Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure

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Infrastructure Requirements for an Economically Efficient System of Public Financial Reporting and Disclosure

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This paper sketches the principal infrastructure requirements for an economically efficient system of public financial reporting (audited accounting information) and disclosure (non-accounting information). Financial reporting and disclosure are complementary means of ameliorating information asymmetry between managers and parties contracting with their firm, including shareholders, lenders, suppliers, customers, and employees. The efficiency of a country’s financial reporting and disclosure system therefore is crucial to its development of economically efficient public corporations and public securities markets as well as to the development of its economy.¹

A skeptical view of making sudden changes to reporting and disclosure systems is adopted, due to the economic, political, legal, and institutional complexity involved in effecting actual change. A particularly skeptical view is reserved for simply mandating new accounting standards for public financial reporting. This amounts to little more than “window dressing,” unless it is accompanied by wholesale revision of the infrastructure that determines the financial reporting incentives of managers and auditors. If forced to nominate a single place from which to

¹ I wish to thank Sudipta Basu, Gilles Hilary, and Christian Leuz for valuable comments on a previous draft.

¹ See Baumol (1965); Fama (1970); Black (2000).
start changing a country’s system of public financial reporting and disclosure, I would advocate liberalizing the rules governing stockholder and lender litigation. The risk of litigation motivates managers and auditors alike to increase transparency and, in particular, to disclose bad decisions and report losses in a timely fashion. Many other institutional features—including the accounting standards actually implemented by managers and the quality of financial reporting and disclosure actually achieved—are determined endogenously by the incentives that managers and auditors encounter. An effective system of private litigation does more to improve actual practice than fiat that is exogenously imposed by governments.

An economically efficient public financial reporting and disclosure system requires the following infrastructure: training an audit profession of adequate numbers, professional ability, and independence from managers to certify reliably the quality of financial statements; separating as far as possible the systems of public financial reporting and corporate income taxation, so that tax objectives do not distort financial information; reforming the structure of corporate ownership and governance to achieve an open-market process with a genuine demand for reliable public information; establishing a system for setting and maintaining high-quality, independent accounting standards; and, perhaps most important of all, establishing an effective, independent legal system for detecting and penalizing fraud, manipulation, and failure to comply with standards of accounting and other disclosure, including provision for private litigation by stockholders and lenders who are adversely affected by deficient financial reporting and disclosure. The scope of these requirements is unavoidably wide, because the accounting infrastructure complements the overall economic, legal, and political infrastructure in all countries.

These infrastructure requirements collectively comprise the important features of a common-law disclosure system. This is not surprising, because the topic of this paper—sketching an economically efficient public financial reporting and disclosure system—presumes that information asymmetry (between corporate managers and information users) is to be resolved by public rather than private communication. Arm’s-length public disclosure plays a considerably more important economic role in common-law countries than elsewhere, so the infrastructure required to support high-quality public disclosure is more developed in common-law countries such as the United States and the United Kingdom. This does not necessarily mean that it is optimal for other countries to move to a
common-law system or that it is politically or institutionally feasible for them to do so. Nevertheless, current interest in the topic of public reporting and disclosure arises in part from the attempts (or professed attempts) of a variety of countries and corporations to move closer to the common-law model of public disclosure.

The first section of the paper describes the criteria for economically efficient accounting and non-accounting disclosure. This involves a survey of the economic and political roles of firms’ published financial statements and their relation with non-accounting disclosure. The accounting literature offers some guidance in this task, but it is severely limited by its almost exclusive focus on share markets (and, even then, on some narrow aspects of the use of financial statements and other disclosures in share markets). Non-share-market demands for accounting substantively influence the characteristics of an optimal accounting system.

The second, third, and fourth sections describe several international case studies—starting with nations that were industrialized by the early twentieth century and finishing with China—whose experience sheds light on the essential ingredients of an efficient system of public financial reporting and disclosure. The second section describes the principal characteristics of infrastructure in common-law countries that lead to generally higher-quality financial reporting and disclosure than in code-law countries. The third section describes a case study of four East Asian countries that have a similarly low endogenous demand for high-quality financial reporting and disclosure, but that implanted accounting rules developed in overseas common-law economies without making widespread complementary changes in infrastructure. This experiment achieved no appreciable effect on the quality of financial reporting in these countries. One conclusion is that mandating the international accounting standards (IAS) promulgated by the London-based International Accounting Standards Committee (IASC), without altering the incentives facing financial statement preparers (managers and auditors), is at best a superficial exercise. The fourth section describes the Chinese experience with IAS, which is very similar. This section summarizes the complex, complementary changes in infrastructure required to change actual financial reporting practice in China, as

2. The rule-making function of IASC has been taken over by a newly constituted International Accounting Standards Board, modeled on the U.S. Financial Accounting Standards Board.
distinct from making window dressing changes to accounting standards. A concluding section offers suggestions for further research.

The extent of infrastructure reform required to improve financial reporting and disclosure in practice is so comprehensive that a healthy dose of skepticism is in order at the outset. Actual practice is a function of corporate governance, corporate ownership and control, political factors, the legal system, the training and independence of auditors, the relation between financial reporting and taxation, as well as accounting standards themselves. Complementarity among these institutional variables severely limits the effectiveness of piecemeal change. Furthermore, these complementary infrastructure variables all are subject to at least some degree of political influence, which places further restrictions on change. Changing one element alone—notably, the system for setting accounting standards or, worse, just the accounting standards themselves—is likely to be a futile exercise, unless it is accompanied by a wide range of complementary changes in infrastructure. Improving the economic efficiency of public financial reporting and disclosure therefore is a difficult, complex process.

What Are the Criteria? Observations on the Economic and Political Roles of Published Accounting Financial Statements and Corporate Disclosure

The accounting literature provides some limited guidance on establishing criteria for an economically efficient system of public financial reporting and disclosure. This section summarizes what is known about the economic and political roles of the audited accounting information contained in published financial statements and the relation between accounting and non-accounting disclosures. Although there are substantial underlying similarities in these roles internationally, economic and political factors differ among countries and regions and exert a compelling influence on infrastructure policy analysis.

Efficient Contracting with the Corporation: Heterogeneous Demand for Financial Statement Information

Following Coase, a corporation can be viewed as a contracting intermediary, inserted between factor owners and consumers, to minimize con-
tracting costs. All parties contracting with the firm have a specific (in the sense given by Alchian) investment in it, equal to at least their contracting costs. It follows that all parties contracting or contemplating contracting with the firm demand information about the firm’s ability to meet its contractual obligations. Firms therefore agree to incur the costs of supplying information, and in return they receive better terms of trade from factor owners and customers. This contracting structure of the firm creates the fundamental demand for financial reporting and disclosure by all contracting parties and provides the broadest criterion for an economically efficient public financial reporting and disclosure system: efficient contracting with the firm. Finer criteria are developed below.

The parties contracting with the typical firm are varied, so it should not be surprising that published financial statements and other corporate disclosures play important economic roles in short- and long-term debt markets, in equity markets, in limiting the exposure of shareholders and lenders to bribery, fraud, and asset expropriation (by influential investors, managers, and other employees), in the evaluation and compensation of management, in labor markets, in informing major customers and suppliers, and in a variety of economic contexts. Debt and equity markets use information from financial statements for both primary transactions (new loans, initial public offerings of equity, and seasoned equity offerings by already public companies) and secondary transactions (enforcement of loan agreements and sales of issued debt and equity securities on the financial markets). Financial statement information also is used internationally in levying corporate income taxation and for a variety of political purposes, including regulation. In addition, the publication of independently audited financial information exerts a strong influence on the quality—and hence the usefulness—of unaudited disclosures by corporate managers.

3. Coase (1937). Conversely, the firm would have no economic role without contracting costs: factor owners and consumers would contract directly, without intermediation. Contracting costs include the costs of search, negotiation, execution, bonding, monitoring, and enforcement, plus the residual loss from opportunities forgone due to contracting costs (see Jensen and Meckling 1976).


5. Origination of the literature on the use of accounting information in a variety of economic and political contexts generally is attributed to Watts (1977) and Watts and Zimmerman (1978, 1986). An alternative area of research, surveyed in Owen and others (2000), is social and environmental auditing.
Consequently, published financial statements are supplied to meet heterogeneous demand. These heterogeneous uses affect the properties of the optimal accounting system and of the optimal accounting information supplied by it. Some of these effects are described below. Any analysis of accounting and disclosure infrastructure requirements must pay attention to heterogeneous sources of demand and cannot be restricted to the equity market.

Nevertheless, the use of financial statement information in share markets is perhaps the most thoroughly researched area in accounting. The literature’s focus on share markets can be explained in part by the economic importance of equity capital markets and by the exceptional sensitivity of share prices to financial disclosures (shares being the residual claims on a corporation’s assets). However, the emphasis on share markets also is due in part to the literature’s origins in North America, where equity markets are well developed even by the standards of most Western economies, and in large part to the relatively low-cost availability of comprehensive research-quality databases for share markets.

The strand of empirical research literature in accounting known as value relevance studies illustrates the folly of ignoring heterogeneous demand when establishing the criteria for an efficient accounting infrastructure. This literature measures the quality of accounting entirely in terms of the correlation between financial statement variables (typically, earnings and book values) and firms’ stock prices or returns, thereby ignoring all non-share-market demands for accounting. One of the limitations of value relevance is that it ignores a variety of uses of financial statement information, including uses in debt markets, corporate governance, and efforts to enhance the quality of non-accounting disclosure, that are economically important and induce accountants to supply information that deviates sys-

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6. In the parlance of U.S. standard setters, accountants supply general-purpose financial statements.
8. Origination of the literature on the relation between accounting information and share prices generally is attributed to Ball and Brown (1968), who use the database of stocks on the New York Stock Exchange that was newly constructed by the Center for Research in Security Prices at the time of writing.
9. Early versions of this criterion abounded in the so-called “golden era” of accounting research, ranging from Canning (1929) through Chambers (1966). This populist criterion was resurrected by Lev (1989). Holthausen and Watts (2001) and Barth, Beaver, and Landsman (2001) debate the value relevance criterion.
tematically from what is implied by the simple value relevance criterion. These uses are described in subsequent subsections, which also discuss how the relative importance of particular uses of financial reports depends on a country’s political and legal system and on its stage of economic development. These subsections outline a framework for assessing the efficiency of accounting reporting and non-accounting disclosure.

First Criterion for Published Accounting Information: Independence from Managers

The first criterion for an economically efficient system is that published financial information must be based on independently observable outcomes, not on the stated beliefs of managers. Disclosure includes both accounting and non-accounting information. Accounting information is contained in the audited financial statements (typically, income statements, balance sheets, and cash flow statements). Non-accounting information is contained in disclosures by managers that are neither audited nor contained in the formal financial statements. The distinction between these categories of disclosure, and the subtle but important interaction between them, has been lost on some observers, but it is crucial.

