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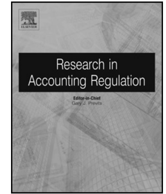

Regular Paper

Developments in accounting regulation: A synthesis and annotated bibliography of evidence and commentary in the 2011 academic literature

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A B S T R A C T

In this article, we synthesize in annotated bibliography form, recent regulation-related findings and commentaries in the academic literature. This annotated bibliography is one in a series of bibliographies that summarizes regulation-related academic research. We reviewed academic outlets such as *The Accounting Review*, *Journal of Accounting Research*, *Journal of Accounting and Economics*, *Contemporary Accounting Research*, *Accounting Horizons*, *The Journal of Accounting, Auditing & Finance*, *Journal of Accounting and Public Policy*, *Journal of Business, Finance & Accounting*, *Auditing: A Journal of Practice and Theory*, and *Research in Accounting Regulation*. We annotate results of regulation-related research studies and key points from regulation-related commentaries.

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Introduction

In this article, we develop an annotated bibliography of research findings in the 2011 academic literature that relate to accounting regulation. We reviewed key academic outlets including *The Accounting Review*, *The Journal of Accounting Research*, *The Journal of Accounting and Economics*, *Accounting Horizons*, *The Journal of Accounting, Auditing & Finance*, *The Journal of Accounting and Public Policy*, *The Journal of Business, Finance & Accounting*, *Auditing: A Journal of Practice and Theory*, and *Research in Accounting Regulation*. While research in these journals is aimed primarily at informing the academic audience, the findings are often relevant to the regulatory debate. To this end, our paper provides a convenient and detailed summary and analysis of the regulation-related literature for the benefit of practitioners and regulators, and a comprehensive literature overview for academics.

Our time period for this article is 2011. Obviously, we could not review every article related to the regulatory debate. However, we have tried to identify and discuss the articles that are particularly relevant to the key regulatory topics during the year. As such, our annotations are categorized as follows:

Financial Accounting:

- Financial reporting – General
- The financial crisis
- Evaluating individual pronouncements and regulations
- International financial reporting standards

Sarbanes–Oxley and its impact on accounting and auditing quality:

- The value of the audit post-SOX
- The impact of SOX and the PCAOB on audit quality

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Table 1
Financial reporting general.

Madsen (2011)	Concludes that the financial reporting and auditing occupations are highly standardized and that the accounting dialogue is now dominated by the standard setters themselves. He expresses concerns about over-standardization of the profession.
DeFranco et al. (2011)	Develop an output-based measure of financial statement comparability and use the measure to provide evidence that financial statement comparability reduces the cost of acquiring information and increases the overall quantity and quality of information about the firm.
Demerjian (2011)	Provides evidence that the balance sheet approach and fair value have led to a decline in the usefulness of balance sheets for debt contracting purposes.
Badertscher and Burks (2011)	Find that catch up adjustments allowed in restatement circumstances have not reduced reporting delays.

- The impact of SOX on audit quality – internal controls testing
- The impact of SOX on accounting quality – corporate governance and audit committees
- Costs and unintended consequences of PCAOB compliance

Financial reporting: general

Accounting researchers continually assess the state of the financial accounting model (Table 1). Papers in 2011 examined qualities of accounting including standardization, comparability, complexity, timeliness, the balance sheet approach, and fair value reporting. Madsen examines the extent to which accounting careers and accounting procedures are standardized. He concludes that audit-related and financial reporting-related jobs are surprisingly standardized. Regarding the standard setting process, Madsen concludes that standardization has increased dramatically over the past several decades. Standardization has led to a decrease in participation in the accounting dialogue by those not directly involved in the standard setting process. DeFranco et al. develop a novel output-based measure of financial statement comparability and use the measure to provide evidence that comparability does lead to reduced costs of information acquisition and increases the quantity and quality of information available about a firm. Demerjian provides some evidence that the balance sheet approach coupled with a trend toward fair value has led to a decrease in the usefulness of accounting measures in the debt contracting process. Finally, Badertscher and Burks find evidence that reporting delays were not decreased following a regulatory decision to allow a catch up adjustment in lieu of full restatement.

