. The coefficient β_{3j} on the product of return and the return dummy measures the *incremental* country-specific incorporation of current “bad” value-relevant information in earnings. It permits a test of the asymmetric timeliness, or earnings conservatism, of country j earnings. Because β_{3j} measures the incremental effect of “bad news,” the total effect is $\beta_{2j} + \beta_{3j}$. Thus, β_{2j} and $(\beta_{2j} + \beta_{3j})$ are measures of the inverse lags, L^{-1} , for good and bad news respectively, in country j . International differences in earnings timeliness, for good and bad news combined, are reflected in the RSQs of individual-country regressions (4E).

²¹ As well as the first-order effect of lags on RSQ, it would be reduced by pooling firms and years with varying lags.

²² While ΔV then is a stationary process, first differences in NI are independent up to lag L , so considering only low-

Properties of dividends (*DIV*) and operating cash flow (*OCF*), for comparison with earnings properties, are obtained from the corresponding regressions:

$$DIV_t = \beta_0j + \beta_1j RD_t + \beta_2j R_t + \beta_3j R_tRD_t + \varepsilon_t \quad (4D)$$

$$OCF_t = \beta_0j + \beta_1j RD_t + \beta_2j R_t + \beta_3j R_tRD_t + \varepsilon_t \quad (4C)$$

The eight hypotheses can be expressed in terms of model parameters as follows:

H1: Equation (4E): *RSQs* (code law) < *RSQs* (common law)

H2: Equation (4E): $\beta_{3j} > 0, \forall j$

H3: Equation (4E): β_{3j} (common law) > β_{3j} (code law)

H4: Equation (4E): β_{3j} (code law) < β_{3j} (UK) < β_{3j} (other common law)

H5: [Equation (4E) *RSQ* - equation (3D) *RSQ*] common-law > code-law

H6: [Equation (4E) *RSQ* - equation (3D) *RSQ*] U.S. > other common-law

H7: Equation (4E) *RSQ* > equation (3C) *RSQ*, all countries

H8: [Equation (E) *RSQ* - equation (3C) *RSQ*] common-law > code-law

4. Data: Variable definitions, sample selection and descriptive statistics

Earnings, cashflows and dividends are from the Global Vantage Industrial/Commercial (IC) file. Stock prices and number of outstanding shares are from their Issue (I) file. Each is scaled by opening market value of equity (price times number of shares). Equivalently, each is defined on a per share basis, adjusted for any stock splits or stock dividends using the Global Vantage adjustment factor, and divided by beginning price. Data span the 1985-95 period.

The earnings levels variable is calculated as $NI_t = Y_t / (N_t P_{t-1})$, where *Y* is net income before extraordinary items (IC data 32), *N* is adjusted number of shares and *P* is share price.²³ Earnings change ΔNI_t is $NI_t - NI_{t-1}$. Dividend levels and change variables (*DIV* and ΔDIV) and operating cash flow variables (*OCF* and ΔOCF) are calculated equivalently. The dividend variable is dividends paid (IC data 36). Operating cashflow is defined as net income before extraordinary items (IC data 32) plus depreciation (IC data 11), minus the change in non-cash current assets (IC data 75 minus data 60), plus the change in current liabilities other than the

order (<L) correlation makes earnings appear like a random walk (Ball and Watts 1972).

²³ German companies do not deduct minority interest from earnings, but Global Vantage alters their numbers to comply with US practice. We therefore define German *Y* as IC data 32 + data 27, which reconciles to the earnings numbers actually reported. Nevertheless, the adjustment has only a trivial effect on the results.

current portion of long-term debt (IC data 104 minus data 94). Stock return R is the holding-period return, including dividends, over the company's fiscal year (the same period as earnings).

The extreme 2% (1st and 100th percentiles) of each variable (NI , ΔNI , DIV , ΔDIV , OCF , ΔOCF , and R) are excluded. Next, each firm/year with a missing value for any variable is excluded, giving the same observation set for the various variables and models estimated. Finally, countries with less than 1000 firm/year observations over the thirteen years are excluded, leaving 40,359 firm/year observations in eleven years from seven countries: Australia, Canada, UK and USA (common-law countries) and France, Germany and Japan (code law countries).

Table 1 contains sample descriptive statistics. The individual-country samples are pooled firm-years and range in size from 1054 (France) to 21225 (US). In Panel A the mean fiscal-year returns range from 3.7% (Japan) to 17.3% (Australia). Means NI ranges from 1.7% (Japan) to 6.6% (UK). In contrast with returns, earnings are negatively skewed (all medians exceed means). All mean and median OCF exceed NI due to the absence of investment expenditures in the former and the presence of depreciation in the latter. Mean dividend yield, DIV , ranges from 0.7% (Japan) to 3.5% (Australia).

In all seven countries, the variables rank in volatility as follows (highest first): R , OCF , NI and DIV . These rankings are consistent with our basic model, namely: (1) earnings is a lagged (smoothed) function of changes in value, and hence has lower volatility; (2) cash flow from operations is a noisy earnings variable, and hence has higher volatility; and (3) dividends is a lagged (smoothed) function of earnings, and hence has lower volatility.

[Table 1 here]

Panel B reports the distribution of ending months for companies' fiscal years. Typical ending months vary internationally. December is the norm in Canada, France, Germany and US. March is the norm in Japan and June is the norm in Australia. UK, which we categorize as the least regulated country in the sample, exhibits the greatest dispersion in fiscal year-ends. Panel C reports the sample distribution by calendar year.

5. Results

5.1 Demand for Timely Earnings in Code versus Common Law Corporate Governance. The hypothesis that code-law countries' earnings are less timely is tested by comparing RSQs from the individual-country Basu regressions, reported in Panel A of Table 2 and graphed in Figure 1.

With the possible exception of France, there is a clear difference between individual code-law country RSQs (4.24%-12.63%) and common-law country RSQs (9.09%-16.96%), consistent with the hypothesis. When countries are grouped, the overall code-law RSQ is 5.24%, approximately one-third the common-law equivalent of 14.37% (excluding UK).

According to Cramer (1987), the standard deviation of estimated RSQ is 1.3% (0.6%, 0.3%) in a regression with four independent variables including intercepts, a true RSQ of 5%, and sample size 1,000 (5,000, 20,000). For a true RSQ of 15%, the standard deviation of the estimate is 2.0% (0.8%, 0.5%). Differences in the order of 5% between our sample countries therefore are significant, assuming independence across countries.

[Table 2 here]

[Figure 1 here]

Demand for Conservative Earnings. The hypothesis that earnings are conservative, that is more timely in incorporating bad than good news, predicts higher RSQs in years with positive returns. This prediction is tested in Panel B, in which separate linear models are fitted for negative-return and positive-return years. In all common-law countries and in Germany, the bad-news RSQs exceed their good-news counterparts. The exceptions are France and Japan, discussed below. We conclude that earnings in most countries exhibit asymmetric conservatism, being more likely to incorporate current-year bad value-relevant news than good news.

It is instructive to compare the slopes for good and bad news. Panel B shows that US earnings on average are approximately ten times as sensitive to bad news as to good (regression slopes of 0.32 and 0.03). The median-country's relative sensitivity to good versus bad news is the UK ratio of approximately five (0.19: 0.04). The incremental slope β_{3j} in Panel A is significant and positive for all seven countries (note that in Panel B the bad-news slope is not incremental to the good news slope).

5.3 Demand for Greater Earnings Conservatism in Common-law Governance. The hypothesis that common-law countries' earnings are more conservative than code-law earnings is tested by comparing their RSQs in Panels A and B. This comparison reveals that the greater *overall* timeliness of common-law earnings is due entirely to their more timely incorporation of bad news. In all common-law countries, Panel B RSQs in bad years exceed those in good years. RSQs in good-news years are extremely low; Australian, Canadian and US earnings over the

sample period essentially ignore current value-relevant good news. However, the lesser good-news timeliness of common-law earnings is more than offset by their considerably greater bad-news timeliness. One characterization of common-law accounting is that it is directed primarily toward incorporation of bad news. With the exception of Germany, the same thing cannot be said of code-law accounting. These results are consistent with the hypothesis that, relative to code-law countries, the common-law demand for earnings originates more in arm's length corporate governance, debt contracts, and investor litigation, and less in determining short-term payouts.