At its most fundamental level, the economic role of independent observation of the actual, observable outcomes of managers’ actions (that is, “accounting” for outcomes) is to solve an agency problem.10 Truthful information disclosure is beneficial because it reduces the risk of lenders, stockholders, and other parties contracting with the firm. However, because managers have a personal interest in the information disclosed, they have incentives to “manage” (be untruthful in) their disclosures. Managers’ interest in disclosure derives from its effect on their promotion prospects, prestige, reputation, perks, bonuses, stock, and stock options.

A solution to this agency problem that emerged at the genesis of public corporations is to agree to an independent audit of public information.11 Managers thereby agree to limit the extent of their manipulation of financial information by contracting to allow an independent, professional accounting firm to audit (monitor) them for a fee. In order to certify that published financial information is largely independent of manipulation

10. There are many formulations of the agency setting. Lambert (2001) provides a survey.
by managers, the auditor must be able to determine that the information is based on independently observable outcomes, a property known by accountants as verifiability. That is, the auditor must be able to observe the basis for the numbers in the financial statements. Independent observables include observable assets (cash, receivables, plant, and equipment), liabilities (payables, pension obligations), periodic cash flows and periodic earnings (based on cash flows and independently observable predictors of cash flows, such as credit sales that are highly likely to generate cash and prepayments of expenses that avoid future expenditures of cash).12 Agreeing to an independent audit makes the manager's employment contract more valuable.13 It also makes the corporation's financial disclosures more credible. This, in turn, makes contracting with the corporation less risky to other parties, thereby reducing its cost of debt and equity capital and allowing it to obtain better terms in dealing with managers, suppliers, employees, customers, and others.

Enforcing a separation between two different types of disclosure about firms' cash flows induces more-truthful information disclosure. One type of disclosure is audited by an independent, professional party. Auditability, in turn, requires that the disclosure be based on independently observable facts, not managers' opinions or plans. Consequently, independently audited accounting information is based on independently observable cash flow outcomes. This is embodied in the revenue recognition rule, under which accounting income is a measure of value added, calculated as the difference between revenues from sales that actually have been made to independent parties (provided cash collectability is nearly certain) and associated factor costs from transactions actually made with independent parties (that is, not opportunity costs). The other type of disclosure about cash flows is made by managers who (as a consequence of their employment) possess independently unobservable information about future cash flows. For example, they have information about the firm's product market

12. An exception to this separation rule is the accounting standards on loss recognition, which require companies to report expectational information when there is a material reduction in an investment's expected future cash flows. These are known as asset impairment rules. Basing reported accounting income on observable delivered sales is known as the revenue recognition principle. The property of independent observability also is known as verifiability or auditability. Its prominence in accounting is a further reason to avoid value relevance—simple correlation with stock prices or stock returns—as a criterion in accounting.

prospects, cost estimates, competitive assessments, strategies, and planned acquisitions. Managers’ disclosures therefore state or imply expectational information, such as beliefs, plans, and forecasts. A disclosure system that enforces this separation between independently observable (auditible) and unobservable (expectational) information generates two types of efficiency: contracting and information efficiency.

Separation provides a direct gain in contracting efficiency. This arises because the audited published financial statements supply users with contractible variables. Lenders can contract to restrict a firm’s leverage ratio, knowing that accountants will report the amounts of debt and total assets independently of the interests of managers. Management compensation contracts can provide for earnings-based bonuses, knowing that managers have not unduly manipulated reported earnings. Shareholders can contract to receive routine, reliable financial statements. A primary economic role of public accounting information therefore is to provide a variety of users with independent—hence reliable and contractible—financial statements.

Separation also provides an indirect, but important, gain in informational efficiency. This arises because the publication of independent accounting information increases the quality of non-accounting disclosures by managers. Having a reliable system of timely and accurate reporting of independently observable outcomes (cash flows or independently observable predictors of cash flows) exerts a discipline on managers’ privately held expectations and on their publicly stated expectations (in the form of plans and forecasts). Knowing that they ultimately will be held to account for “delivering the goods” has a sobering effect on managers’ non-financial expectational disclosures and on the expectations themselves (hence on the investments and strategic decisions that managers make). Separating independently observable disclosures from managerial disclosures thus creates a subtle, but beneficial, interaction between them. That

14. Although the distinction is useful, in practice the two categories overlap. A credit sale with a low probability of default is viewed as an observable financial outcome in public reporting, because there is considerable independent evidence of the expected cash outcome, even though the cash flow itself has not yet been realized. “Balanced scorecard” metrics (for example, customer satisfaction scores, on-time delivery frequencies, number of website visits) are not viewed as observable financial outcomes in public reporting, even though they themselves are independently observable, because their correlation with future cash flows is a matter of managerial judgment (that is, there is insufficient independent evidence of their cash flow outcomes).
is, audited corporate financial reporting and non-audited disclosure by managers are *complements*, not substitutes.

The following paradox emerges: the higher is the quality of the accounting system for measuring actual outcomes, the higher is the quality of managers’ expectational disclosures, the greater is the accuracy of investors’ expectations of actual outcomes, and the lower is the amount of new information contained in the accounting system’s announcement of actual outcomes. In other words, the informational efficiency of the total disclosure system can be a decreasing function of the new information contained in accounting income when it is publicly reported.\(^{15}\) The low surprise content of earnings reports in U.S. stock markets—documented by Ball and Brown and many studies since—thus is consistent with the United States being almost universally viewed as possessing a high-quality system of public financial reporting and disclosure.\(^ {16}\)

Three interrelated conclusions can be drawn. First, the economic efficiency of an accounting system is not monotone increasing in the size of the announcement effect of accounting income, defined as the effect on stock prices over short announcement windows, such as one to three days. Low earnings announcement effects can indicate that the accounting system is effectively playing one of its most important economic roles: disciplining managers’ publicly stated expectations and disciplining their investment behavior based on those expectations, through independent measurement of outcomes when they are delivered. The discipline of knowing that actual outcomes will be reported accurately and independently causes managers to be more truthful in revealing non-accounting information, allowing investors to form more accurate expectations of future accounting income and reducing the surprise content. The relevance of short-window event studies to assessing the optimality of an accounting infrastructure therefore is questionable.\(^ {17}\) In particular, the effect of financial statement information on the total information available to investors and other users can be a decreasing function of the earnings surprise, or announcement effect, over a short interval around its disclosure.

Second, one has to be cautious in responding to routine calls for having formal financial statements incorporate information about managers’

\(^{15}\) See Gigler and Hemmer (1998).

\(^{16}\) Ball and Brown (1968).

\(^{17}\) The same cannot be said of associations over “long” windows, such as one year, as in Ball and Brown (1968); Basu (1997); Ball, Kothari, and Robin (2000).
cash flow expectations. These calls typically are motivated by evidence of a low surprise content of audited financial information or a low correlation between book values and market values, coupled with evidence or a belief that information about cash flow expectations exists outside the system of public financial reporting. Heeding such calls could increase the short-window announcement effect of financial statements (notably, earnings) or increase the correlation between financial statement information and share prices, but it also could decrease the efficiency of the total system of disclosure. If reported income incorporated revisions of managers’ revealed expectations, they would have incentives to be less truthful in what they reveal, thereby reducing the quality of expectational data and all the decisions based on them.

Third, in general it is economically incorrect to analyze an optimal accounting system as if it were the only source of information in the economy. When non-accounting disclosure is introduced to the analysis, the optimal accounting system is one that optimizes total disclosure, not simply accounting disclosures considered alone. This, in turn, requires an analysis of the comparative advantages of accounting and non-accounting disclosures and of the interaction between them.18

In sum, the first criterion for an economically efficient disclosure system is that published financial statements disclose independently observed (that is, genuinely audited) actual outcomes. Conversely, information based on managers’ unobservable beliefs is disclosed most efficiently through other media, such as managers’ earnings forecasts or briefings of security analysts. Effective separation of these disclosure components (that is, independently audited reporting and unaudited managerial disclosures)

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18. In a widely cited analysis, Lev (1989) appears to overlook these issues. Among other things, Lev cites evidence on the correlation between accounting earnings announcements and short-window announcement-period returns, as if this correlation were a strictly increasing indicator of financial statement optimality. Then, in repeating the age-old clarion call for incorporating into the published financial statements various types of expectational information that can be—or already is—disclosed by managers, he risks reducing the reliability of both. An implicit assumption is that the accounting system can be optimized in isolation, as if there were no other sources of information to users. This assumption sits poorly with the facts and also with the implicit assumption in empirical work (for example, Lev and Sougiannis 1996) that the share market is fully informed about the values of intangible assets such as intellectual property, even when accountants do not record them on published financial statements. This illustrates the limitations of exclusively using what is described as a value relevance criterion.
is a fundamental requirement of an economically efficient system of public financial reporting and disclosure.

Second Criterion for Published Accounting Information: Timely Incorporation of Economic Losses

The second criterion for economically efficient public financial reporting is a substantial modification of the first. It deals with the incorporation into published financial statements of adverse information about future cash flows that is observable only to managers. This subsection describes how two important uses of financial statement information—in debt agreements and in corporate governance—create a demand for recognizing and reporting economic losses in a timely fashion, even though they are based on expectational information.

Information about economic gains and losses frequently takes the form of managers becoming aware of increases and decreases in expected future cash flows from long-term investments. Published financial statements can incorporate this information in one of two general ways: deferred or timely recognition. Under deferred recognition, accounting income is based on cash flows at (or close to) when they eventuate (in accounting parlance, when they are realized). Therefore, a change in present value of future cash flows is not incorporated until essentially all the affected future cash flows have eventuated. This gradually incorporates economic income into accounting income over the entire life of the investments, and accounting income becomes a type of moving average of past economic income. Alternatively, under timely recognition, the accounting system capitalizes the change in expectations and incorporates it in accounting income as a one-time gain or loss. Timely recognition produces an accounting income variable that incorporates economic income earlier than deferred recognition.

Lenders (both short- and long-term) and credit rating agencies use financial statement information, and this demand influences its optimal properties. Lenders participate less in firms’ economic gains than shareholders, but they are adversely affected by losses. Relative to shareholders, lenders prefer financial statement information that is more efficient in incorporating economic losses and have a lower preference for incorporating economic gains. This asymmetry of interest creates a demand for
accounting standards and financial statements that are more attuned to capturing economic losses than gains.

Corporate governance gives rise to a similar demand for accounting asymmetry. Assume that it is personally more costly for managers to abandon their losing investments and strategies than it is for them to continue operating their winners. Losses on abandonment reduce reported income and can reduce managers’ wealth via bonuses, reappointment, promotion, reputation, and prestige. Continuing to operate losing investments can magnify the loss to shareholders but reduce its effect on the current generation of managers by gradually incorporating the reduced cash flows into earnings over time. The resulting agency problem can be mitigated by using accounting rules that quickly identify economic losses—that is, negative ex post net present values (NPVs)—and charge them against reported income. If economic losses are charged against income even if managers have not abandoned the losing investments (in accounting terms, even if the losses are unrealized), then there is no incremental income penalty to actual abandonment. The personal incentive of managers to prolong losing investments and strategies—and thereby increase the economic loss—is reduced. In addition to its direct effect on managers via reported earnings, early reporting of economic losses also brings quicker pressure on managers from external directors, large shareholders, security analysts, and the press.