Madsen (2011)

Madsen uses survey data gathered from U.S. workers (O*NET) to examine the degree to which the accounting occupation is standardized. The measure of standardization comes from the Occupational Information Network (O*NET), which is a database of information about professions developed by the U.S. Department of Labor. On the website are questions about the extent to which a person's job requires him/her to evaluate information to see if it complies with standards and questions about the relative complexity of the standards that are to be complied with. Madsen finds that accounting occupations most closely involved with financial reporting are unexpectedly standardized. In fact, the audit profession is shown to be highly standardized. The more mechanical functions in accounting such as bookkeeping are actually found to be less standardized. More complex tasks, more litigation risks, and increased professional legitimacy are shown to be positively correlated with more standardization.

Madsen also examines optimal standardization in terms of diversity of participation in the standard setting process. Suboptimal levels of standardization will have negative effects on the profession. Too little standardization can cause the work and the financial reporting to be too different across companies. Excessive standardization will stifle debate and innovation among members of the profession. The author examines standardization by examining citations from the widely used "Accountants Handbook" between 1923 and 2007. Citation of individuals from different groups is indicative of wider participation in the accounting dialogue whereas citation of primarily regulators would suggest high standardization.

He collects data on three accounting topics: financial statement form and content (expected to be highly standardized); production cost accounting (expected to be largely unstandardized); and intangible assets (controversial). Citations are categorized as referencing norms (e.g., case law, accepted practice, or business associations), experts (e.g., journals and researchers), the profession (e.g., American Institute of CPAs, the American Accounting Association, and the National Association of Cost Accountants), regulation (e.g., the Securities and Exchange Commission and the Interstate Commerce Commission), or standards (e.g., the CAP, APB, and FASB).

He finds that the standard-setters' influence increased slowly during the eras of the Committee on Accounting Procedure (CAP) and the Accounting Principles Board (APB) and then sped up during the era of the Financial Accounting Standards Board (FASB). The increased influence of the FASB is associated with a decrease in the participation in the accounting dialogue by other groups. Citations to standard setters for financial statements jump from 14% to 50% from the 1970 to the 1991 editions. Citations to standard setters for intangible assets were 5% in the 1970 edition and 40% in the 1991 edition. As expected, standard setters are rarely cited in the pages related to production cost accounting. Thus, Madsen finds an increase in standardization coupled with a decrease in participation in the accounting dialogue by non-standard setters. Madsen speculates on why increasing standardization has occurred. Potential reasons include that standard setters are evaluated on standards issued so they have incentive to issue more standards or that

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standard setters lack credible data and knowledge to determine optimal levels of standardization.

Finally, Madsen points out that he measures the crowding out of participants in the standard setter process as a cost of overstandardization, but there could be a larger cost in the form of lower quality accounting. He leaves this issue for future research.

DeFranco, Kothari, and Verdi (2011)

Past studies of financial statement comparability used inputs into the accounting system to measure comparability. DeFranco et al. develop a measure of financial statement comparability based on outputs and then test the value of financial statement comparability.

Firms are considered to have comparable accounting systems if similar financial statements generally result from a demonstrable set of similar economic events. They use stock returns to proxy for the net effect of economic events. They use accounting earnings as the output of the accounting system. Firms that demonstrate similar returns with similar economic conditions are deemed comparable. They demonstrate that their model predicts reasonably well the analysts' choices of comparable firms.

The next issue examined is whether financial statement comparability is a valuable quality. They find that analyst coverage is greater for firms with comparable financial statements. Forecast accuracy is also greater and dispersion of forecasts is less. Hence, comparability of financial statements appears to reduce the overall cost of acquiring information and increases the overall quantity and quality of information about the firm.

The authors believe that their measure could be used to identify shifts in comparability resulting from changes in measurement rules, reporting standards, accounting choice differences, or adjustments.