Regression slopes, reported in Panel A of Table 2 and in Figure 2, reveal a similar pattern. The β_{2j} slopes show that earnings in every common-law country exhibit *less* sensitivity to good news than do earnings in France and Germany (earnings in Japan exhibit the least timeliness for both good and bad news). However, the incremental bad-news slopes β_{3j} for common-law countries range from 0.15 to 0.37, considerably larger than the code-law range of 0.01-0.10. The pooled incremental slopes are 0.31 for the common-law group as a whole (excluding UK) and 0.01 for the code-law group.

[Figure 2 here]

5.4 Effect of Differential Regulation and Litigation Rules among Common-law Countries. The data also support the hypothesis that UK earnings are less conservative than other common-law countries' earnings, but more conservative than code-law earnings. The UK bad-news RSQ of 11.55% in Panel B falls between that of the common-law group (12.24%) and the code-law group (1.68%). The incremental bad-news slope β_{3j} of 0.15 in Panel A falls between the code-law country range of 0.01-0.10 and the other common-law country range of 0.29-0.40.

5.5 Code-law "Stakeholder" Links between Earnings and Current Dividends. Table 3 reports results for the contemporaneous association between returns and dividends, for precisely the same sample of firm-years as for earnings in Table 2. Results generally support the hypotheses that common-law earnings are more timely relative to dividends than code-law earnings. In Panel A, the ratio of the returns/earnings RSQ to the returns/dividends RSQ exceeds unity for three of the four common-law countries.²⁴ In contrast, dividends are *more* timely than earnings in two of

²⁴ Panel B reports Voung's likelihood ratio statistic for selection among non-nested models, computed separately for positive and negative returns. The competing models have a common dependent variable (returns) but different independent variables (earnings and dividends). See Dechow (1994).

the three code-law countries (Germany and Japan). In Germany, where there are particularly binding institutional links between dividends and earnings, earnings captures only 56% as much current value relevant information as dividends. The equivalent ratio for Japan is 78%. For the pooled code-law group the ratio is 96%, meaning that current earnings and dividends capture approximately the same amount of current value-relevant information. The conclusion is that the timeliness of code-law earnings is constrained by its direct role in determining current dividends. Comparative RSQs for earnings and dividends are summarized in Figure 3.

[Table 3 here]

[Figure 3 here]

An asymmetric relation with current value-relevant information is evident for dividends as well. In Panel A of Table 3, all countries' incremental slopes in negative-return years are positive. Consequently, in the separate-sample regressions reported in Panel B, the total sensitivity of dividends to bad news is greater than the sensitivity to good news. This unexpected result appears inconsistent with the well-known Lintner (1956) model, in which managers are assumed more reluctant to decrease dividends.²⁵

5.6 Tax Induced Links between Earnings and Current Dividends. There are mixed results for the hypothesis that dividend tax imputation gives an incentive to make earnings conform more closely to dividends. This implies that earnings is more timely relative to dividends in the US than in common-law countries with dividend imputation (Australia, Canada and UK). The results for Australia and UK reported in Panel A of Table 3 are consistent with the hypothesis, but those for Canada are not. A feasible explanation is that the marginal investor in Canada is a US resident and does not receive imputation credits, so that Canada effectively is in the same tax category as the US.

5.7 Universal Timeliness of Earnings Relative to Cash Flow from Operations. Table 4 reports results for the contemporaneous association between returns and cash flow from operations, for precisely the same sample of firm/years as for earnings and dividends in Tables 2 and 3. In all seven countries, the earnings RSQs are higher than those of operating cash flow, the ratio

²⁵ Brealey and Myers (1996, pp. 420-22). The issue is not one of differential informativeness of dividend increases and decreases. The dependent variable is dividends and the sample is classified on the sign of the independent variable, stock return. This reverses the design in event studies, where the dependent variable is return and the independent variable for sample classification is sign of dividend change.

ranging from 2.10 (Germany) to 4.78 (US). This is consistent with our hypothesis that, despite differences in accounting methods across countries, accounting accruals are universally informative: that accruals reduce the noise in operating cash flows due to firms' investment and financing decisions. This result generalizes the well-known U.S. result (Ball and Brown 1968, Dechow 1994) and contrasts sharply with that reported above for dividends. Comparative results for earnings, dividends and operating cash flows are summarized in Figure 4.

5.8 Common-law Timeliness of Earnings Relative to Cash Flow from Operations.

The incremental timeliness of earnings (relative to cash flows) measures the extent to which a country's accounting rules and practices are oriented toward the timely incorporation of value-relevant information. Results generally support the hypotheses that common-law earnings are more timely, relative to cash flow from operations, than code-law earnings. In Panel A of Table 4, three of the top four ratios of the returns/earnings RSQ to the returns/dividends RSQ are from common-law countries. Earnings in Germany and Japan incorporate the lowest amount of current value-relevant information, relative to cash flows.

[Table 4 here]

An interesting result is the incremental bad-news slope β_{3j} for operating cash flows, which is positive and significant in four of seven countries (Australia, Canada, US and Japan). The three negative coefficients are not significant. This implies that the properties of earnings are not due entirely to accounting practices. For example, managers could be reducing discretionary expenditures (e.g., on R&D or advertising) in bad years, either to reduce financing costs or to make earnings less volatile. The demand for earnings that exhibit particular properties appears to be satisfied by managers' actions, and not entirely by accounting practices.

5.9 Earnings Lags versus Earnings Noise. In our model (4), accounting-induced noise reduces regression RSQs but not slopes, because earnings are dependent variables. Lags in incorporating value-relevant information in earnings reduce both RSQs and slopes. Comparison of countries' slope coefficients and RSQs permits the following inferences about international differences. First, estimated good news slopes and RSQs are both "small" for most countries (Panel B of Table 2). This implies that substantial lags in incorporating good news (smoothing current positive information over time) generally are a major contributor to the lack of timeliness of earnings in incorporating positive value-relevant information. Second, code-law good-news

coefficients and slopes both generally exceed their common-law counterparts, implying shorter lags in incorporating (less smoothing of) good news.²⁶ This is especially the case for France. Third, a comparison of slopes and RSQs indicates the presence of both lags and accounting noise in all countries.²⁷ Fourth, the slope coefficients for dividends are lower than for earnings, consistent with dividends being an even more smoothed series than earnings. We caution that these inferences are conditional on our model.

5.10 Linear versus Non-linear Models. The misspecification in linear models can be seen from their generally lower RSQs in Panels C and D of Table 2, compared with the Basu non-linear regressions in Panel A.²⁸ This is problematic in an international study due to substantial differences among countries in non-linearity (i.e., to differences in asymmetric earnings timeliness). Code-law countries exhibit considerably less asymmetry, and hence their RSQs differ little between the specifications. In contrast, the asymmetry is sufficiently strong in Australia, Canada and US to cause RSQs from the Basu model to be approximately 1.6 to 3.2 times their linear model equivalents. These are depicted in Figure 4.

[Figure 4 here]

6. Further Tests

6.1 Pooled Sample. We also estimate (4E) from pooled multi-country data:

$$NI = \beta_0 + \sum_j \beta_{0j} CD_j + \beta_1 RD + \sum_j \beta_{1j} RD.CD_j + \beta_2 R + \sum_j \beta_{2j} R.CD_j + \beta_3 R.RD + \sum_j \beta_{3j} R.RD.CD_j$$

The six country dummy variables CD identify the firm's country, with $CD_j = 1$ for firm/years in country j and $= 0$ otherwise. US is the "base country," so US firms have zero values for all

²⁶ Model (1) in Panel B of Table 5 below provides an explicit test of differences among countries' slopes. The difference between code- and common-law good news slopes is significant ($t=+2.37$).

²⁷ Assume earnings Y_t smoothes change in value ΔV_t by incorporating $L^{-1}\Delta V_t$ in each of L periods and adds noise v_t , with ΔV independent over time and of v_t . Then the predicted slope and RSQ are L^{-1} and $[L + L^2\sigma^2(v)/\sigma^2(\Delta V)]^{-1}$.