Furthermore, ex ante knowledge that unrealized losses will be charged against reported income reduces the incentive of managers to undertake negative NPV projects in the first place. They are less likely to invest in “monuments,” such as oversized head offices or factories, unprofitable acquisitions, and other pet projects that give them personal utility. In the absence of accounting rules that charge economic losses against income in a timely fashion, subsequent generations of managers will inherit the poor performance of these investments. Accounting rules that quickly charge economic losses against income therefore allow more effective monitoring of the current generation of managers.

Why do managers agree to an accounting system that incorporates economic losses in a timely fashion and that thereby makes them both more likely to incur the personal cost of abandoning losing investments and strategies and less likely to invest in negative NPV projects that give them personal utility? They do so because this allows them to bond themselves ex ante to act more in the interests of the owners of the firm and thus makes
their employment contract more valuable. Such bonding is credible only if there are costs to managers of not complying with accepted accounting standards for incorporating economic losses—that is, only if there is an effective system of detection and enforcement. An independent audit profession and effective stockholder litigation laws play important roles in this function.

There is an interesting intersection between debt and governance effects. Timely incorporation of economic losses into the financial statements can have immediate debt-induced governance effects, through loan agreements that transfer specified decision rights from loss-making managers to lenders. For example, under the terms of a long-term loan agreement, lender approval of any new borrowing, new investment, or payment of dividends might be required if a corporation violates specified financial statement ratios. Ratios can be stated in terms of income statement variables, which are affected directly by accounting loss-recognition rules. Ratios also can be stated in terms of balance sheet variables, such as leverage, which is affected by losses flowing into the balance sheet book value of equity. Timely recognition of losses in accounting therefore triggers any transfer of decision rights under debt agreements more quickly.

The accounting literature tends to overlook corporate governance benefits when analyzing an efficient system of financial reporting and disclosure. Formal disclosure models typically focus on information that reduces bid-ask spreads, liquidity, and hence the cost of capital. Yet managers’ production and investment decisions are affected by being held to account for the cash flows (and earnings) that are generated. The quality of

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19. Notably, the times interest earned ratio—earnings before interest and taxes (EBIT) to interest commitments. This ratio is affected in countries—like the United States—where accounting standards require losses to be deducted from operating income, as distinct from being reported as extraordinary items.


22. Verrecchia (2001) surveys this literature. Early papers are Verrecchia (1982) and Diamond (1985). Additional limitations of this literature include the following: (1) its focus on equity capital costs ignores the use of financial information by firms in their contracts with other factors (including debt capital) and with customers, and (2) dollar spreads in U.S. markets historically have been quoted in discrete amounts (typically $1/8, $1/4, or $3/8), which exhibit little variation, and thus, when scaled by price, the resulting proportionate spread essentially is an inverse price variable. See Callahan, Lee, and Yohn (1997).
financial disclosure therefore affects firms’ cash flows, in addition to the capital costs at which the cash flows are discounted.\footnote{Jensen and Meckling (1976). See also Lowenstein (1996).}

The second criterion for an economically efficient disclosure system therefore is timely incorporation of economic losses in the published financial statements. This goes beyond mere disclosure of adverse information to the share market and even beyond its disclosure to the debt market. Timely incorporation of economic losses in the published financial statements increases the effectiveness of corporate governance, compensation systems, and debt agreements in motivating and monitoring managers. It decreases the ex ante likelihood that managers undertake negative NPV projects but pass on their earnings consequences to a subsequent generation; it also increases the incentive of the current generation of managers to incur the personal cost of abandoning investments and strategies that have ex post negative NPVs.\footnote{Managers’ bonuses and job tenure are a function of reported earnings (Warner, Watts, and Wruck 1988).} Timely incorporation of economic losses in the published financial statements engenders monitoring and allocative efficiency.

Managers typically possess the most accurate information about economic losses, which generally takes the form of reduced expectations of future cash flows. Consequently, it can be difficult to encourage managers to disclose the information to the markets and to incorporate economic losses in the published financial statements. The markets are likely to be informed well before any accounting responses occur, so the problem frequently is loss recognition in the accounts. The common-law mechanism for this problem—stockholder and lender litigation against managers and auditors who fail to incorporate economic losses in the published financial statements—is an effective solution.

\textit{Why Is There No Third Criterion: Timely Incorporation of Economic Gains?}

An economically efficient public financial reporting and disclosure system therefore requires published financial statements to do two things: (1) incorporate only independently observed outcomes and (2) incorporate economic losses in a timely fashion. Notable is the absence of a criterion for timely incorporation of economic gains. Adding such a criterion would
be tantamount to adopting a simple value relevance criterion. Why is it absent? Why is the second criterion asymmetric in its treatment of economic gains and losses?

The reason is not that value relevance is difficult to achieve. In fact, it is trivial for public financial reporting to achieve an absolutely perfect value relevance score. By construction, public financial reporting refers to financial statements issued by listed firms: that is, firms with publicly traded shares. Perfectly value-relevant public financial reporting is achievable, simply by marking to market the year-end balance sheet, that is, by setting the book value of shareholders’ equity equal to the market value of equity (share price times number of shares) at that date. Accounting income then is recorded as the change in the firm’s market value of equity, adjusted for dividends and net capital contributions, and thus is identical to economic income.\(^{25}\) The resulting financial statements are perfectly value relevant, but they also are (a) perfectly redundant (merely duplicating existing prices) and hence perfectly useless, (b) a function of managers’ stated beliefs (unless managers’ statements are totally devoid of information, share prices will respond to those statements, at least to a degree) and hence manipulable, and (c) not based on independently observable outcomes (prices are present values of expected future cash flows) and hence unable to exercise a role in monitoring managers’ stated beliefs.

This thought experiment demonstrates that the criteria for an optimal accounting system must be more complex than a simple correlation with stock prices.\(^{26}\) It also demonstrates the folly of ignoring heterogeneous demand: that is, of ignoring uses of financial statement information that include short- and long-term debt agreements, management compensation, corporate governance, and monitoring of actual outcomes subsequent to managers’ expectational statements. These uses are economically important and cannot be ignored; for efficient public financial reporting and disclosure, the stock market is not the only game in town.

Furthermore, non-share-market uses of published financial reports induce accountants to supply information that deviates systematically from

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25. Defined as change in market value of equity over the period, adjusted for any dividends and capital contributions or distributions. See Hicks (1946).

26. This helps to explain why even publicly listed corporations invariably write covenants in their loan agreements in terms of financial statement variables (accounting book values) and not in terms of market values. For example, leverage ratios are defined in terms of book values of equity, not market values.
the prediction of a simple value relevance criterion. For example, in 1974 the Financial Accounting Standards Board (FASB) issued FAS no. 2, an accounting standard that henceforth required all U.S. public companies to write their research and development (R&D) expenditures off against income in the year they are made. Previously, companies were allowed to treat R&D expenditures as assets and then amortize them against income over their estimated useful economic life. Because R&D expenditures generate essentially no revenues in the current year, the effect of the new standard was to decrease the amount of reported income by the amount of current-year R&D expenditures. The motive of the FASB in adopting this standard was not that it believed that the rate of return on investments in R&D was exactly –100 percent, which would be the only feasible interpretation of its actions under a simple value relevance criterion. Rather, it decided to cede to managers the economic role of informing users about the expected future cash flows arising from R&D expenditures; that is, independent accountants ceased certifying the existence of these R&D assets. Such behavior is inexplicable under a simple value relevance criterion.

The available information about economic gains and losses frequently is possessed only by managers, when they become aware of increases and decreases in expected future cash flows from long-term investments, and hence frequently is not independently observable. In cases where economic gains can be independently observed, such as when an investment is traded in a liquid market, the accounting rules typically allow them to be incorporated in income. However, most long-term corporate assets are not traded in liquid markets, and economic gains are not independently observable. Consequently, the published financial statements tend to ignore economic gains when they occur and to wait for independently observable cash flow outcomes. Favorable information held by managers therefore must be disclosed through other media, such as optimistic statements, earnings forecasts, and briefings for security analysts.

27. For example, gains on holding marketable securities or foreign currency.
28. Some countries (such as the United Kingdom) permit upward revaluations of some long-term assets, most notably real estate (where independent appraisals are available). Even in those countries, the gains are not included in reported income: they are credited to revaluation reserve accounts. Upward revaluation has not been permitted in the United States since three correlated events: the 1929 stock market crash, the ensuing collapse in asset prices, and the creation of the SEC in 1934.
This asymmetric accounting treatment of positive and negative information about future cash flows is most pronounced in common-law countries, which not coincidentally place the greatest reliance on public financial reporting and disclosure. In the United States, this asymmetry has become perhaps the most prominent feature of accounting income. Basu reports that, by 1990, accounting income in the United States was approximately ten to twenty times as sensitive to current-period economic losses as to economic gains. This was not always the case, the asymmetry having become more pronounced over the past quarter century. Basu’s evidence suggests that U.S. public financial reporting rates highly on both of these criteria. Ball, Kothari, and Robin report similar evidence in other common-law countries.

Internal Reporting and Internal Corporate Governance

The quality of financial reporting can affect decisions at all levels of management, as was made clear in the notorious case of DaimlerBenz AG (now DaimlerChrysler). It is well known that this company changed its accounting standards from German to U.S. generally accepted accounting principles (GAAP) for public financial reporting. It is less well known that the company changed to U.S. GAAP for internal managerial reports as well. In making the change, Daimler cited the advantage of reducing the ability of managers to manipulate the financial performance of their own business unit. In Daimler’s view at least, the use of U.S. GAAP allows less managerial discretion over measuring their own performance and provides more accurate internal financial reporting to senior managers. Thus higher-quality accounting enhances internal corporate governance if it is applied at a micro as well as a macro corporate level. Financial reporting therefore has implications for allocative efficiency within corporations.

30. Ball, Kothari, and Robin (2000). Their comparison with code-law countries is discussed below.
Demands on Accounting Vary with Economic Development, Including Limiting Bribery, Fraud, and Asset Expropriation

The relative importance of particular uses of financial reports is a function of a country’s stage of economic development. During the transition from a planned to a market economy (China being a notable case at present), one of the principal roles of accounting is to control bribery, fraud, and asset expropriation. Independent accounting can be effective in detecting bribery and fraud for two reasons. First, in search of independent observability, accountants already scrutinize the documentary evidence on a transaction-by-transaction basis in preparing published financial statements, which naturally permits scrutiny of all transactions for evidence of bribery and fraud. Second, bribery and fraud at the level of individual transactions reduce the reliability of the financial reports that are based on aggregation of transactions, so the litigation-conscious auditor has an incentive to scrutinize efficiently the transactions that enter the firm’s accounting system. Independent accounting can be similarly effective in detecting asset expropriation, because it forces the accounting system to record (and hence account for) all of the individual assets acquired by the firm, all of the legitimately incurred debts of the firm, and all of the distributions made by the firm. This is one of the strengths of an accounting system based on recording independently observable outcomes: while managers’ expectations can disappear due to circumstances beyond their control, countable assets such as cash, receivables, and equipment cannot.