Demerjian (2011)

Demerjian observes a decline in balance sheet covenants in lending contracts and hypothesizes that the shift in standard setting toward the "balance sheet approach" has made the balance sheet less useful in contracting. The "balance sheet approach" emphasizes the valuation of assets and liabilities. Formerly, the net income determination held primacy. The philosophy has been accompanied by changes such as a preference for fair values. His theory is that debt contracting parties prefer conservative balance sheets with high verifiability to best predict the lower bound of the liquidation value of assets.

The author uses a sample of 8527 private lending agreements from 1996 to 2007 to test his hypothesis. First, he documents the decline in balance sheet covenant use over the period. The use of income statement covenants remained constant over the period. To examine whether accounting rules led to the reduction, he calculates a volatility ratio (VR) that measures borrower exposure to balance sheet accounting rules. The ratio is book value volatility over adjusted net income volatility. This ratio captures the magnitude of balance sheet adjustments such as mark-to-market investments and impairments recognition. He finds that higher VR ratio is associated with fewer balance sheet covenants. Thus, accounting changes appear to be associated with a change in the way lenders and borrowers contract.

Demerjian recognizes that there are other reasons for the reduction in balance sheet covenants. For example, Demerjian suggests that firms with asset bases concentrated in fixed assets are more likely to have a balance sheet covenant. Also, firms with loans that are likely to be securitized show a lower incidence of balance sheet covenant. The author controls for these factors when exploring any role of accounting guidance in the decline.

In conclusion, it does appear that the balance sheet approach with accompanying policies such as fair value accounting has led to a reduction in the usefulness of balance sheets for debt contracting purposes. In a discussion of the paper, Skinner (2011) opines that the evolution of standard setting is not fully captured in Demerjian's model. He concludes that there are still important unknowns regarding the economic determinants of debt contracts.

Badertscher and Burks (2011)

In a 2008 report to the SEC, the Advisory Committee on Improvements to Financial Reporting voiced concerns that investors faced a diminished information environment following a firm's announcement of accounting irregularities sufficient to warrant a restatement. Investors were potentially disadvantaged in two ways. First, the advisory committee asserted that following the initial disclosure of the irregularity, firms provided little guidance until the actual filing of the restated financial statements. Second, the process of revising or reconstructing the firm's statements was so time-consuming as to lead to delays in subsequent regulatory filings and earnings releases. In response, the Committee put forth a controversial proposal that, in lieu of a restatement, more firms should be permitted to use a cumulative "catch-up" adjustment. In this study, the authors examine the Committee's concerns and proposed solution by examining both the length and underlying causes of reporting delays for restatement firms.

The authors' examine 1315 firm restatements occurring from 1997 to September 2005. In addition to the GAO database, the authors hand-collect data on the firm's announcement date of the definitive (not estimated) earnings impact of the restatement. The authors find that the median interval between the restatement announcement and the earnings impact disclosure is 12 days and the time to SEC filing 23 days. Earnings announcement dates are delayed by a median of approximately 6 days relative to the prior period. For each measure of timeliness, sample mean values are considerably larger, indicating extreme observations of lengthy delays. The authors partition on the existence of fraud, as in these cases, large delays are more likely given the inherent difficulty of investigating the reliability of the firm's underlying accounting system. They find that the reporting delays for the fraud sample are significantly greater than the non-fraud sample, with the non-fraud median interval from initial disclosure to the financial impact only 1 day.

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Table 2
The financial crisis.

Linsmeier (2011)	Points to a role that limitations of accounting for banks played in the three banking crises of the past 25 years.
Bhat et al. (2011)	Conclude that accounting guidance to ease mark-to-market accounting requirements did reduce pressure on banks to sell securities into the liquidity shock.
Bertomeu and Magee (2011)	Develop a theory that links economic conditions and regulatory activity in accounting.

Various constituents expressed concerns that the expanded use of catch-up adjustments would lead to more aggregation and less transparency in these situations. Using a multivariate regression analysis, the authors examine the association between reporting delays and various proposed determinants (e.g. restatement characteristics, firm and auditor attributes). They find that reporting lags are positively associated with the existence of fraud, the length of the period covered by the restatement, and the magnitude of the earnings restatement. These characteristics differ greatly from the relatively small, simple restatements targeted by the proposed “catch-up” adjustment alternative. Thus, the authors conclude that the “catch-up” proposal has been largely ineffective at reducing reporting delays.