²⁸ Panel D shows that for common-law countries, the Easton and Harris (1991) model, incorporating both the level and change in earnings, under-estimates the earnings-returns RSQ relative to the Basu specification to a lesser degree. For code-law countries, the models in Panels A and D have comparable RSQs, presumably because the greater degree of "smoothing" of current value-relevant information implies greater persistence in reported earnings. Note that the Panel C levels specification is equivalent to a regression of price on book value per share, and the Panel D level/differences specification is equivalent to a regression of price on book value and earnings [e.g., Collins, Maydew and Weiss 1997]), but estimated in the first differences of all variables.

country dummy variables. The coefficient β_2 on return measures the incorporation of current “good” value-relevant information into US firms’ earnings and the coefficient β_{2j} on the product of the stock return variable and any country dummy variable measures the *incremental* country-specific incorporation of current “good” value-relevant information into current earnings, relative to the US. Similarly, β_3 measures the asymmetric timeliness, or earnings conservatism, of US firms’ earnings in incorporation current “bad” value-relevant information. The coefficient β_{3j} measures the *incremental* country-specific incorporation of current “bad” value-relevant information into current earnings, relative to the US, and tests hypotheses about differences among countries in earnings conservatism. The sum $\beta_2 + \beta_{2j} + \beta_3 + \beta_{3j}$ is the total sensitivity of current earnings to bad news in country j . Results are reported in column (1) of Table 5 and are consistent with those reported above. For example, each of the three code-law countries in the sample (France, Germany and Japan) earnings exhibit significantly less incremental sensitivity of earnings to bad news than US earnings.

[Table 5 here]

6.2 Variation in Expected Returns. A potential problem arises from variation in expected returns across time, countries and firms. Assume ΔV_t is caused by information about the vectors of future cash flows a_t and expected returns r_t ; and a_t and r_t are independent of each other and over time. Expression (2) then can be simplified as:

$$NI_t = h(a_t, \xi_t) \tag{6}$$

where the disturbance term now incorporates expected return effects, in addition to lagged information about cash flows and accounting noise. Using ΔV_t as a proxy for a_t would introduce measurement error due to expected return variation. While accounting earnings are not clearly free of all expected return effects, they likely treat some variation in aggregate stock returns as exogenous, notably negative serial correlation due to changes in market-wide expected returns (French, Schwert, and Stambaugh 1987; Fama and French 1988). “Market effects” likely vary in size internationally (e.g., the Japanese market index during our sample period).

We report two controls for market-wide expected return effects. First, in column (2) of Table 5 we estimate a pooled regression with annual stock return defined relative to the mean return for the firm’s country/year. Results are very similar to those in column (1). The regression

F -statistic rises from 273 to 303, consistent with a slightly better specification. Second, column (3) of Table 5 reports statistics from the pooled regression, with earnings scaled by country/year long term interest rates. The regression F -statistic and t -statistics for most slopes fall only slightly. We conclude that our results are not substantially influenced by market-wide effects.

6.3 Consolidated versus Parent Earnings. In countries where parent companies are not required to “equity account” their share of affiliate earnings, parent-company earnings omit a component of the earnings that accrues to stockholders. This introduces measurement error in the returns-earnings relation. While the error affects the dependent variable, it seems likely to be correlated with the parent-company earnings and thus to affect the regression slopes. We therefore replicate column (1) results for the 33,441 total firm/years in which Global Vantage specifically labels earnings as “fully consolidated.” This guarantees that the earnings variable includes parent companies’ proportional shares of affiliated companies’ earnings and thus are free of the error. The sample size reduction is due almost entirely to Japan, which loses most observations.²⁹ Results (unreported) are almost identical except for Japan (due to the small sample size).

6.4 Extending the Lag in Earnings. An interesting question is how long it takes news to be incorporated in earnings. Column (4) of Table 5 reports results when the dependent variable is $N_t + N_{t+1}$, allowing an additional year for news to be incorporated. The coefficients generally increase: the median two-year coefficient is approximately 1.6 times its one-year equivalent.³⁰ The RSQ increases by approximately the same proportion (note that the dependent variable is two-year earnings). These results demonstrate that future earnings incorporate current value-relevant information over time (there is earnings “smoothing,” “momentum” or “persistence”).

6.5 Control for Industry Composition. To alleviate the concern that the results are due to different sample composition across countries, column (5) reports results after controlling for industry effects, in the form of SIC codes. Little change is apparent.

6.6 Subperiod Results. Splitting the sample into two subperiods, 1985-90 and 1991-95, reveals three interesting results, reported in Table 6. First, the incremental coefficients on bad news

²⁹ Excluding these observations is not clearly necessary because Japanese rules require equity accounting in the parent’s books (Nobes and Parker 1995, ch.13). Few observations are excluded for Germany where public companies have issued consolidated earnings since the Seventh Directive, including equity in affiliates’ earnings.

³⁰ The exception is the good-news slopes for US and Australia. The sample size decreases, due mainly to losing one year. Results are for overlapping samples.

increased in the second subperiod for six of the seven individual-country regressions (4E), the exception being Japan. Several countries exhibit large relative increases, including Australia (0.48 vs. 0.26), UK (0.19 vs. 0.09), France (0.22 vs. 0.04) and Germany (0.19 vs. 0.05). These exceed the magnitude of the US change (0.33 vs. 0.28). One implication is that French and German accounting (though not Japanese) changed during the sample period, with earnings adopting more common-law properties. Another implication is that Basu (1997) might have erred in attributing increased asymmetry in US earnings' timeliness to changes in US litigation rules, since similar increases occurred in France and Germany, where litigation is not an issue.

Second, despite the increased sensitivity to bad news, the RSQs in six of seven country regressions (4E) decreased between subperiods, generalizing the US result [Ramesh and Thiagarajan (1995); Lev (1997)]. The combined implication of increased slopes and decreased RSQs is increased accounting-induced noise, rather than increased lags in incorporating value-relevant information into earnings. This appears inconsistent with Lev's (1997) view that the RSQ decline is due to increased value creation in intangibles that is not reflected in current earnings, implying an increased lag in incorporating current value-relevant information into earnings. Earnings incorporate changes in cash flows (adjusted for working capital accruals) arising from intangibles only as they occur over time, after changes in their present value became known. Lev's explanation therefore predicts a decline in slopes, as well as in RSQs.

Third, the results for cash flow from operations, reported in Panel C, contrast unexpectedly with those for earnings. Between subperiods, the slopes on "good news" *increased* for six of seven countries, the incremental slopes on "bad news" show no systematic change, and the RSQs in all of the individual-country cash flow regressions (4C) *increase*. We have no explanation for this apparently systematic change.

7. Conclusions and Implications

Academic and professional interest in different national accounting models has been rekindled by the worldwide trend toward "internationalization" of the markets – especially capital markets – in which accounting information is used. The properties of accounting information prepared under common-law accounting standards is of particular contemporary interest because the International Accounting Standards Committee (IASC) currently is

completing a set of “international” accounting standards, which are widely viewed as reflecting a largely common-law view of “transparent,” timely disclosure.³¹

We show that institutional differences among nations influence the demand for reported earnings and thereby have predictable effects on the properties of earnings that corporations supply. We infer earnings properties from the way earnings responds to the flow of value-relevant information. While we focus on earnings, the identities which link earnings and book value also link the degree of conservatism in reporting both earnings and book values.

Specific results include: greater timeliness of common-law relative to code-law countries’ earnings; common-law timeliness being entirely due to greater earnings conservatism, defined as heightened sensitivity of earnings to bad news; lower earnings conservatism in less-litigious UK; separation between contemporaneous earnings and dividends variables in common-law but not code-law countries; greater timeliness of earnings relative to operating cash flow in all countries; and increases over time in earnings conservatism in most countries.

The result that earnings in common-law countries are more timely during periods of “bad news” than earnings in code-law countries has implications for corporate governance. Early earnings disclosure of bad news brings pressure from analysts, affects managers’ and employees’ bonuses, and thus increases the incentive to attend to the sources of losses more quickly. In comparison with a system that allows losses to take longer to be reflected in earnings, it makes optimistic statements by managers less credible. Earnings reductions flow into book values of equity and hence tighten leverage and dividend constraints in debt agreements. Common-law accounting thus increases incentives for managers to act more promptly in stemming losses. In contrast with Roe (1994), we conclude that enhanced common-law disclosure standards reduce the agency costs of shareholders monitoring managers across a public market, thus countering the advantages of closer shareholder-manager contact in code-law countries.