The accounting literature in developed economies contains little on the role of accounting in controlling bribery, fraud, and asset expropriation. Perhaps the accounting systems in those countries are sufficiently effective for this role to be taken for granted. Correspondingly, much of the debate in developed economies is about adapting accounting standards (that is, the formal rules for recording various types of transactions) in response to innovations in commercial practice (such as firms trading in derivative contracts). Here, too, the literature in developed economies is a misleading guide for the development of economically efficient accounting in other economies. In particular, during a transition to a market-oriented economy,

32. Limiting asset expropriation is widely viewed as an important economic function (Black 2000; La Porta and others 1997, 2000) but has received scant attention in the international accounting literature.
a focus on improving accounting by simply adopting Western-looking accounting standards might accomplish little more than window dressing. There are more basic accounting issues to attend to.

In other countries and circumstances, achieving high transparency in financial statement information is important in developing deep equity markets. The implication is that optimal accounting and disclosure infrastructure is at least in part a function of local factors, including economic development.

Effects of the Political and Legal System

In general, the accounting and other disclosure infrastructure in a country seems likely to remain a function of its political and legal system. An important distinction between countries’ accounting and disclosure infrastructures is whether they originate and function in a more market-oriented common-law system or in a more planning-oriented code-law system. The demand for public financial reporting and disclosure differs predictably between these systems. For example, under the stakeholder model of corporate governance that is typical of code-law countries, both debt and equity capital are more likely to be supplied by banks with close insider relations to the corporation, thereby finessing agency issues that otherwise would be mitigated by financial reporting and disclosure. Under the stakeholder model, information asymmetry is resolved less through high-quality public financial reporting and disclosure and more through insider access by stakeholder representatives. Conversely, corporate income taxation and political factors are more important influences on financial reporting under code law. Accounting and other disclosure infrastructure therefore is likely to remain a function of a country’s political and legal system.

Complementarity: A Strength and a Barrier

Finally, it is important to recognize that countries’ accounting infrastructures, especially in market-oriented common-law countries, have evolved over time as complementary components of their total, complex economic, legal, and political infrastructures. This is a strength of market
economies. One consequence is that simply transplanting accounting rules from those economies into another economic environment is likely to have a limited effect, unless accompanied by a wide range of changes in complementary infrastructure. There is evidence of this from countries that have adopted the accounting standards of the United Kingdom, the United States, or the IASC, without any apparent effect on the quality of their financial reporting. Institutional complementarity implies that accounting infrastructure cannot be analyzed independently of the wider economic, legal, and political fabric and can be difficult to change effectively.

**Summary: Criteria for Efficient Accounting and Corporate Disclosure**

This discussion has canvassed the criteria for economically efficient accounting reporting and non-accounting disclosure. The accounting literature provides limited assistance in that task and is misleading in several respects, leading to the following conclusions:

—The demand for accounting reports and non-accounting disclosure is heterogeneous; specifically, it is not confined to the share market and it is not well represented by a simplistic value relevance criterion.

—in general, the economic role of financial statement information is to increase the efficiency of contracting between the firm and all factor suppliers, including shareholders and lenders as well as managers and customers.

—Being held to account for actual, independently observable outcomes exerts a discipline on managers and on the investments and strategic decisions they make. Consequently, independence from managers is an important property of the quality of financial statement information. This requires an independent and capable audit profession. Independence generally implies basing accounting information on actual, independently observable outcomes (such as cash flows or the transfer of legal risk in a sale to a customer). Conversely, independence generally implies declining to incorporate information derived from managers’ expectations.

—Nevertheless, it appears that an optimal accounting system anticipates observable outcomes—and relies on the information in managers’ expectations—when this runs against the interests of managers. The use of financial statements in debt financing and corporate governance (both

separately and interactively) creates a demand for timely incorporation of economic losses (downward revisions in the present values of expected future cash flows). This is an important property of the quality of financial statement information.

—Accounting and non-accounting disclosures interact: they are complements. Routine reporting of accounting information based on independently observable outcomes provides an important reality check, particularly for managers making nonfinancial disclosures (which generally are a function of their unobservable expectations). Conversely, the effect of financial statement information on the total information available to investors can be a decreasing function of the surprise, or announcement, effect over a short interval around its disclosure.

—Higher-quality (that is, both independent and asymmetrically conservative) accounting systems also enhance corporate governance within the firm by better monitoring the performance of line-of-business managers.

—Independent accounting can control bribery, fraud, and asset expropriation. Although this tends to be taken for granted in developed market-oriented economies, it can be an important role in transition economies.

—In transition economies, a focus on simply adopting Western-looking accounting standards for reporting to international investors can amount to little more than window dressing.

—If one had to start somewhere in attempting to increase the quality of public financial reporting and disclosure, a good place would be to liberalize litigation rules, providing managers and auditors with incentives to actually do so.

This summary ends with two cautious observations. First, a country’s optimal accounting and non-accounting disclosure infrastructure is likely to remain a function of its political and legal system. Second, institutional complementarity implies that accounting infrastructure cannot effectively be changed independently of the wider economic, legal, and political fabric.

In following sections, these criteria are used to analyze three international accounting issues of current interest: differences in published accounting information between common-law and code-law countries; a move among code-law countries to adopt accounting standards developed in common-law countries; and the limited effect on the quality of published accounting information of adopting common-law accounting stan-
standards in four Asian countries, without substantial complementary institutional reform, and in China, when it mandated IAS standards.

The Effect of Disclosure Infrastructure: What We Learn from the Role of Public Information in Code-Law and Common-Law Countries

One of the most substantial international differences in the quality of public financial statements is between countries where standard setting and enforcement occur under codified law and countries where they are predominantly a function of common law. Code law is a governmental responsibility, whereas common law originates in private action and is enforced privately. The essential difference between these systems is the extent of political versus market influence on the system of corporate governance (including corporate disclosure and financial reporting and the setting and enforcement of accounting standards).35

An important manifestation of the code- and common-law systems is their respective adoption of the stakeholder and shareholder models of corporate governance. Alchian and Demsetz argue that stockholders, as residual claimants, have the greatest incentive to monitor managers.36 It follows that in a market with unregulated governance, stockholders or their elected representatives are the most efficient monitoring party. So it is not surprising that the shareholder model is dominant in common-law corporate governance, with shareholders alone having voting rights in appointing the governing board and in establishing the rules governing its conduct. In contrast, code-law politicization of the creation and enforcement of securities laws (including laws on corporate governance, reporting, and disclosure) gives power to all political coalitions, including capital, labor, and managers. Again, it is not surprising that the stakeholder governance model predominates under code law, with a range of coalitions given


voting rights—by fiat—in the creation and enforcement of securities laws as well as in corporate governance. This seemingly simple difference in governance models has a substantial effect on the quality of public disclosure and provides valuable insights into the effects of various differences in infrastructure between code- and common-law countries.

Common law evolved a millennium ago in England and was exported to many British colonies, including Australia, Canada, New Zealand, and the United States. Common laws, including accounting standards, originate by becoming commonly accepted as standards of practice (hence the U.S. term “generally accepted accounting principles”). Enforcement of common law is a private matter, accomplished through civil litigation (hence the importance of stockholder litigation in common-law countries, such as the United States in particular). The penalty for violating common law is the award of damages to the party whose rights are proven violated. Because shareholders, lenders, and others are assumed under common law to be at arm’s length from the firm, information asymmetry generally is ameliorated by timely public disclosure.

Code law originated with the Romans, who implanted it in many Continental European countries, from whence it was exported to most former colonies of France, Germany, Italy, Portugal, and Spain. During the Meiji era (1868–1910), Japan grafted German law and French accounting onto its feudal bakuhan system, although there is evidence that it still conforms more closely to a separate Asian model (see the following section). Code law originates in governments or governmental administrative bodies (which write “the code”) and is enforced by governments. Code violation is a criminal matter, with attendant criminal penalties (fines, imprisonment, and restrictions on practice). Under the stakeholder model, agents of the major parties contracting with the firm (banks and other financial institutions as suppliers of capital, labor unions, governments, and major customers and suppliers) have decision rights in corporate governance. In contrast with common law, information asymmetry between managers and the major parties is more likely to be ameliorated by private “inside” access to information, chiefly via representation on the governing board. Unlike common law, there is no fundamental presumption that parties contract with the firm at a distance and therefore must be informed by public disclosure.

Public versus private provision of information is an important difference between common-law and code-law governance systems. It reflects a fundamental difference in approach to corporate governance, to the manner of dealing with information asymmetry, and hence to the manner of contracting between the firm and its debt and equity investors, employees, suppliers, and customers. The implication for accurate and independent public financial reporting and disclosure is simple: the demand for such information is lower in code-law countries than in common-law countries.

Conversely, financial reporting in code-law countries is designed more to meet other demands. The financial statements tend to have a more direct effect on corporate payouts to parties dealing with the firm. Under the stakeholder model, accounting income is a communal pie to be divided among the stakeholders: as dividends to shareholders, taxes to governments, and bonuses to managers and employees. The current-period payout preferences of these parties—more specifically, of the agents who represent them in corporate governance—influence income reporting. The situation is complicated in countries, like Germany, that impose excess taxes on undistributed profits, thus linking income recognition and payout policies even more closely. It has been said of German accounting that the Supervisory Board first determines its desired payouts and then figures the income this requires them to report that year!

More specifically, the payout preferences of the agents with decision rights in corporate governance are skewed toward reducing volatility. Banks represent capital suppliers in corporate governance and are regulated on the basis of leverage ratios and other prudential ratios that penalize volatility in bank income. This leads directly to a preference by banks for low volatility in the accounting incomes of companies in which they invest, because equity accounting requires them to incorporate their share of the income of a company (provided they control a substantial share of holdings) into their own income and balance sheet. Bank representatives also are well aware of the central government’s incentives to reduce volatility of tax receipts, an awareness that is cultivated by the closely knit hierarchy in code-law banking systems. Managers and employees typically are over-invested in their firm (relative to its market weight) and prefer to reduce volatility in payouts. Annual reelection of employee representatives sharpens their awareness of this preference. Profit-based bonus schemes certainly give managers in common-law countries an
incentive to reduce volatility in accounting income, but it is muted by the
long-term shareholder value perspective of common-law governance. In
contrast, bank and employee representation in code-law governance ampli-

\[114x575\]102x562\]fies the incentive to reduce volatility in the published accounting numbers.

Code-law firms can reduce the volatility of reported income in a rich
variety of ways. They can be classified according to which of the two cri-

\[114x536\]102x523\]teria for an efficient financial reporting system they violate. First, code-law
accounting grants managers considerable discretion in making various
accounting estimates. In good years, they can reduce reported income by
over-estimating expenses (for example, through excessive depreciation,
loss provisioning, or allowance for bad debts), by underreporting revenues
(deferring a portion of software revenues), and even by transferring funds
to hidden reserves. These techniques “put income in the bank” for the
future. In bad years, they can increase reported income by reverting to nor-

\[114x497\]102x484\]mal accounting estimates, “taking income out of the bank.” DaimlerBenz
AG (now DaimlerChrysler) provides the most notorious example of this
practice in recent years. This company reported 1993 income of DM615
million, certified by its auditors as complying with German accounting
standards. Subsequently, as a requirement of listing its stock in New York,
the company filed financial information complying with U.S. GAAP, dis-

\[114x393\]102x380\]closing a loss for the year of DM1.839 billion. Under German rules, it
had been able to avoid reporting this loss, which only came to light as a
consequence of listing in a common-law jurisdiction.