Financial reporting: the financial crisis

Research published in 2011 also addressed accounting's role in the recent financial crisis (Table 2). Linsmeier concludes that limitations in the accounting applied to banks played a role in several crises over the past 25 years (e.g., the S&L crisis, the Japanese crisis, and the U.S. banking crisis). Bhat et al. examine whether guidance that eased mark-to-market rules during the crisis were fruitful and concludes that the banks appear less likely to sell impaired securities into the liquidity shock. Bertomeu and Magee examine the way accounting regulation processes change in periods of positive and negative economic conditions.

Linsmeier (2011)

Linsmeier argues that limitations of accounting for banks played a role in the three banking crises of the past 25 years (the Savings and Loan Crisis of the late 1980s and early 1990s, the Japanese banking crisis of the 1990s, and the recent U.S. banking crisis). For example, in 2009, 140 U.S. banks failed. Virtually all of these banks failed banks reported substantial positive net worth on the balance sheet just 4–6 months before collapse and most of them were considered adequately capitalized by regulators. Linsmeier suggests that this is evidence that the amortized cost model of reporting loans and other financial instruments is not effective and a new accounting model for financial instruments is warranted. The revised model should provide better signals about the financial position and results of operations of financial institutions.

Banks are essentially collections of financial contracts, and some of these contracts can change in value rapidly. As was seen during the recent bank crisis, the accounting system should be able to identify deteriorations in value in a timely manner. Currently, banks report derivatives and marketable securities at fair value. However, they can still report the majority of financial instruments such as loans and many debt securities at amortized cost. These historic cost-based amounts are adjusted only when the instrument is deemed other than temporarily impaired. The other than temporary impairment determination requires judgment, and bank financial executives have not been effective at identifying these impairments and recording the on a timely basis. Linsmeier argues that banks should be required to report all changes in the values of securities in the financial statements currently.

Linsmeier points to two academic studies to provide evidence that fair values would better reflect the risks. Blankespoor, Burks, and Easton (2010) showed that bank leverage measured under a full fair value system reports is six times more highly correlated with a key measure of potential credit risk problems (the TED spread). Also, Hodder, Hopkins, and Wahlen (2006) show that income volatility measured using fair values is much more indicative of interest rate risk and other measures of market risk. Linsmeier does not call for the elimination of amortized cost-based reporting. Instead, he believes that information from both regimes is valuable and should be given equal prominence.

Bhat, Frankel, and Martin (2011)

The 2007–2008 financial crisis featured periods of market illiquidity that caused debt security prices to tumble. Under fair value accounting, many of these securities became impaired and had to be written down as a result. These losses caused banks' income and regulatory capital levels to fall precipitously. As a result, banks faced pressures to sell the mortgage-backed securities despite the depressed liquidity shock-induced prices.

In response to these concerns, the FASB issued three staff positions. FAS 157-4 updated FAS 157 to emphasize that measurements of fair value should reflect values from transactions in an orderly market. This guidance eased the mark-to-market rules. FAS 115-2 and FAS 124-2 updated FAS 115 and FAS 124. Under this guidance, “other than temporary impairment” losses through net income were only to be recorded when a firm intends to sell a debt security prior to recovery of the amortized cost of the security. If a firm intends to hold the security, only the portion of a value reduction related to credit need be recorded in net income. The rest of the reduction in the security's value was to be recorded in other comprehensive income. These regulatory actions were intended to dissuade companies from selling securities that are currently in a distressed state due primarily to temporary market illiquidity.

Bhat et al. examine whether these accounting rule changes made it less likely that banks would sell securities that are in a liquidity-induced distressed state. They use a sample of private and public banks over the period of

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Table 3
Evaluating individual pronouncements and regulations.