Our results suggest that contracting costs explain why a largely common-law model is evolving for international transacting (including IASC adoption of a common-law approach to

³¹ IASC is a coalition of professional accounting organizations from more than eighty countries. Its standards are designed to substitute for or complement countries’ domestic standards. Several national regulatory bodies have announced that IASC standards are or will be acceptable. Others, including the SEC, are considering the move. IASC standard-setting has been guided by little theory or evidence on how accounting standards influence important properties of reported financial information. For summaries of different models and descriptions of IASC activities, see Radebaugh and Gray (1997), Ball (1995), Nobes and Parker (1995) and Choi and Mueller (1992).

disclosure). The cost of cross-border transacting for parties who are geographically, culturally and linguistically separated from the firm's management presumably is greater in a system that assumes they are informed insiders than in one with greater public disclosure ("transparency").

Greater common-law earnings conservatism should be no surprise, considering the use of accounting earnings in common-law arm's-length debt and equity markets, and especially considering common-law litigation. Nevertheless, German accounting in particular is widely presumed to be more conservative. German accounting is said to be conservative because German managers can reduce earnings by transfers into secret reserves during good years. However, they also can increase earnings by transfers out of reserves in bad years. The practice was common in the UK at the beginning of the twentieth century (Yamey 1962), but was effectively extinguished in common-law countries as a consequence of the Royal Mail case.³²

The research design we use is subject to several obvious limitations. First, the assumption that stock return is a valid proxy for the flow of value-relevant news might be questioned. Rate of return is the change in stock price over a company's fiscal year (adjusted for dividends and capital transactions), scaled by opening price. It therefore is identical to the fiscal-year change in market value of stockholders' equity, scaled by opening value for econometric reasons. The research design thus studies the flow of *market-valued* income into *book-valued* income. Some undoubtedly would question the validity of using stock prices, particularly in code-law countries which have endogenously lower liquidity and public disclosure standards. Any "noise" in annual stock returns as a measure of market-valued income could be a correlated omitted variable.

We counter that the flow of information into code-law stock prices is not impeded in code-law countries by poor public disclosure, but occurs instead via the trading of informed insiders. In the absence of insider-trading laws, which exist in common-law countries but which are incompatible with code-law governance, the incentives of corporate insiders are to trade on information and thus incorporate it into prices. As Ramseyer (1993) observes, this explains the practice of Japanese banks trading in the stock of their clients. In addition, we note that poor information flow would imply that earnings announcements are less anticipated from other sources, and thus are larger surprises. Our results are inconsistent with this argument.

A second concern is whether the sample period is representative (Japan, for example, went through boom and bust). This concern is addressed to some degree in the specification tests in Table 5, where the results change little when annual firm return is defined relative to the mean return for its own country/year, and when earnings are scaled by the country/year interest rate. A related concern is correlated omitted variables. For example, if the proportion of growth options relative to assets in place varies across countries, then common application of the Revenue Realization Rule will cause earnings to vary internationally in timeliness, due to “real” rather than “accounting” effects. Our results hold only for listed corporations. The number of listed code-law corporations is comparatively small, in part because code-law systems are not designed for the demands of public disclosure, and thus private corporations are comparatively more prevalent. For example, UK has approximately four times as many listed corporations as Germany. Thus, our sample is less representative of code-law accounting in general. Again, this concern is addressed in Table 5 tests, where there is little effect of controlling for country differences in industry composition.

Subject to these and other limitations, we believe the results to be of interest to accountants, analysts, standard-setters, regulators and students of corporate governance.

³² *Rex v. Lord Kylsant* 1932 1 KB 442. This case-law was codified in the 1948 UK Companies Act, which required companies to distinguish reserves from provisions, “making the creation of secret reserves more difficult.” (Nobes and Parker 1992, p.103). German practice is exemplified by the notorious Daimler-Benz case (Ball 1998).

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Table 1
Sample Characteristics

A. Descriptive Statistics:													
	N	R			NI			DIV			OCF		
		μ	Med	σ	μ	Med	σ	μ	Med	σ	μ	Med	σ
Australia	1321	17.3	9.9	52.6	2.6	6.7	19.0	3.5	3.6	3.3	11.6	10.9	33.3
Canada	2901	12.1	6.0	46.8	3.2	5.3	15.4	2.0	1.4	2.4	15.1	12.2	28.9
US	21225	12.7	8.1	42.8	3.1	6.2	14.4	1.9	1.0	2.4	11.7	10.3	21.4
UK	5758	13.5	9.8	38.0	6.6	7.2	8.8	3.4	3.3	2.0	12.7	10.4	18.8
France	1054	14.9	6.6	43.0	6.1	6.6	10.8	2.3	2.1	1.9	22.1	15.7	36.2
Germany	1245	8.9	4.2	31.5	3.7	4.2	9.0	2.0	2.0	1.7	18.4	14.3	26.8
Japan	6855	3.7	-2.8	33.4	1.7	1.8	2.1	0.7	0.7	0.4	4.7	4.2	7.8
B. Observations by Fiscal Year End (Month):													
	1	2	3	4	5	6	7	8	9	10	11	12	Total
Australia	5	0	32	4	30	964	32	2	45	0	6	201	1321
Canada	113	26	131	51	21	105	47	144	155	72	31	2005	2901
US	964	405	872	401	446	2094	562	506	1666	700	425	12184	21225
UK	297	119	1222	333	119	344	121	143	590	164	66	2240	5758
France	0	2	23	0	0	3	0	12	24	5	0	985	1054
Germany	0	19	4	0	0	75	9	0	183	7	3	945	1245
Japan	94	363	5341	39	68	29	9	14	150	67	144	537	6855
Total	1473	934	7625	828	684	3614	780	821	2813	1015	675	19097	40359
C. Observations by Year:													
	85	86	87	88	89	90	91	92	93	94	95	Total	
Australia	11	29	88	91	116	165	160	164	181	178	138	1321	
Canada	189	221	277	276	306	325	306	311	317	325	48	2901	
US	1586	1661	2234	2240	2159	2098	2006	2111	2153	2189	788	21225	
UK	98	314	438	508	621	703	722	751	756	733	114	5758	
France	9	66	74	72	98	147	155	151	131	146	5	1054	
Germany	20	74	83	76	90	145	180	189	170	192	26	1245	
Japan	3	328	668	739	841	881	850	857	874	814	0	6855	
Total	1916	2693	3862	4002	4231	4464	4379	4534	4582	4577	1119	40359	

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability with results in previous tables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The common-law countries are listed first.

Variables: *R* denotes security return over the fiscal year; *NI* denotes annual earnings per share before extraordinary items deflated by beginning of period price; *DIV* denotes annual dividends per share deflated by beginning of period price; *OCF* denotes annual operating cashflow per share deflated by beginning of period price; *N* denotes the number of firm/year observations.

Table 2
Contemporaneous Association between Earnings and Returns:
Various Specifications

<i>Panel A:</i> $NI = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$						
	β_2	$t(\beta_2)$	β_3	$t(\beta_3)$	Adj. R^2	N
Australia	-0.01	-0.53	0.37	8.63	9.09%	1321
Canada	0.00	0.12	0.40	17.21	16.96%	2901
USA	0.03	8.57	0.29	34.02	14.66%	21225
UK	0.04	10.14	0.15	13.32	13.79%	5758
France	0.08	7.30	0.07	2.30	12.63%	1054
Germany	0.05	4.28	0.10	3.27	5.38%	1245
Japan	0.01	5.95	0.01	2.58	4.24%	6855
Common	0.02	7.07	0.31	39.10	14.37%	25447
UK	0.04	10.14	0.15	13.32	13.79%	5758
Code	0.04	13.27	0.01	2.19	5.24%	9154
<i>Panel B:</i> $NI = \beta_0 + \beta_1 R + \varepsilon (R \geq 0)$						
	β_1	Adj. R^2	N	$NI = \beta_0 + \beta_1 R + \varepsilon (R < 0)$		
	β_1	Adj. R^2	N	β_1	Adj. R^2	N
Australia	-0.01	-0.08%	813	0.36	10.14%	508
Canada	0.00	-0.06%	1688	0.40	17.93%	1213
USA	0.03	0.80%	12721	0.32	11.67%	8504
UK	0.04	3.22%	3612	0.19	11.55%	2146
France	0.08	8.98%	611	0.16	4.68%	443
Germany	0.05	2.41%	712	0.16	4.94%	533
Japan	0.01	1.10%	3141	0.02	0.83%	3714
Common	0.02	0.44%	15222	0.33	12.24%	10225
UK	0.04	3.22%	3612	0.19	11.55%	2146
Code	0.04	3.32%	4464	0.05	1.68%	4690
<i>Panel C:</i> $R = \beta_0 + \beta_1 NI + \varepsilon$						
	β_1	$t(\beta_1)$	Adj. R^2	N		
Australia	0.47	6.30	2.85%	1321		
Canada	0.79	14.49	6.72%	2901		
USA	0.90	46.08	9.09%	21225		
UK	1.44	26.67	10.98%	5758		
France	1.40	12.22	12.34%	1054		
Germany	0.76	7.84	4.64%	1245		
Japan	3.16	16.82	3.95%	6855		
Common	0.85	47.52	8.15%	25447		
UK	1.44	26.67	10.98%	5758		
Code	1.44	22.44	5.20%	9154		