The wide discretion that code-law accounting grants managers over
the amount of income reported in any year violates the first criterion of
an efficient financial reporting system: that the financial statements
(income in particular) be based on outcomes that are observable independ-
ently of managers. It is symptomatic of the stakeholder governance
model, in which information asymmetry is handled more by insider com-

\[114x289\]102x276\]munication than by public disclosure and in which stakeholder payout
preferences have substantially greater influence on the published numbers.

The second way of reducing income volatility violates the second cri-

\[114x198\]102x185\]terion of an efficient system of financial reporting: failing to incorporate

volatility in dividends. This does not directly imply a preference for low earnings volatility,
due to the looser common-law connection between current-period (as distinct from long-
term) dividends and earnings.

39. The case is described in Ball (1998).
economic losses in a timely fashion. Recall that economic losses are reductions in expectations of future cash flows and that the accounting system can incorporate economic losses in one of two ways. One alternative is to incorporate a capitalized loss in accounting income, either buried among operating expenses or separately captioned to identify its transitory nature.\footnote{These are known as one-time charges. A particular loss might be captioned as a restructuring charge, a loss on abandonment, and so forth.} Provided the economic loss is recognized without a long delay, this method makes accounting income incorporate economic reality in a timely fashion. It also increases the volatility of accounting income, by incorporating comparatively large, capitalized, transitory items. The other alternative is to take no action and simply ignore the loss. This has the effect of incorporating the loss in income over the entire period of the reduced cash flows, as they eventuate. Taking no action reduces the volatility of accounting income, which becomes a type of moving average of past economic income. It does so at the expense of the second criterion for an economically efficient disclosure system: timely incorporation of economic losses in published financial statements.

The contrasting treatment of economic losses under code-law and common-law systems is shown in figures 1 and 2. Figure 1 depicts the extent to which accounting income incorporates economic gains and losses in code-law and common-law countries, as reported by Ball, Kothari, and Robin.\footnote{Ball, Kothari, and Robin (2000, table 3). See also Alford and others (1993); Barth and Clinch (1996); Ali and Hwang (2000).} They study a sample of more than 40,000 firm-year incomes reported under the accounting rules of seven countries over the period 1985–95. The countries are classified as predominantly code law (France, Germany, Japan) or common law (Australia, Canada, United Kingdom, United States). To estimate the relation between economic and accounting incomes, they adapt the piecewise linear model of Basu:\footnote{Basu (1997).}

\begin{equation}
\text{NI}_t = \beta_{1i} + \beta_{2i} \text{RD}_t + \beta_{3i} \text{R}_t + \beta_{4i} \text{RD}_t + \varepsilon_t.
\end{equation}

Here, $\text{NI}_t$ is accounting income of firm $i$ in fiscal year $t$, scaled by its market value of equity at the end of the previous fiscal year. $\text{RD}_t$ is the stock return over fiscal year $t$, defined as change in the market value of the equity (adjusted for dividends and capital contributions), also scaled by the firm’s
market value of equity at the end of the previous fiscal year. The dummy \( RD_{i} \) equals 1 if return \( R_{i} \) is negative and 0 otherwise. The return variable is a proxy for economic income, and the dummy allows accounting income to be a differential function of economic gains and losses. The coefficients are allowed to vary by country. Thus the coefficients \( \beta_{2j} \) and \( (\beta_{2j} + \beta_{3j}) \) capture the incorporation of economic gains and losses, respectively, into current-year accounting income, under the accounting rules and practices of country \( j \).

The differences between code-law and common-law countries are dramatic. Accounting income in every common-law country essentially is unresponsive to current-year economic gains (proxied by positive fiscal year returns), the slope for the common-law group as a whole being only 0.02. Accounting income in common-law countries is substantially more responsive to current-year economic losses (proxied by negative fiscal-year returns), the group slope being 0.33.\(^{43}\) In contrast, code-law accounting income exhibits slightly more response to current-year economic gains (group slope of 0.04), but, which is more important, there is considerably

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43. Basu (1997) reports that by 1990 the U.S. slope on economic losses had risen to approximately 0.60.
less response than under common law to current-year economic losses (group slope of 0.05). The substantially asymmetric response of common-law income to economic losses is not evident in the code-law group.

Ball, Kothari, and Robin defend the use of annual stock return as a valid proxy for economic income (scaled by market value). They argue that there is no reason to believe that, particularly over an annual horizon, stock markets are less well informed in countries with low standards of public disclosure, because those same countries have greater private disclosure to suppliers of capital and (by necessity) weaker insider trading laws. Nevertheless, Ball and Robin provide corroborating evidence from an alternative proxy for the incorporation of economic income in accounting income. This research design, also due to Basu, is based only on the time-series behavior of accounting income and exploits the transitory nature of economic gains and losses. The extent to which accounting income incorporates economic income in a timely fashion as one-time transitory components is identified by the extent to which changes in income immediately reverse. Recall that untimely incorporation takes the form of persistent cash flow effects over many years, which does not produce immediate reversals of changes in income. More timely incorporation of economic losses than of gains is allowed by estimating the piecewise linear model:

\[
\Delta NI_t = \alpha_{0j} + \alpha_1 \Delta NI_{t-1} + \alpha_2 \Delta NI_{t-2} + \alpha_3 \Delta NI_{t-3} + \Delta NID_{t-1} + \nu_i.
\]

Here, \(\Delta NI_t\) is the current-year change in reported income (that is, from year \(t - 1\) to year \(t\)), \(\Delta NI_{t-1}\) is the prior-year change in reported income (that is, from year \(t - 2\) to year \(t - 1\)), and \(\Delta NID_{t-1}\) is a dummy variable taking on the value 1 if prior income change \(\Delta NI_{t-1}\) is negative and 0 otherwise.

44. All differences are significant when the model is estimated in several ways, for example, annual Fama/MacBeth regressions for individual countries; separate pooled time series and cross sections for individual countries; a grand pooled regression for all firm-years, with individual-country coefficients; regressions after controlling for mean annual individual-country returns; and regressions after controlling for Standard Industrial Classification codes.
45. Ball, Kothari, and Robin (2000).
46. Ball and Robin (1999).
47. That is, economic income is independent across time (Fama 1970).
Figure 2 summarizes results reported in Ball and Robin. It reveals a substantial difference in the extent to which common-law and code-law accounting income incorporates transitory components. The estimated slope of current-year income changes on positive prior-year changes is \(-0.09\) for the code-law group (indicating some transitory gain components) and \(+0.06\) for the common-law group. The major difference is in the estimated slopes of current-year changes on negative prior-year changes, which are \(-0.31\) for code law and a significantly greater \(-0.82\) for common law. The latter slope is interpreted as indicating that common-law accounting income is more likely to incorporate economic losses in a timely fashion: that is, as single, transitory components of reported income. This evidence, which is based only on the time-series behavior of accounting income, corroborates the stock market–based evidence reported earlier.

Taken as a whole, the evidence indicates that code-law accounting satisfies the criteria of an efficient public financial reporting system to a lesser degree than common-law accounting. A comparative lack of auditor independence permits considerable managerial discretion over reported income, and a near absence of stockholder and lender litigation costs to managers and auditors alike reduces their incentives to confront economic losses and to recognize them in the financial statements. Consequently, public financial statements under code law rate poorly in informational, contracting, and monitoring efficiency. This is not surprising in view of the more limited role of public financial reporting and disclosure in that system.

What infrastructure changes would be required to produce a more efficient disclosure system under code law? Here the warning on “complexity” bears repeating. Some requirements would include the following:

—Reducing the reliance on private contracting with—and disclosure to—a single “company” bank as supplier of capital,

—Hence, reducing the economic role of a hierarchical banking system acting as sole intermediary for debt and equity capital,

49. There is no suggestion that reduced independence in these countries leads to more undetected fraud (as distinct from misrepresentation of financial outcomes to meet other objectives). However, that is a concern in lesser-developed code-law countries, including China.
50. The conclusion that higher standards of disclosure in common-law countries increase monitoring efficiency contrasts with Roe (1994).
—Separating the tax and financial reporting systems,
—Basing payouts more on value and less on current-period income,
—Reducing managers’ discretion over reported income,
—Increasing the oversight responsibilities for financial disclosure of external board members,
—As a consequence, reducing stakeholder decision rights in corporate governance, and
—Increasing stockholder and lender litigation rights.

Litigation rights seldom are raised in the context of international accounting, but in my view they constitute the single most essential requirement for an efficient disclosure system. Without litigation, the incentives of auditors to reduce management’s discretion over financial reporting are considerably reduced, as are the incentives for managers to reveal private information about economic losses and to incorporate it in the financial statements.
Absent from this list is a new set of accounting rules, such as IAS. In my view, the quality of a country’s financial reporting is endogenous—that is, it is determined by the incentives of financial statement preparers (managers and auditors). On the one hand, adopting “better” accounting rules or strengthening the qualifications of auditors is mere window dressing, unless accompanied by incentives to apply them. On the other hand, stronger incentives will produce better practices of financial disclosure, hence better (explicit or implicit) accounting standards. This point is illustrated by the experiences of China and of several East Asian countries, which are described next.

The Effect of Transplanting Single Elements of Disclosure Infrastructure: What We Learn from the Experience of Four East Asian Countries

The infrastructure essential for an efficient system of public disclosure is well illustrated by the experience of the four East Asian countries of Hong Kong, Malaysia, Singapore, and Thailand. These countries historically have implanted accounting standards from common-law sources (United Kingdom, United States, and IASC), without making substantial changes in complementary institutions. Consequently, financial disclosure in these countries has not attained anywhere near common-law levels.

Three of the countries (Hong Kong, Malaysia, and Singapore) are former British colonies, and their accounting standards during colonization closely resembled British standards. After independence, Malaysia and Singapore turned to U.S. GAAP as a model for their accounting standards. More recently (in the case of Malaysia, as early as 1977), East Asian standards generally have been influenced directly by IASC standards. The London-based IASC aims to achieve greater consistency in accounting standards internationally, and the standards it has promulgated are widely viewed as seeking common-law levels of disclosure quality. Thailand escaped colonialization, but Thai accounting standards nevertheless reflect a significant IASC influence and a lesser U.K. influence. The accounting standards that have been implanted from overseas into Hong Kong, Malaysia, Singapore, and Thailand therefore potentially facilitate comparatively high-quality public financial reporting.
Nevertheless, these countries have not made the substantial changes in their complementary institutions that are required to make common-law accounting standards truly effective. Although the institutional structure in these countries differs noticeably from that of Continental Europe, chiefly in the absence of organized labor representation in politics and corporate governance, they share a crucial property of the code-law system: information asymmetry is resolved more through private communication and less through public disclosure. A principal reason is the dominance of family ownership and control, even of the largest listed corporations. High levels of family ownership are further leveraged, to achieve greater control, by three devices. First, groups of companies are tied together by complex cross-holdings, thereby reducing external control. Second, “pyramid” ownership structures create chains of control: for example, owning 50 percent of a company that owns 50 percent of another gives control of the latter with only a 25 percent outlay. Third, investments are made in a company by various family members and by persons tied together under long-term networking relationships, and the investors vote as a block. Family groups frequently are ethnic Chinese, even in Malaysia and Thailand, so the Chinese system of personal networking (guanxi) predominates. Public debt and equity are less important than family equity ownership and private banking arrangements, and little or no stockholder or creditor litigation arises from untimely disclosure of losses. Managers are more likely to be monitored in private. Overall, the system of contracting is private and among parties with strong, binding relations, rather than public and at arm’s length. Public disclosure therefore plays a substantially reduced economic role. As a consequence, financial statement preparers (managers and audit firms) still do not encounter common-law financial reporting incentives. In particular, there is little litigation-induced pressure to book economic losses in a timely fashion.