Anwer et al. (2011)	Find improved transparency following SFAS133's stricter categorizations of hedging or trading derivatives.
Lee (2011)	Concludes that SFAS 142 requirements for Goodwill improve representational faithfulness and do not promote opportunistic behavior.
Bens et al. (2011)	Develop a measure of "impairment surprise" and conclude that SFAS 142 may add noise to the information environment.
Guthrie et al. (2011)	Investigate opportunistic behavior surrounding the SFAS 159 fair value option.
Agoglia et al. (2011)	Find more aggressive reporting of leases under a rules-based environment in an experimental study of rules-based versus principles-based standards using financial executives as subjects.
Yuri et al. (2011)	Present the AAAFASC committee analysis of the current IASB/FASB exposure draft on lease accounting.
Ohlson et al. (2011)	Present the AAAFASC committee analysis of the current FASB proposal on revenue recognition, including an alternative model advanced by the committee.
Zhang and Zheng (2011)	Document a reduction in stock price mispricing following Regulation G implementation.

2006–2010. They find that banks did appear to be acting consistent with the "feedback effect" prior to the rule changes. The rule changes did appear to lessen these pressures. Upon easing of the mark-to-market rules, banks were less likely to sell into the liquidity shock. Banks with the most exposure to feedback effect pressures exhibited the change in sale likelihood. This is evidence that accounting rules do appear to have true economic consequences. Further, it is evidence that regulatory action in the face of these pressures was successful.

Bertomeu and Magee (2011)

Bertomeu and Magee observe that much accounting regulation has occurred during economic hardship (e.g., SEC Acts and Sarbanes–Oxley). They also note that resistance to regulation seems more intense prior to a recession as pre-recession eras have been marked by prominent debates on accounting standards (e.g., stock options in the middle 1990s and poolings of interest in the early 2000s). The authors endeavor to develop a theory for links between accounting regulation and economic activity. They are interested in whether accounting regulation differs based on economic conditions and whether economic conditions differ because of accounting variations.

They begin by describing how the demand for reporting quality varies as a function of the economic cycle. Their model uses a positive framework in which the regulators, who are subject to political pressure, respond to demands by borrowers and lenders at different points in the economic cycle. In good times, there is a large supply of high quality projects available for investment. Thus, the holders of high quality projects have the power and prefer high quality reporting so that investors and lenders will choose to fund their projects rather than the lesser quality projects. Thus, financial reporting is of higher quality and the unprofitable projects are detected and stopped.

As the economy softens, a higher supply of low quality projects results so the power can shift to these entrepreneurs (e.g., owners of bad projects prefer opaque reporting to avoid detection and the potential for project termination). As a result, there is less demand for high quality reporting and reporting deteriorates. In the low quality reporting environment, banks are less able to identify the high quality projects. Hence, an increase in lending results (more lending than during the earlier good times despite the worsening economic conditions). Sufficiently severe economic decline will lead banks to demand high quality reporting. In the absence of improved reporting, banks will be less willing to lend, thus impeding proper credit market function. This increase in reporting quality leads to higher detection rates for bad projects and amplifies the bad economy.

Interestingly, following periods of low quality reporting, banks will have a high quantity of bad loans on their balance sheets. This can lead banks to engage in lower reporting quality in an attempt to protect asset valuations and market values. Also, low quality reporting makes it more difficult for investors to detect the true state of the economy. This can cause a delayed response to regulatory choices and interest rates during a recession.

The authors also model particular accounting rules during different points in economic cycles. For example, they find that the historical cost of a loan is more accurate than the market value of the loan during the early stages of a recession. In a severe recession, market prices will better approximate the liquidation value of the loan. The market prices will understate the value of the loan in these times of crisis, but the value will be less understated than the overstatement inherent in the historical cost.

The authors acknowledge that this first study is explanatory only and examines only a small subset of the transactions. They encourage researchers to expand the understanding of institutional and economic determinants of reporting quality.

Financial reporting: evaluating individual pronouncements and regulations

Researchers addressed individual pronouncements and regulations through empirical studies and commentaries (Table 3). Anwer et al. find evidence of improved transparency following implementation of SFAS 133. Goodwill reporting under SFAS 142 was examined by Lee and by Bens et al. Lee's study finds evidence of improved representational faithfulness and no evidence of opportunistic behavior. Conversely, Bens et al. find additional noise in the information environment following implementation of SFAS 142. Guthrie et al. investigated adoption of the SFAS 159 Fair Value Option and do not find a pattern of opportunistic behavior, despite or perhaps because of the SEC's promise of heightened scrutiny. An experimental study by Agoglia et al.