<i>Panel D:</i>	$R = \beta_0 + \beta_1 NI + \beta_2 \Delta NI + \varepsilon$					<i>N</i>
	β_1	$t(\beta_1)$	β_2	$t(\beta_2)$	<i>Adj. R</i> ²	
Australia	0.44	5.75	0.12	2.84	3.37%	1321
Canada	0.72	13.06	0.26	6.44	8.00%	2901
USA	0.76	36.52	0.37	18.58	10.54%	21225
UK	1.21	20.40	0.46	9.07	12.22%	5758
France	1.28	10.86	0.46	4.23	13.73%	1054
Germany	0.71	6.78	0.13	1.30	4.69%	1245
Japan	2.23	11.04	2.85	11.83	5.86%	6855
Common	0.74	39.71	0.30	18.92	9.42%	25447
UK	1.21	20.40	0.46	9.07	12.22%	5758
Code	1.29	19.10	0.47	7.04	5.70%	9154

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability across variables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The four common-law countries are listed first. The common law country category excludes the UK.

Variables: *R* denotes holding-period security returns including dividends over the fiscal year; the proxy for bad news $RD = 1$ if $R < 0$ and $= 0$ otherwise; *NI* denotes annual earnings per share before extraordinary items deflated by beginning of period price; *DNI* denotes a firm's first difference over time in *NI*; *N* denotes number of firm/year observations.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm/year observations for each country. Intercepts are not reported.

Table 3
Contemporaneous Association between Dividends and Returns

<i>Panel A:</i>										
$DIV = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$										
	β_2	$t(\beta_2)$	β_3	$t(\beta_3)$	Adj. R^2	N	Ratio			
Australia	0.00	-1.85	0.06	8.67	11.10%	1321	0.82			
Canada	-0.01	-9.06	0.04	11.26	7.26%	2901	2.34			
USA	-0.02	-26.54	0.05	34.24	9.15%	21225	1.60			
UK	0.01	8.69	0.02	9.25	9.71%	5758	1.42			
France	0.01	4.22	0.02	3.90	8.81%	1054	1.43			
Germany	0.02	6.66	0.01	0.99	9.59%	1245	0.56			
Japan	0.00	2.28	0.01	9.72	5.45%	6855	0.78			
Common	-0.01	-25.53	0.05	35.67	8.43%	25447	1.70			
UK	0.01	8.69	0.02	9.25	9.71%	5758	1.42			
Code	0.01	10.08	0.01	3.78	5.45%	9154	0.96			
<i>Panel B:</i>										
$DIV = \beta_0 + \beta_1 R + \varepsilon (R \geq 0)$						$DIV = \beta_0 + \beta_1 R + \varepsilon (R < 0)$				
	β_1	Adj. R^2	N	Ratio	Vuong	β_1	Adj. R^2	N	Ratio	Vuong
Australia	0.00	0.22%	813	-0.36	0.65	0.06	18.29%	508	0.55	2.41
Canada	-0.01	3.84%	1688	-0.02	5.22	0.03	7.92%	1213	2.26	-3.69
USA	-0.02	4.39%	12721	0.18	9.67	0.04	10.38%	8504	1.12	-1.48
UK	0.01	1.86%	3612	1.73	-1.74	0.03	9.28%	2146	1.24	-1.48
France	0.01	2.18%	611	4.12	-2.46	0.03	9.48%	443	0.49	1.88
Germany	0.02	4.78%	712	0.50	1.43	0.02	3.77%	533	1.31	-0.6
Japan	0.00	0.10%	3141	11.00	-2.74	0.01	4.46%	3714	0.19	6.06
Common	-0.01	3.41%	15222	0.13	8.71	0.04	10.25%	10225	1.19	-2.45
UK	0.01	1.86%	3612	1.73	-1.74	0.03	9.28%	2146	1.24	-1.48
Code	0.01	1.53%	4464	2.17	-2.87	0.01	2.69%	4690	0.62	1.89
<i>Panel C:</i>										
$R = \beta_0 + \beta_1 DIV + \varepsilon$										
	β_1	$t(\beta_1)$	Adj. R^2	N	Ratio	Vuong				
Australia	2.85	6.55	3.08%	1321	0.93	0.17				
Canada	0.48	1.34	0.03%	2901	224.00	-5.30				
USA	1.05	8.45	0.33%	21225	27.55	-18.50				
UK	5.57	22.65	8.17%	5758	1.34	-2.74				
France	6.25	9.38	7.63%	1054	1.62	-1.90				
Germany	5.78	11.57	9.66%	1245	0.48	3.06				
Japan	16.23	16.61	3.85%	6855	1.03	-0.18				
Common	1.19	10.64	0.44%	25447	18.52	-17.88				
UK	5.57	22.65	8.17%	5758	1.34	-2.74				
Code	6.85	22.53	5.25%	9154	0.99	0.07				

<i>Panel D:</i>	$R = \beta_0 + \beta_1 DIV + \beta_2 \Delta DIV + \varepsilon$							
	β_1	$t(\beta_1)$	β_2	$t(\beta_2)$	Adj. R^2	N	Ratio	Vuong
Australia	1.47	3.11	4.36	6.82	6.31%	1321	0.53	1.67
Canada	-0.07	-0.19	3.97	6.43	1.40%	2901	5.71	-4.63
USA	0.90	7.28	4.78	11.41	0.93%	21225	11.33	-19.34
UK	4.30	17.12	7.29	17.19	12.64%	5758	0.97	0.35
France	5.46	7.45	3.40	2.56	8.11%	1054	1.69	-2.10
Germany	5.17	9.47	2.40	2.76	10.14%	1245	0.46	3.13
Japan	15.08	15.26	14.89	6.86	4.50%	6855	1.30	-2.05
Common	0.87	7.73	4.50	15.82	1.41%	25447	6.68	-17.00
UK	4.30	17.12	7.29	17.19	12.64%	5758	0.97	0.35
Code	6.24	19.22	3.52	5.20	5.51%	9154	1.03	-0.29

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability across variables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The four common-law countries are listed first. The common law country category excludes the UK.

Variables: R denotes holding-period security returns including dividends over the fiscal year; the proxy for bad news $RD = 1$ if $R < 0$ and $= 0$ otherwise; DIV denotes annual dividends per share deflated by beginning of period price; ΔDIV denotes a firm's first difference over time in DIV ; N denotes number of firm/year observations; $RATIO$ denotes the ratio of the R^2 s of the equivalent earnings (table 2) and dividends (this table) regressions.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm/year observations for each country. Intercepts are not reported.