Political factors also militate against efficient public disclosure in the region. The Thai government codifies accounting standards and requires conformity between tax and financial reporting. Throughout the region, there are political pressures to “smooth” income by spreading large gains

51. A survey by the Hong Kong Society of Accountants (1997) documents extensive family ownership of Hong Kong public corporations: 53 percent of listed corporations had more than 50 percent of outstanding shares owned by a single family. See also Claessens, Djankov, and Lang (2000).
and losses over time. It is difficult to envision the Malaysian prime minister allowing many companies during the Asian currency crisis to recognize substantial economic losses in their accounts, thereby placing them in technical default of loan agreements and potentially under the control of foreign banks.

As in the Continental European stakeholder model, the Asian model therefore does not demand high-quality public disclosure, a key element of which is timely financial statement recognition of losses. Ball, Robin, and Wu confirm this finding. They employ the research designs of Ball, Kothari, and Robin and of Ball and Robin to study a sample of 2,726 annual earnings reports issued under the accounting standards of the four countries over 1984–96. Figure 1 compares the East Asian group slopes for regressions of accounting income on fiscal-year stock returns, reported in Ball, Robin, and Wu, with the equivalents for code-law and common-law groups as described above. Accounting income in the four East Asian countries exhibits low sensitivity to the equity-return proxy for economic income. Furthermore, accounting income is insensitive to current-period economic losses, in sharp contrast with the common-law model. For the East Asian group as a whole, the regression slopes of accounting income on proxies for economic gains and losses are both estimated as only 0.02. In comparison, the slopes against losses are 0.05 and 0.33 for the code-law and common-law groups over essentially the same period. The contrast with East Asian accounting is sharp.

Figure 2 compares the East Asian group slopes for regressions of change in accounting income on the prior-year change, reported in Ball, Robin, and Wu, with the equivalents for code-law and common-law groups. The East Asian group slope on negative past income change is only −0.10, indicating that transitory losses are a lesser component of income than in both code-law and common-law countries. The slope on positive past income change is −0.36, indicating that transitory gains are a greater component of East Asian corporations’ accounting incomes.

53. Ball, Kothari, and Robin (2000); Ball and Robin (1999).
55. The point estimate of the East Asia slope on losses is lower even than in the code-law sample, although the significance of the difference is debatable (due, among other things, to the small sample size and cross-sectional correlation).
Overall, there is little evidence of timely incorporation of economic losses in East Asian financial reporting.

In my view, the East Asian experiment demonstrates the futility of implanting exogenously developed accounting standards into a complex, complementary commercial infrastructure. The experience shows that high-quality accounting standards might be a necessary condition for an efficient disclosure infrastructure (although even that is debatable), but they certainly are not sufficient. The experience of China, to which I now turn, is similar.

The Effect of Transplanting Single Elements of Disclosure Infrastructure: What We Learn from the Experience of China

Prior to the recent reforms, China’s accounting system functioned as part of its Soviet-era planning apparatus. The ensuing changes were prompted in large part by the Chinese government’s desire to have domestic companies conform more closely to international practice. Two basic reforms were initiated. First, in 1992 the Ministry of Finance mandated its accounting standards for business enterprises (ASBE), to be followed in financial reporting by domestic companies. ASBE are IAS adapted to local conditions, under the expectation that they will remain closely related over time (described as “connected tracks”). Domestic accounting firms audit the financial statements of domestic companies reporting under ASBE. Second, the government authorities required all domestic companies with foreign shareholders to publish financial statements conforming to IAS. An international (“Big Five”) accounting firm audits these statements. This is another case of a country implanting exogenously developed accounting standards into a complex, complementary commercial infrastructure.

At this point in its economic reform and development, many features of China’s institutional environment militate against high-quality disclosure, despite state-mandated ASBE and IAS. They include extensive guanxi networks that inform parties privately, not publicly; political influence of the Chinese government and army; links between tax and financial reporting; government-mandated listing rules that require companies to be profitable (so companies hide losses); extensive non-arm’s-length transacting between listed former state-owned enterprises and current or former state-owned enterprises (the government effectively controls both sides
of the transactions, which allows income to be manipulated for political objectives; unquantified off-balance-sheet liabilities (for employee housing, schooling, or health care); a severe shortage of qualified accountants; lack of auditor independence (domestic auditors frequently are former internal accountants in the companies they now are auditing); and the essential absence of litigation risk for managers and auditors who hide losses.

Ball, Robin, and Wu study a sample of 1,625 Chinese income reports over 1992–98. This includes a subsample of 289 observations for companies with foreign shareholders, which are required to report two versions of income, one complying with domestic ASBE and the other complying with IAS. The data results show little correspondence with common-law financial reporting. Using the research design described above, the regression slopes of accounting income on proxies for economic gains and losses are both estimated as only 0.05, for both versions of reported income. That is, even when Chinese firms report under international accounting standards and their financial statements are certified by an international audit firm, their reported incomes are not timely in reflecting economic losses. This result confirms the futility of implanting exogenously developed accounting standards into a complex, complementary commercial infrastructure.

Far too much attention has been given—both by academic accountants and by policymakers—to bringing China’s accounting standards into line with the best international practice. There are three primary reasons for holding this view. First, the greatest potential contribution of an efficient accounting system in China today involves its domestic, not international, uses. Almost all of China’s economic activity is domestic and is undertaken by inefficient state enterprises. Developing accounting systems for internal control and performance measurement within these organizations must be a high priority. China has substantial problems with bribery, fraud, and asset expropriation, which an independent, accurate accounting system could reduce. Training an independent accounting profession for domestic purposes must be another high priority. Second, encouraging companies to attach the IAS label to what, in fact, are low-quality financial statements dilutes the IAS brand name, possibly with the unintended con-

sequence of reducing the quality of financial reporting in China as well as internationally. Third, focusing on standards diverts attention away from the complex task of reforming the complementary infrastructure required to affect financial reporting practices. 58

An efficient financial reporting and disclosure system seems unlikely to emerge in China without significant reforms in the following areas:

—Ownership: reducing state and family control of enterprises, while developing a liquid capital market with substantial private investment,
—State-owned enterprises: making managers more accountable for the assets under their control and for their performance,
—Bankruptcy law: requiring perennial loss-makers to close their doors,
—Politics: reducing the effect of politics on corporate disclosure,
—Tax system: separating tax reporting as far as possible from financial reporting,
—Product and factor markets: deepening product and factor markets by minimizing the number of related-party transactions to combat the manipulation of financial information,
—Off-balance-sheet liabilities for housing, health care, and education: clarifying off-balance-sheet liabilities to improve the reliability of financial disclosures,
—Training of accountants: rebuilding the accounting profession, which essentially was dismantled during the Cultural Revolution,
—Auditor independence: severing the strong unofficial ties that frequently exist between the auditor and the audited firm, and
—Legal system: exposing managers and auditors to genuine costs of financial misreporting.

Again absent from this list is a better set of formal accounting rules. China’s experience is that this is not a sufficient remedy. In my view, the priorities lie elsewhere, including strengthening the incentives of managers and auditors to improve financial reporting and disclosure practice and increasing the demand for implementing better accounting methods.

58. If one had to start somewhere, in my view the most effective place would be with increasing the expected cost to managers and auditors of misleading financial reporting, particularly of failing to report losses. Improved financial reporting would ensue, which in turn would require firms to follow better accounting practices (which then could be formulated as accounting standards). Doing it the other way around—improving standards without changing incentives—seems futile.
On the Economics of Accounting Standards

When the issue of improving financial reporting arises, the literature on international accounting puts nearly all its eggs in one basket: formal accounting standards. For example, if a country has no accounting standard requiring companies to book liabilities for health care obligations to its retired employees, it generally goes unquestioned that financial reporting in that country would be enhanced by mandating such a standard. Another—currently prominent—example of the focus on standards is the faith that is placed in the efforts of the IASC to develop a complete set of internationally acceptable, high-quality, formal accounting standards.

This focus on standards is strange, considering that no work (to my knowledge) has been done on the economics of accounting standards. Various questions are yet to be resolved:

— Why does a country have uniform accounting standards that are mandatory for all public companies?
— Do uniform standards emerge in unregulated financial reporting markets?
— Do uniform standards exist because they are economically efficient as a consequence of increasing returns to scale in determining optimal standards (that is, due to a predominance of fixed costs)?
— Is the economic function of accounting standards analogous to the function of mandatory standards established by franchise companies (for example, the standards of McDonald’s Corporation for food quality, cleanliness, style, and so forth) for all its franchisees?
— Is the economic function of accounting standards different than other professional standards (such as engineering and medical standards)?
— What determines the optimum degree of detail in accounting standards?
— What is the role of uniform accounting standards in reducing audit “opinion shopping” by managers?
— When it sets uniform standards for U.S. financial reporting, is the FASB a regulator, an efficient professional body, or both?
— How different would U.S. standards for financial reporting be if there were no Securities and Exchange Commission?
— How do formal accounting standards interact with a country’s institutional financial reporting and disclosure infrastructure?
The issue of accounting standards has to be viewed in the context of the market for public financial reporting and the political influences on it. In East Asia and China, the low quality of financial reporting arises endogenously from the surrounding infrastructure. That infrastructure creates a demand for low-quality financial reports, which managers and auditors supply. The adoption of high-quality accounting standards in such an economic and political environment then has limited effect on the quality of financial reporting and amounts to mere window dressing.

The insufficiency of accounting standards can be illustrated by the hypothetical case of a country with no accounting standard for health care obligations to retirees. Mandating such a standard could reduce the quality of financial reporting in that country, if the economic and political environment encouraged managers to use this as another way of manipulating reported income.\(^59\) In general, the outcome of a new accounting standard is likely to depend on its interaction with the underlying economic and political determinants of firms’ financial reporting practices.