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examined the reporting behavior of financial executives under either a rules-based or principles-based lease accounting standard. The findings indicate more aggressive reporting under the rules-based approach. The American Accounting Association's Financial Accounting Standards Committee (AAAFASC) provided analysis regarding two specific IASB/FASB proposals. Yuri et al. reported the AAAFASC's view on the IASB/FASB lease proposal, addressing key points of concern for the committee and Ohlson et al. presented the committee's suggestions regarding the IASB/FASB revenue recognition proposal, including a simplified alternative model. Finally, Zhang and Zheng analyzed Regulation G reconciliations between pro-forma and GAAP earnings and concluded that Regulation G has reduced stock price mispricing by improving the transparency of pro-forma reporting.

Anwer, Kilic, and Lobo (2011)

Anwer et al. examine the association between reported derivative strategies and bond spread in an effort to determine the impact of SFAS133 on bond investors' assessments of the bank's derivatives. SFAS133 requires a more precise designation of individual derivatives as either "hedging" or "trading", with the "hedging" designation reserved for those derivatives that are highly correlated with specific exposures. The authors posit that the tighter requirements of SFAS 133 will lead to lower bond spreads post-SFAS 133 as reported "hedging" derivatives are more clearly defined. They examine the relation between bond spreads and derivative strategies in the 2 year period before adoption of SFAS133 and the 2 year period following adoption of SFAS133. They use a sample of 141 US Banks.

The evidence supports the hypothesis that bond spreads were more negatively associated with "hedging" derivatives following the implementation of SFAS133 and evidence indicates that following implementation of SFAS133, bond spreads were more negatively associated with "trading" derivatives, a finding the authors attribute to the inclusion in the "trading" category of broader economic hedges that no longer qualify for the "hedging" category. The authors interpret the results as evidence that transparency has improved with SFAS133.

Lee (2011)

One of the most widely discussed ideas in the U.S. to come out of the accounting scandals at the turn of the 21st century was the promise held by a move away from rules-based standards toward a principles-based approach. Standards promulgated by the FASB following this time period frequently include the desire for principles-based guidance with an emphasis on representational faithfulness. SFAS 142 changed the reporting requirements for Goodwill, moving to a fair value-based approach, in line with the principles-based emphasis on representational faithfulness.

Lee examines goodwill in the period following SFAS 142 to determine if cash flow predictions are improved under the fair value-based approach to goodwill. The author uses a sample of 5447 firm-year observations in the pre-142 period and 8401 firm-year observations in the post-142 period to test the hypothesis that future cash flows are better predicted post-142. The empirical results support this hypothesis. Further tests are done in an attempt to discern how managers are using the discretion allowed by the SFAS 142 approach to goodwill valuation and impairment.

The results of these tests do not support an opportunistic behavior hypothesis or a signaling hypothesis, indicating that there is no significant opportunistic behavior associated with the goodwill impairment charge. The author concludes that the findings are consistent with the intent of the FASB regarding SFAS 142, in that the reported goodwill under SFAS 142 has greater representational faithfulness than reported goodwill before SFAS 142.

Bens, Heltzer, and Segal (2011)

The most notable changes to goodwill reporting under SFAS 142 are the exclusive reliance on impairment analysis and the elimination of systematic amortization. In this paper, Bens et al. examine the stock market reactions to the announcement of goodwill impairment pre-SFAS 142 and post-142. The authors compute impairment "surprise" as the difference between an expected impairment and the actual impairment. They measure the cumulative abnormal return associated with the impairment "surprise" event to discern any change in the informativeness of the goodwill impairment following SFAS 142.

The authors also examine how several informativeness-related findings from prior research were impacted by SFAS 142. These other empirical questions involve the information asymmetry environment (measured as analyst following), the complexity of the reporting requirements (measured as size of the firm), and complexity of the firm (measured as sales concentration).