Table 4
Contemporaneous Association between Cashflows and Returns

<i>Panel A:</i>										
	$OCF = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$									
	β_2	$t(\beta_2)$	β_3	$t(\beta_3)$	Adj. R^2	N	Ratio			
Australia	0.07	2.74	0.16	2.11	2.39%	1321	3.80			
Canada	0.02	1.07	0.25	5.28	3.57%	2901	4.75			
USA	0.04	7.81	0.10	7.39	3.07%	21225	4.78			
UK	0.11	11.40	-0.02	-0.87	3.74%	5758	3.69			
France	0.19	4.78	-0.16	-1.39	3.33%	1054	3.79			
Germany	0.16	4.28	-0.04	-0.37	2.56%	1245	2.10			
Japan	0.01	1.17	0.08	7.18	1.70%	6855	2.49			
Common	0.04	8.04	0.12	9.19	3.00%	25447	4.79			
UK	0.11	11.40	-0.02	-0.87	3.74%	5758	3.69			
Code	0.08	8.92	0.00	-0.04	2.24%	9154	2.34			
<i>Panel B:</i>										
	$OCF = \beta_0 + \beta_1 R + \varepsilon (R \geq 0)$					$OCF = \beta_0 + \beta_1 R + \varepsilon (R < 0)$				
	β_1	Adj. R^2	N	Ratio	Vuong	β_1	Adj. R^2	N	Ratio	Vuong
Australia	0.07	0.89%	813	0.25	0.92	0.23	1.42%	508	12.88	-3.38
Canada	0.02	0.01%	1688	384.00	0.42	0.27	2.81%	1213	2.82	-6.23
USA	0.04	0.47%	12721	9.34	-1.51	0.14	1.42%	8504	7.31	-12.88
UK	0.11	3.40%	3612	0.55	0.18	0.09	0.67%	2146	13.85	-6.93
France	0.19	2.87%	611	0.76	-2.12	0.03	-0.20%	443	-47.40	-1.67
Germany	0.16	2.15%	712	2.22	-0.16	0.13	0.27%	533	13.96	-2.18
Japan	0.01	0.01%	3141	10.00	-2.79	0.09	2.15%	3714	2.07	2.61
Common	0.04	0.42%	15222	8.12	-0.13	0.16	1.59%	10225	6.45	-14.62
UK	0.11	3.40%	3612	0.55	0.18	0.09	0.67%	2146	13.85	-6.93
Code	0.08	1.27%	4464	1.20	-3.10	0.08	0.49%	4690	5.49	-2.18
<i>Panel C:</i>										
	$R = \beta_0 + \beta_1 OCF + \varepsilon$									
	β_1	$t(\beta_1)$	Adj. R^2	N	Ratio	Vuong				
Australia	0.23	5.46	2.14%	1321	1.33	-0.55				
Canada	0.23	7.86	2.05%	2901	3.28	-4.07				
USA	0.32	23.63	2.56%	21225	3.55	-13.59				
UK	0.39	14.87	3.68%	5758	2.98	-6.54				
France	0.22	6.08	3.31%	1054	3.73	-3.73				
Germany	0.20	5.93	2.67%	1245	1.74	-1.25				
Japan	0.43	8.30	0.98%	6855	4.03	-5.74				
Common	0.29	25.11	2.41%	25447	3.38	-13.30				
UK	0.39	14.87	3.68%	5758	2.98	-6.54				
Code	0.28	14.59	2.26%	9154	2.30	-4.72				

<i>Panel D:</i>	$R = \beta_0 + \beta_1 OCF + \beta_2 \Delta OCF + \varepsilon$							
	β_1	$t(\beta_1)$	β_2	$t(\beta_2)$	<i>Adj. R</i> ²	<i>N</i>	<i>Ratio</i>	<i>Vuong</i>
Australia	0.24	4.62	-0.01	-0.32	2.07%	1321	1.63	-0.95
Canada	0.24	6.94	-0.01	-0.33	2.02%	2901	3.96	-4.73
USA	0.36	22.03	-0.05	-4.13	2.63%	21225	4.01	-16.00
UK	0.54	16.87	-0.18	-8.07	4.75%	5758	2.57	-6.43
France	0.28	6.23	-0.07	-2.26	3.68%	1054	3.73	-4.03
Germany	0.29	7.48	-0.16	-4.53	4.18%	1245	1.12	-0.29
Japan	0.76	12.44	-0.48	-9.97	2.38%	6855	2.46	-5.25
Common	0.32	22.98	-0.04	-3.53	2.46%	25447	3.83	-15.39
UK	0.54	16.87	-0.18	-8.07	4.75%	5758	2.57	-6.43
Code	0.40	17.21	-0.17	-9.04	3.11%	9154	1.83	-3.94

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability across variables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The four common-law countries are listed first. The common law country category excludes the UK.

Variables: *R* denotes holding-period security returns including dividends over the fiscal year; the proxy for bad news $RD = 1$ if $R < 0$ and $= 0$ otherwise; *OCF* denotes annual operating cashflow per share deflated by beginning of period price, where operating cashflow is defined as earnings plus decrease in non-cash current assets plus increase in non-debt current liabilities plus depreciation.; ΔOCF denotes a firm's first difference over time in *OCF*; *N* denotes number of firm/year observations; *RATIO* denotes the ratio of the R^2 s of the equivalent earnings (table 2) and cashflow (this table) regressions.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm/year observations for each country. Intercepts are not reported.

Table 5

Comparative Asymmetry in the Contemporaneous Returns-Earnings Relation:
Pooled Regressions with Individual-country Effects

$$Y = \beta_0 + \sum_j \beta_{0j} \cdot CD_j + \beta_1 \cdot RD + \sum_j \beta_{1j} \cdot RD \cdot CD_j + \beta_2 \cdot R + \sum_j \beta_{2j} \cdot R \cdot CD_j + \beta_3 \cdot R \cdot RD + \sum_j \beta_{3j} \cdot R \cdot RD \cdot CD_j$$

Model	(1)	(2)	(3)	(4)	(5)					
Y:	NI	NI	NI/R _F	NI2yr	NI					
Control:		\bar{R}_j			SIC					
	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat	Coeff	t-stat
Panel A: Country Dummies Model:										
Earnings "Good News" Sensitivity										
β_2 (Return)	0.03	9.88	0.01	3.96	0.36	9.88	-0.05	-84.24	0.04	10.25
β_{2j} (Return * Cntry Dums):										
Australia	-0.03	-3.95	-0.04	-3.17	-0.48	-4.24	-0.02	-3.02	-0.04	-4.15
Canada	-0.03	-3.80	-0.01	-1.63	-0.32	-3.54	0.06	10.03	-0.02	-3.28
UK	0.02	2.40	0.03	3.74	0.14	1.57	0.09	2.92	0.01	1.57
France	0.05	4.16	0.06	3.48	0.65	3.86	0.55	21.28	0.05	3.69
Germany	0.03	1.57	0.04	1.81	0.55	2.54	0.21	19.32	0.02	1.42
Japan	-0.02	-2.64	0.00	-0.51	-0.17	-1.69	0.07	6.82	-0.02	-3.12
F-stat for	11.35		7.73		10.28		164.13		9.75	
Cntry Return	p<.01		p<.01		p<.01		p<.01		p<.01	
Dums										
Incremental "Bad News" Sensitivity										
β_3 (RDum* Return)	0.29	39.21	0.29	47.25	3.66	38.11	0.43	26.13	0.29	31.04
β_{3j} (RDum* Ret*Cntry Dums):										
Australia	0.07	2.64	0.01	0.37	0.19	0.50	0.12	1.85	0.08	2.89
Canada	0.11	5.28	0.05	2.92	0.45	1.70	0.12	2.43	0.11	5.25
UK	-0.14	-8.26	-0.17	-11.11	-2.05	-9.10	-0.24	-2.47	-0.14	-7.96
France	-0.22	-5.81	-0.14	-4.40	-2.87	-5.99	-0.68	-7.40	-0.21	-5.54
Germany	-0.19	-4.41	-0.24	-5.74	-2.49	-4.55	-0.31	-7.48	-0.20	-4.73
Japan	-0.29	-15.74	-0.29	-16.80	-3.43	-14.90	-0.42	-10.70	-0.28	-15.16
F-stat: Cntry	67.44		72.74		54.55		37.81		63.43	
Negative Ret	p<.01		p<.01		p<.01		p<.01		p<.01	
Dums										
Regression:										
N	40,359		40,359		39,240		33,082		40,359	
Adj. R ²	15.39%		16.82%		13.83%		22.50%		16.17%	
F	272.98		303.32		234.19		410.56		117.16	

Panel B: Country Category Dummies

Model:

Earnings "Good News" Sensitivity

β_2 (Return)	0.02	8.36	0.01	2.82	0.26	8.22	-0.05	-83.70	0.03	8.99
β_{2j} (Return* Cntry Cat Dums):										
UK	0.02	3.52	0.04	4.35	0.23	2.75	0.20	19.12	0.02	2.58
Code	0.01	2.37	0.02	2.87	0.24	2.99	0.15	15.26	0.01	1.53
F-stat for Cntry Cat Return Dums		7.94		12.24		7.20		297.97		3.98
		$p < .01$		$p < .01$		$p < .01$		$p < .01$		$p < .01$

Incremental "Bad News" Sensitivity

β_3 (RDum* Return)	0.31	46.23	0.30	53.64	3.76	43.28	0.46	30.27	0.31	36.68
β_{3j} (RDum* Ret*Cntry Cat Dums):										
UK	-0.16	-9.50	-0.17	-11.72	-2.14	-9.69	-0.34	-8.14	-0.16	-9.25
Code	-0.30	-19.00	-0.28	-18.82	-3.47	-17.41	-0.48	-13.65	-0.29	-18.31
F-stat: Cntry Cat Negative Ret Dums		200.92		218.66		174.82		111.56		187.17
		$p < .01$		$p < .01$		$p < .01$		$p < .01$		$p < .01$

Regression:

N	40,359	40,359	39,240	33,082	40,359
Adj. R ²	14.87%	16.23%	13.50%	21.32%	15.67%
F	642.07	711.90	557.84	938.83	148.07

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability with results in previous tables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The common-law countries are listed first. The sample sizes for model (3) that uses NI/R_F as the dependent variable and model (4) that uses only the two-year NI values are 39,240 and 33,082 respectively.