Why does the international accounting literature tend to assume that better accounting standards lead to better financial reporting practices? Perhaps the underlying assumption is that the same causality holding in common-law countries also holds in others. Under common law, new standards arise because there is a demand for them. Furthermore, there are costs of not following generally accepted standards, in the form of higher contracting costs (including the cost of capital) and higher litigation costs. In common-law countries, new standards tend to be effectively implemented in practice. However, mandating the same standards will not have the same effect on financial reporting practice in an economic and political environment with predominantly private contracting and without litigation.

**Implications for IAS**

Perhaps as a consequence of the literature’s focus on standards, the alleged gains from international accounting standards have been taken

\(^59\) For example, by varying the rate used to discount the liability, which can have a substantial effect on the balance sheet liability and a very substantial effect on reported income.
largely for granted by accounting researchers and have not been rigorously investigated. This, too, is strange, especially in light of the immense amount of effort that academic and professional accountants have put into promoting IAS.

The potential gains for countries adopting IAS are claimed to be the following:

—Enhanced comparability of accounting standards across countries. More uniform standards enhance the comparability of financial statement information, leading to lower risk or lower information costs to cross-border lenders, investors, analysts, and other users.

—Higher quality of accounting standards in low-quality countries. Countries with low-quality standards will increase the quality of their financial reporting by adopting higher-quality standards, leading to a more efficient system of financial reporting.

—Lower cost of setting standards. IAS are public goods, and smaller countries, in particular, will find it cheaper to copy them than to maintain their own standard-setting bodies.

I approach these claims with skepticism. First, greater uniformity of accounting standards seems unlikely to achieve greater comparability of financial statements so long as differences in the economic and political infrastructures determine financial reporting in actual practice. Comparability of the financial statements that firms issue under IAS would only occur if managers and auditors faced the same economic and political demands internationally. Endorsement of IAS by the International Organization of Securities Commissioners would not accomplish this. Second, higher-quality standards do not automatically lead to higher-quality financial reporting, as experienced in East Asia and China. Third, the notion that IAS are public goods has some disturbing consequences, to which I now turn.

Why, then, would a country such as China, in which the economic and political infrastructure militates against high-quality financial reporting, announce that it requires all firms to follow high-quality accounting standards? I believe the answer lies in the well-known signaling model of Spence: it is essentially costless to do so. If there is no cost of signaling

60. Ball (1995). Feasibly, it can lead to reduced financial statement comparability, as the health care liability in the previous section demonstrates.

quality, all rational actors signal that they are high quality, so the signal loses its discriminatory informativeness. The cost to a country of adopting IAS as its accounting is economically trivial, provided it changes little else. The claim that using IAS is cheaper than using domestic standards even implies a negative signaling cost. The predicted consequence is that low-quality countries will seek to hide among high-quality countries by adopting IAS, while at the same time continuing to issue low-quality financial statements.

The IASC appears to have encouraged a broad cross section of countries to adopt its standards. In doing so, it does not appear to have discriminated on the basis of the economic and political determinants of the quality of financial statements. Nor could it do so even if it desired: although its constitution empowers it to promulgate IAS standards, it possesses no mechanism for enforcing quality. It has not acted to protect its brand name, nor can it. As a signal of quality, the IAS label has doubtful equilibrium value, to say the least.

The question then arises as to how a high-quality reporting and disclosure company can signal this effectively. The principal option now available to a company desiring to credibly signal high quality is to list its stock or issue an American depositary receipt in a common-law jurisdiction, such as on the London or New York exchanges, thereby exposing itself to the risk of litigation if it fails to disclose material adverse information. As distinct from merely adopting IAS, U.S. GAAP, or U.K. reporting standards, listing one’s stock in a common-law country carries a positive cost and thus is a more credible signal of information quality. There is reason to have faith in the private incentives of companies to act this way. As the notorious case of DaimlerBenz shows, listing in New York can be driven by product-market competition: low-quality reporting and disclosure reduce the efficiency of a company’s governance and thus is a competitive disadvantage.

62. Countries adopting IAS are listed at www.iasc.org.uk/frame/cen1_12.htm. The list includes many countries that have adopted IAS by fiat, but that have reputations for corruption and poor financial reporting and disclosure practices and no apparent incentives for managers and auditors to change their behavior.
63. The case is described in Ball (1998).
The Important Role of Litigation Rules

Institutional complexity suggests skepticism of piecemeal attempts to improve corporate financial reporting and disclosure. However, if one had to start somewhere, a good place would be with liberalizing the rules governing stockholder and lender litigation. Litigation risk motivates managers to disclose their bad decisions and report their losses in a timely fashion. It also motivates auditors to ensure the transparency of financial statements. In the absence of an efficient system of private detection and penalization of inadequate disclosure and reporting, other institutional changes seem doomed to failure. Government systems of detection and penalization, when coupled with substantial limitations on private litigation, reduce the efficiency of a country’s financial reporting and disclosure system and thereby suppress the development of economically efficient public corporations and public securities markets, as well the economy at large.64

Complexity implies that it is more effective to attempt wholesale change in the infrastructure of financial reporting and disclosure or at least to work on most facets simultaneously. The importance of stockholder and lender litigation rights is that they are the means of enforcing a market system of corporate financial reporting and disclosure, and effective litigation rights cause other institutional features (such as independent auditors and high-quality accounting standards) to emerge endogenously in a market system.

Suggestions for Future Research

There are three areas in which the accounting literature is deficient from the perspective of analyzing the requirements of financial reporting infrastructure internationally.

First, the contemporary research literature focuses on share market uses of accounting information. Some attention is given to long-term debt markets, management compensation, taxation, and particular industries such

64. The culprit is restrictions on private litigation, such as statutory limitations on parties who may litigate, on formation of classes, and on the size of damage awards. In the United States, the SEC undertakes statutory (criminal) litigation but works in parallel with private (civil) securities litigation.
as insurance and banking. Scant attention is given to many topics that are of interest internationally, including the quality of internal information reported to business unit managers, the relation between internal and public financial reporting, and the role of independent and reliable financial accounting in mitigating bribery and fraud (including asset expropriation by managers, employees, and influential shareholders).

Second, when focusing on the equity market, economic analyses of accounting have tended to approach the topic in terms of the effect of disclosure on the cost of equity capital, including its effect on bid-ask spreads and transaction costs. This ignores the important economic role of financial information in corporate governance. For example, timely incorporation of economic losses on financial statements reduces agency costs by more effectively monitoring managers who otherwise would continue their loss-making investments and strategies. In other words, the quality of financial reporting and disclosure affects the production and investment decisions of managers, and the cash flows they generate, in addition to the capital costs at which those cash flows are discounted. High-quality reporting and disclosure have evolved as an important mechanism of corporate governance, in common-law countries especially.

Third, in the international accounting area, there is a strong focus on accounting standards, including the development of international accounting standards. This focus is surprising in light of the scant literature on the economics of accounting standards: on issues such as why standards exist, what determines the extent to which they are followed, what are the costs of falsely signaling the quality of one’s standards, and why standards vary across firms, industries, countries, and time.

In many ways, the economic analysis of accounting is still in its infancy, and the properties of an efficient financial reporting system are poorly understood.
Comment and Discussion

Comment by Christian Leuz: In his paper, Ray Ball outlines infrastructure requirements for an efficient accounting and disclosure regime. He emphasizes that the accounting and disclosure system is embedded in the country’s institutional infrastructure. That is, the existing infrastructure determines the demand for accounting and disclosure, which in turn determines the properties of the optimal accounting and disclosure system. In this sense, accounting and disclosure are endogenous and complementary elements of the country’s economic, legal, and political infrastructure.

The complementarities among the different components of a country’s infrastructure imply that isolated changes in the accounting and disclosure system (for example, adopting international accounting standards) are unlikely to be effective. Concurrent modifications of the complementary elements are necessary to change the accounting and disclosure practices of firms. Therefore, the suggested infrastructure requirements for an efficient accounting and disclosure system are necessarily extensive. They comprise essentially the entire economic, legal, and political framework and pertain, in particular, to corporate governance, ownership and financing structures, legal enforcement, litigation rights, and shareholder and bondholder rights. The paper discusses several empirical studies presenting evidence from European and Asian countries that supports these arguments.

With respect to accounting and disclosure, Ball highlights two characteristics of an efficient financial reporting system: verifiability and asymmetry. Verifiability implies that financial reporting is based on transactions and events that are ex post observable by independent third parties (for example, auditors and courts) and not based on managers’ expectations or
beliefs. Ball argues that disclosure of ex post financial information holds managers accountable and generates ex ante positive externalities for their decisions and voluntary disclosures.

Asymmetry implies that economic losses (but not gains) are reported in a timely fashion. Ball argues that asymmetry improves corporate governance and debt contracting. The timely recognition of economic losses requires adverse information about future cash flows, which typically resides with managers and is based on expectations. Thus asymmetry in financial reporting relies on nonverifiable information, which is a significant modification of the verifiability requirement. Ball points out that exposure to litigation (for not disclosing material information) is a way to enforce the timely recognition of economic losses and to make disclosures of nonverifiable information credible. He therefore argues that litigation is an essential requirement for an efficient disclosure system.

In summary, the paper is most insightful. It has several important messages for standard setters, regulators, and politicians contemplating changing their country’s accounting and disclosure system. In highlighting the links between various elements of the infrastructure, Ball warns us about the difficulty and complexity of changing firms’ accounting and disclosure practices. He also points out that the policy debate may have focused too narrowly on accounting standards, thereby overlooking the importance of supporting institutions in other parts of a country’s infrastructure.

The remainder of this discussion reinforces some of the arguments that I find particularly important. It highlights the underlying premises of these arguments and draws attention to some unresolved questions and areas for future research.

Verifiability and the Trade-off between Relevance and Reliability

The first criterion heavily emphasizes the need for audited financial information to be independent of managers’ expectations and hence manipulation. Although I agree with Ball’s assessment in general, there are only very few instances where we can record a transaction without any implicit assumptions about the future. When recognizing sales on account as revenue, we assume that customers eventually will pay the firm. And when recording the purchase of an asset at its acquisition costs, we implicitly presume that the investment will generate future cash flows sufficient to justify those costs—otherwise we would have to recognize a loss at the
acquisition. Thus even in areas, like revenue recognition, where the trans-acquisitions themselves seem easily verifiable, accounting measurement relies on expectations about the future and hence requires information that these assumptions are warranted. As this information generally resides with managers, accounting measurement is always based to some degree on managers’ expectations. This affords discretion to managers and hence some room for manipulation, which is evidenced by the fact that earnings management frequently occurs in the area of revenue recognition.

Accounting generally involves trading off the relevance and verifiability of information. The precise nature of this trade-off depends on the use of accounting information. But going too far in either direction generally results in accounting numbers that are not useful. Managers have valuable information, and putting too much emphasis on verifiability is likely to forgo much of this valuable information. Conversely, putting too much emphasis on relevance is likely to result in accounting numbers that are easily manipulated.

The main question is, therefore, “How can we incorporate valuable information that resides with managers in financial reporting?” Here, we need to think not only about monitoring and enforcement but also about providing incentives to managers to disclose their information truthfully. The asymmetry criterion essentially concedes this point—at least with respect to economic losses. It states that we have to find ways to incorporate into financial reporting adverse changes in managers’ expectations about the future. This brings me to the following question.

Is There a Fundamental Asymmetry between Economic Gains and Losses?

Ball argues that asymmetry follows from debt contracting and managerial horizon problems. But even considering these settings, it is not obvious why accounting should recognize only economic losses in a timely fashion.

Why should debtholders want information primarily about economic losses and not also about (potentially offsetting) economic gains? As Ball points out, an asymmetric accounting treatment of losses and gains results

65. See, for example, Gjesdal (1981).

66. The “value relevance criterion” seems to overlook this trade-off and focuses too narrowly on the relevance of accounting numbers. See also Ball’s critique.
in tighter debt covenants and in earlier transfers of decision rights to debtholders due to covenant violations. But tight debt covenants are costly if they unnecessarily restrict the firm’s investment and financing policy or trigger unnecessary renegotiations between the firm and its lenders, in particular for public debt agreements typically involving a large number of debtholders. Furthermore, transferring decision rights too early is likely to be dysfunctional if debtholders may act opportunistically as well.

Can managerial incentive problems explain an asymmetry between gains and losses? Ball argues that the timely incorporation of losses reduces *over-investment* problems. That is, accounting standards that charge economic losses against income in a timely fashion make it harder to pass on poor investments to the next manager. This is likely to reduce horizon problems associated with *negative* net present value projects. However, the timely incorporation of economic gains should have a similar effect on horizon problems that lead to *under-investment*. That is, recognizing gains in a timely fashion should reduce the likelihood that managers will forgo *positive* net present value projects simply because of a spillover to the next manager.

Thus neither the debt contracting nor the corporate governance perspective provides an obvious rationale for asymmetry in accounting and disclosure. Are there any other reasons? Maybe economic losses are easier to audit than gains? Fundamentally, however, I do not see a difference. Gains and losses arise from changes in the expectations about future cash flows, and both are inherently difficult to verify. There would be a difference if managers’ incentives were asymmetric. For instance, gains would be more difficult to audit than losses only if managers were more likely to overstate than to understate earnings. But in a multiple-period setting, this is not obvious. Managers’ incentives typically depend on the firm’s financial situation. That is, in bad times, managers have incentive to hide losses. But in good times, they are inclined to “bank” some gains, as this facilitates hiding losses in future years. Therefore, allowing managers to recognize economic losses may afford them discretion to charge excessive losses in good years.

Moreover, if managers had an obvious tendency in either direction, the contracting parties and market participants could back out the bias—at least on average. Undoing the bias, however, is not possible when there is

uncertainty about managers’ incentives. That is, earnings management is a problem precisely when it is not clear whether managers are likely to overstate or understate earnings.

Finally, there is the argument that it is easier in court to claim damages due to hidden losses versus hidden gains. Although this may be true empirically, the argument is not compelling—at least not conceptually. There are two sides to every transaction. Why is buying a share at 30, which would have been at 25 had the loss been disclosed, different from selling a share at 25, which would have been at 30 had the gain been disclosed? And why would it not be beneficial for the legal system and courts to enforce the timely recognition of both gains and losses? These are largely unresolved questions.

To be sure, conservatism in accounting is pervasive around the world. Thus there probably are economic reasons for the proposed asymmetry. However, more research is necessary to fully understand these reasons.

On the Informational Efficiency of the Accounting System

Ball’s paper sketches infrastructure requirements for an efficient accounting and disclosure system. However, it is important to bear in mind that these infrastructure requirements are geared toward systems where information asymmetries are resolved via public disclosure and contracts. Ball points to the code-law countries in Europe and stresses that there are other means of resolving information asymmetries. This implies, however, that the infrastructure requirements presented are not universal. They are appropriate if the goal is a financial system with deep public debt and equity markets. In such a system, for instance, exposure to shareholder litigation is a key ingredient in enforcing truthful disclosures.

In an insider system, however, this may not be important, as the key parties are likely to have other means of ensuring the veracity of the information. Moreover, a system that provides relevant parties with private access to information does not rely on public disclosure, but it may be informationally efficient. For example, in Germany, auditors produce a so-called “audit report.” This report is not published but generally is furnished to the firm’s board members as well as key lenders. It is very

68. See Fischer and Verrecchia (2000).
69. The application (or enforcement) of conservatism varies greatly around the world. See Ball, Kothari, and Robin (2000); Ball, Robin, and Wu (2000).
comprehensive and contains (audited) information that is generally not publicly available in disclosure-based systems.

Thus, in principle, the relevant parties can be just as informed in a well-functioning “insider system” as they are in an “arm’s-length system.” So, in evaluating the efficiency of the country’s accounting system, standard setters and regulators should ask how well the relevant (financing) parties are informed.⁷⁰ Focusing on this question is likely to reveal the weaknesses of the existing system. It also should help to identify necessary changes in the infrastructure if the goal is to transition to a different system with a different set of relevant parties (for example, to bolster arm’s-length investors in the economy).

Finally, even though the global as well the financial system of many countries seems to be evolving toward an arm’s-length system, it is worth asking whether deep public debt and equity markets and their infrastructure requirements are the right starting place for emerging-market economies. This question is particularly important in light of the complexity of the requirements and the difficulty of change that Ball warns us about. For emerging-market economies, more basic issues may have to be addressed first. Here, Ball’s comments on the role of accounting in limiting bribery, fraud, and asset expropriation are particularly noteworthy, and his empirical work on the four East Asian countries and China provides important and very powerful lessons.

**Code versus Common Law: On the Importance of Legal Origin**

This comment more generally addresses the recent emphasis on the legal origin of country in the finance literature. What makes the legal origin so special? Does it determine the financial system including accounting and disclosure?⁷¹

The distinction between code law and common law is convenient and works well in many empirical studies.⁷² The reason is that the variable captures combinations of important institutional features. As Ball notes, it separates countries into two groups with different approaches to resolving information asymmetries. However, the focus on the legal origin as a

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⁷¹ Recent work by Rajan and Zingales (2000) tracking measures of financial development over time casts doubts on the legal origin as a major determinant.
⁷² See, for example, Ball, Kothari, and Robin (2000).
determinant can be misleading. Rather, we should identify the underlying factors and focus on those in the analysis. The following two examples illustrate this point.

Recently, Germany has exhibited a strong movement toward a “shareholder value” or arm’s-length system. There are changes in the legal rules pertaining to bankruptcy, capital markets, corporate governance, auditor liability, and accounting. The legal origin, however, has not changed. It is more likely that financing needs of the German economy are responsible for the recent changes. That is, the legal infrastructure appears to respond to recent changes in financial patterns. Moreover, complementarities in the infrastructure imply that once sufficient changes have been made, there are strong economic forces to make the remaining changes. Understanding these forces and the necessary changes is the challenge.

As Ball points out, an important difference between the so-called common-law and code-law countries is that the latter treat violations of the code as a criminal matter. This is not a problem per se; in fact, it may even be an advantage, as criminal punishment is not subject to monetary constraints imposed by the limited liability of managers or the firms. But treating violations as a criminal matter implies that government agencies have to enforce the law, which raises the question whether they have an incentive to do so.

Again, Germany provides an interesting example. German firms prepare separate financial statements for tax and capital market purposes. In the past, however, the links between financial and tax accounting were fairly strong, which meant that the tax authorities essentially enforced financial accounting (and, due to the fiscal interest of the government, presumably prevented extreme forms of conservatism). More recently, these links have weakened, which has resulted in a lack of enforcement of (consolidated) financial statements, that is, those presented to the capital markets.

73. See for example, La Porta and others (1997, 1998).
74. Starting at the time of reunification in 1990 (until recently), Germany’s net capital imports exceeded net capital exports, whereas before, Germany had been exporting capital for a long time and on a fairly large scale. See Bundesbank Statistics, www.bundesbank.de.
75. The link between consolidated financial statements (or group accounts) and tax statements is more implicit than explicit. Consolidated statements are legally the basis neither of taxes nor of dividends. The frequently cited explicit link between German financial reporting and tax accounting pertains primarily to the parent-only statements (or individual accounts), which are separate from the consolidated statements.
In contrast, in the so-called common-law countries, litigation provides explicit monitoring incentives to investors because damages may be awarded if investors can prove a violation of the law. But, again, the legal origin is not the key factor: rather, it is the possibility of litigation. So the debate should focus on the enforcement problem and on litigation as a mechanism for enforcement.

Additional Areas for Future Research

Ball’s paper points to several important areas for future research. I share his assessment that “in many ways the economic analysis of accounting is still in its infancy.” I therefore propose some additional areas for future research:

—Conservatism and the fundamental asymmetry between gains and losses. Conservatism is one of the oldest accounting principles, and it can be found in most accounting systems. Given that it is so pervasive, it is likely to serve a purpose. But so far, it has been difficult to provide compelling reasons for the asymmetric treatment of gains and losses.

—Managerial incentives to disclose. Most of the research has focused on the incentives of firms (but not of managers) to disclose. For instance, there is very little empirical research on the link between disclosure and managerial compensation.

—Enforcement. Enforcement is another area where more research is needed. To my knowledge, it is not yet well understood in which circumstances we need enforcement of accounting and disclosure by government agencies (like the U.S. Securities and Exchange Commission), under which conditions exposure to litigation is sufficient, and when we can rely on reputation-based mechanisms.

General Discussion: Participants pressed the author to identify the steps he recommends for reforming disclosure policies. Ray Ball responded that common-law countries achieved functional disclosure systems through gradual institutional evolution and encouraged policymakers to push forward on all dimensions, including passing bankruptcy laws, improving the court system, increasing the independence of audit firms, and improving and increasing the training of auditors. He also recommended class action and stockholder litigation rights as an optimal point of departure but suggested that reform not begin with accounting standards because many
countries have little demand for or ability to implement international accounting standards. The most important question, however, is whether government or the markets run the disclosure system. Government systems can end up serving objectives other than efficient disclosure, whereas firms must disclose losses in a timely fashion if the market is the driving force. Class action litigation is one way, in Ball’s view, that markets work to enforce disclosure.

Other participants disagreed, pointing to the unfavorable view that other countries have of the U.S. litigation system. Indeed, one participant asked Ball whether countries moving toward a market-based system of disclosure should adopt different standards for fraud to avoid excessive exposure to lawsuits. Ball responded by disagreeing with the view that the United States has too much litigation and noted that the Securities and Exchange Commission (SEC) has no system of its own for monitoring disclosure, relying instead on the market.

This view, too, was contested during the discussion. Several participants noted that the SEC does not just rely on the plaintiffs’ bar to detect fraud and instead has its own investigative staff. One participant proposed that foreign governments would be best served if they recognized the limitations of litigation as an enforcement tool and developed enforcement capability within their securities agencies. Ball countered that the SEC piggy-backs on a particular type of private sector market system and would not function the same way in another economic or political system.

Ed Kane requested Ball’s opinion on the importance of the effort of the International Monetary Fund to evaluate data standards for banks and asked whether this would lower the cost of borrowing. Ball responded that the problem with poor financial information is the impossibility of enforcing agreements allowing for the transfer of corporate governance rights from managers appointed by shareholders to agents appointed by lenders.
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