Variables and Controls: R denotes holding-period security return over the fiscal year; NI denotes annual earnings per share before extraordinary items deflated by beginning of period price; NI/R_F is earnings deflated by the long-term interest rate; NI_{2yr} is the sum of net income over the two years t and $t+1$; the proxy for bad news $RD = 1$ if $R < 0$ and $= 0$ otherwise; the country identifier $CD_j = 1$ for firm/years in country j and $= 0$ otherwise. USA is the "base country" with $CD_j = 0 \forall j$. In model (2) the regression is controlled for

mean annual country return by scaling NI and by redefining RD; in model (5) the regression is controlled for the 10 most prevalent 2-digit SIC code by creating the appropriate dummy variables based on these SIC codes.

Interest rates: R_F is measured as the longest term bond yield available in the IMF's International Financial Statistics, for the calendar year most coincident with the firm's fiscal year [-11,0]. Rates for the individual countries are for: treasury bonds 2years (Australia); govt. bond yield > 10 years (Canada); govt. bond yield (Germany); govt. bond yield, moyens (France); long term govt. bond yield (UK); govt. bond yield (Japan); govt. bond yield 10 year (USA).

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm/year observations for all countries. Results are not reported for the intercept, the negative return intercept and their respective country dummies. The country category models use the common law countries of Australia, Canada and the US as the base category; dummies are used for (1) the UK and (2) the code law countries of France, Germany and Japan.

Table 6
Contemporaneous Association between Earnings (Dividends, Cashflows) and
Returns: Sub-period Analysis

	1985-90						1991-95					
	β_2	$t(\beta_2)$	β_3	$t(\beta_3)$	Adj. R^2	N	β_2	$t(\beta_2)$	β_3	$t(\beta_3)$	Adj. R^2	N
Panel A:	$NI = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$											
Australia	0.02	1.04	0.26	5.31	13.04%	500	-0.02	-0.99	0.48	7.55	9.40%	821
Canada	0.00	-0.23	0.38	12.94	19.75%	1594	0.01	1.30	0.44	11.63	15.83%	1307
USA	0.03	6.14	0.28	26.79	17.28%	11978	0.03	6.54	0.33	22.14	12.85%	9247
UK	0.04	7.49	0.09	6.92	13.67%	2682	0.06	9.02	0.19	11.64	17.42%	3076
France	0.09	5.96	0.04	1.09	19.06%	466	0.06	3.15	0.22	4.24	10.47%	588
Germany	0.05	3.86	0.04	0.97	6.07%	488	0.04	1.95	0.19	4.08	5.32%	757
Japan	0.01	5.21	0.02	4.96	6.97%	3460	0.00	0.16	0.01	1.56	1.02%	3395
Common	0.02	5.64	0.29	30.12	17.33%	14071	0.02	5.32	0.36	26.22	12.66%	11374
UK	0.04	7.49	0.09	6.92	13.67%	2682	0.06	9.02	0.19	11.64	17.42%	3076
Code	0.03	10.97	0.00	0.42	5.26%	4413	0.05	8.05	0.01	1.38	4.37%	4739
Panel B:	$DIV = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$											
Australia	0.00	-0.36	0.06	5.09	14.36%	500	-0.01	-1.89	0.07	7.30	10.26%	821
Canada	-0.01	-5.37	0.04	8.12	7.44%	1594	-0.01	-6.60	0.05	7.69	6.97%	1307
USA	-0.02	-18.02	0.05	25.51	9.77%	11978	-0.01	-19.45	0.05	23.09	8.90%	9247
UK	0.00	2.40	0.03	7.80	8.07%	2682	0.01	8.64	0.02	5.99	11.32%	3076
France	0.01	4.03	0.02	2.02	13.70%	466	0.01	1.42	0.04	4.24	6.68%	588
Germany	0.02	5.40	0.01	1.00	10.70%	488	0.01	3.69	0.01	1.34	8.22%	757
Japan	0.00	6.61	0.00	5.16	9.19%	3460	0.00	-0.61	0.01	7.81	7.23%	3395
Common	-0.01	-17.25	0.05	26.29	9.15%	14071	-0.01	-18.40	0.05	24.33	7.97%	11374
UK	0.00	2.40	0.03	7.80	8.07%	2682	0.01	8.64	0.02	5.99	11.32%	3076
Code	0.01	9.31	0.00	-0.51	4.22%	4413	0.01	9.99	0.00	1.88	9.71%	4739
Panel C:	$OCF = \beta_0 + \beta_1 RD + \beta_2 R + \beta_3 R*RD + \varepsilon$											
Australia	0.01	0.21	0.14	1.31	0.97%	500	0.09	3.02	0.23	2.07	3.33%	821
Canada	-0.02	-0.73	0.29	4.62	3.44%	1594	0.04	2.07	0.22	3.03	3.93%	1307
USA	0.03	3.82	0.09	5.13	2.52%	11978	0.05	7.15	0.13	5.99	3.84%	9247
UK	0.11	7.24	-0.02	-0.55	3.09%	2682	0.12	9.05	-0.03	-0.78	4.47%	3076
France	0.20	3.42	-0.15	-0.96	2.57%	466	0.23	3.95	-0.17	-1.00	4.34%	588
Germany	0.12	2.40	0.12	0.87	2.44%	488	0.25	4.08	-0.19	-1.40	3.03%	757
Japan	0.03	4.99	0.03	1.54	1.85%	3460	-0.01	-0.75	0.12	6.72	3.83%	3395
Common	0.02	2.87	0.12	6.88	2.50%	14071	0.05	8.13	0.15	6.98	3.73%	11374
UK	0.11	7.24	-0.02	-0.55	3.09%	2682	0.12	9.05	-0.03	-0.78	4.47%	3076
Code	0.08	7.30	-0.07	-2.34	1.56%	4413	0.21	11.49	-0.08	-2.39	6.26%	4739

Sample: 40,359 firm/years selected from the Global Vantage Industrial/Commercial and Issue files over 1985-95, using the following procedure. First, for each variable (see below) the two extreme percentiles of firm/year observations are eliminated. Second, all firm/years with missing values for one or more variables are eliminated, to facilitate comparability across variables. Third, all firm/years from countries with less than 1,000 observations are eliminated, leaving seven countries represented. The four common-law countries are listed first. The common law country category excludes the UK.

Variables: R denotes holding-period security returns including dividends over the fiscal year; the proxy for bad news $RD = 1$ if $R < 0$ and $= 0$ otherwise; NI denotes annual earnings per share before extraordinary items deflated by beginning of period price; ΔNI denotes a firm's first difference over time in NI; N denotes number of firm/year observations.

Analysis: Statistics are from regressions using the pooled cross-section and time-series of firm/year observations for each country. Intercepts are not reported.

Figure 1

International Differences in Earnings Timeliness

*R-squares from Individual Country Regressions of Earnings on
(a) Annual Return and (b) Annual Return times Negative Return Dummy.*

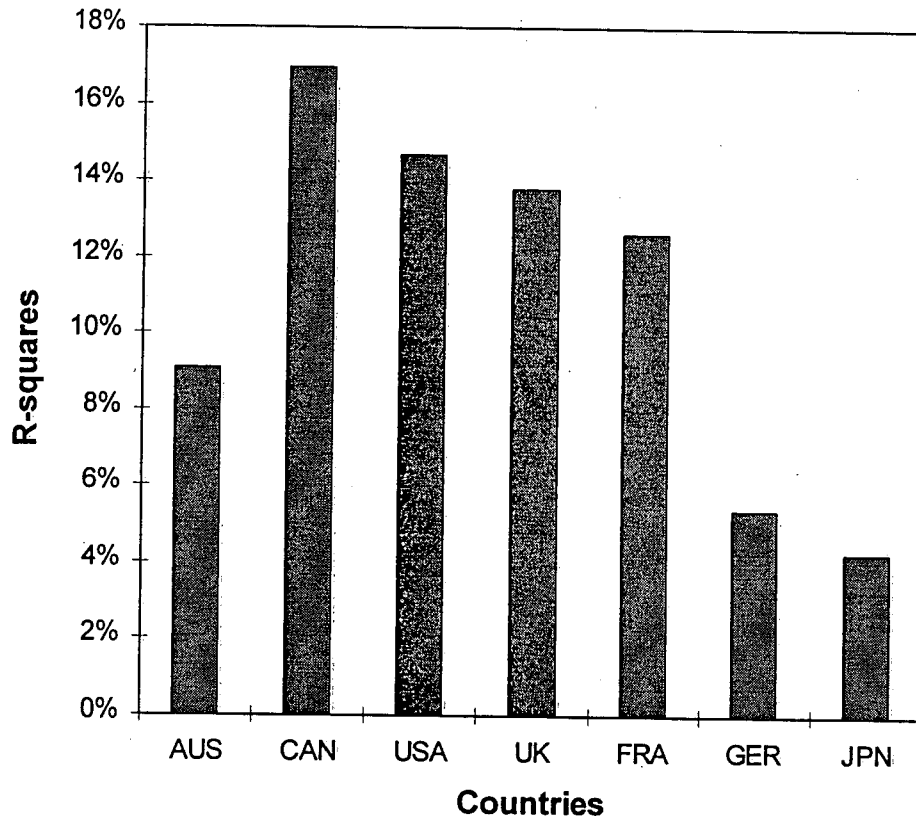


Figure 2

*International Differences in
Asymmetry in Earnings Response to Good and Bad News*

*Sensitivity to Positive and Negative Returns from Pooled Regression of Earnings on
(a) Annual Return and (b) Annual Return times Negative Return Dummy.*

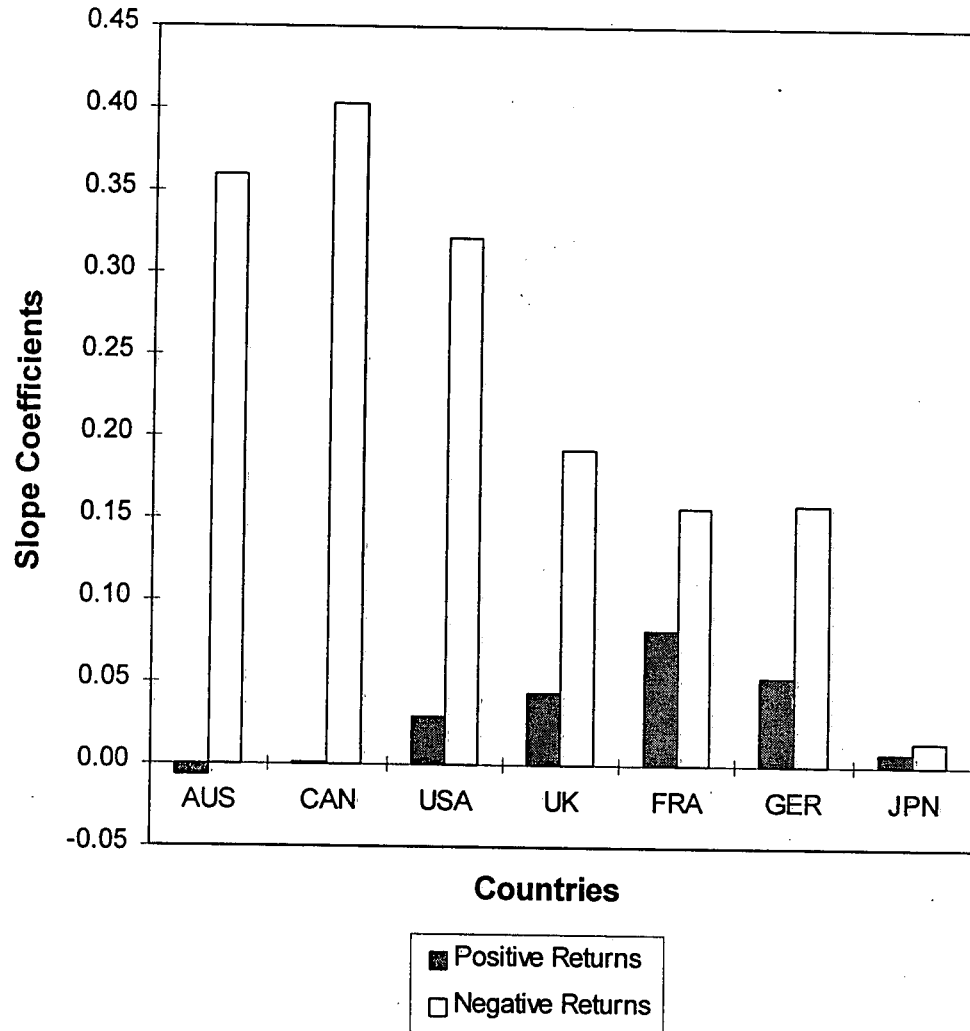


Figure 3

Cash Flows, Dividends and Earnings Internationally

Ratio of R-squares: Earnings vs. Dividends and Earnings vs. Cash Flows.

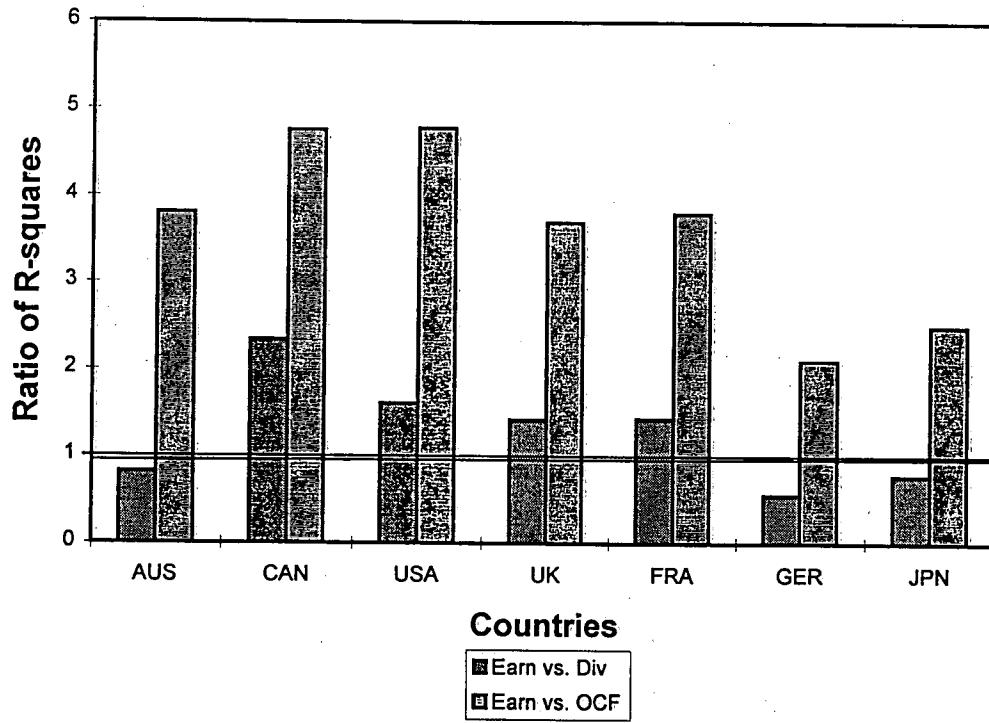


Figure 4

*Bias in Estimating International Differences in Earnings Timeliness
when Ignoring Different Asymmetric Conservatism*

*R-squares from Pooled Regressions of Earnings on
(1) Annual Return and Annual Return times Negative Return Dummy
versus (2) Annual Return Alone.*