The results indicate a significantly negative cumulative abnormal return following an impairment announcement across pre- and post-142, but a weakening of the market reaction post-142 for high information asymmetry firms and for large firms. They found no significant change for smaller firms or those in a low information asymmetry environment. The authors do not attempt to explain these changes, but suggest that perhaps the implementation of SFAS 142 has added noise to the reporting environment.

Guthrie, Irving, and Sokolowsky (2011)

Criticism that the fair value option permitted under SFAS 159 could be used opportunistically gained additional traction in the context of the 2008 financial crisis. Guthrie et al. examine a sample of SFAS 159 fair value option adopters to empirically assess whether firms made the choice of fair value reporting under SFAS 159 opportunistically.

The authors use data for 72 adopters of the fair value option to conduct an analysis of the current and future earnings, with the intent to discern opportunistic adoption of the fair value option. They find no evidence that the sample firms systematically used the fair value option to improve performance and conclude that the adopters appear to have followed the intent of the standard.

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It is noted that the results could also be a reflection of the regulatory intervention that occurred shortly after the early adoption period wherein the SEC essentially promised extra scrutiny over concerns of opportunistic exercise of the fair value option. In addition the authors note that the financial crisis of 2008 may have rendered any benefits of the fair value option moot for purposes of opportunistic behavior for current earnings. The study includes analysis of disclosures made by individual adopters, and future research avenues are also discussed.

Agoglia, Doupnik, and Tsakumis (2011)

Agoglia et al. examine the reporting behavior of preparers under principles-based versus rules-based standards in this study. The authors conduct two experiments using a sample of financial executives to examine the relation between standards precision and reporting decisions in the presence of a weak or strong audit committee. Standards precision is manipulated as more precise (a rules-based approach) and less precise (a principles-based approach) in a lease accounting setting and subjects are tasked with choosing to report a lease as an operating or capital lease. The authors define aggressive reporting in the experimental setting as choosing operating lease treatment over capital lease treatment.

In the task of lease classifications, the respondents were more likely to report aggressively in the more precise setting, consistent with the authors' predictions. The presence of a strong audit committee reduced the aggressive reporting in the more precise setting. The respondents in the less precise standards setting were not influenced by the audit committee. The authors interpret the results as supporting the idea that the aggressive reporting is impacted more by precision of the standard than by audit committee strength.

Overall, the evidence in this paper suggests that principles-based reporting in the presence of a strong audit committee leads to less aggressive reporting than rules-based reporting.

Yuri et al. (2011)

The American Accounting Association Financial Accounting Standards Committee (AAAFASC) provides comments on the IASB/FASB's proposed lease accounting guidance. The discussion covers the weaknesses in current lease accounting and the committee's perspective on the proposed lease accounting model. The committee raises concerns regarding the continuation of differential treatment between lessors and lessees under the proposed model. Relevant prior research is used to raise questions regarding the usefulness of terms such as "more likely than not to occur" as a deterrent to management manipulation. The committee then discusses five key components of the proposed lease accounting model: the definition of a lease, the initial and subsequent measurement at fair values, the lessor's accounting, the recognition and income measurement impacts of the proposed model, and the reported lease elements' impact on common accounting ratios. Throughout the discussion the committee references relevant prior research to support its position.

Regarding the definition of a lease under the proposed rule, the opinion of the committee is that opportunities for structural manipulation remain given the distinguishing characteristics provided for treatment as a lease. Initial and subsequent measurement issues are discussed, with the committee advocating the use of the risk free rate to discount cash flows, and highlighting the potential disconnect between assets and liabilities that will occur under the proposal. The committee supports a single accounting approach for the lessor rather than the two treatments provided in the proposed model, citing structural opportunities under treatments and the benefits of symmetry between the lessee and the lessor treatment. Differences in lease recognition and income measurement between lessee and lessor present potential problems for consolidations and for tax treatments. Finally, the impact on commonly used accounting ratios is discussed. The committee concludes that while the IASB and FASB continue to address issues raised in the exposure draft, the proposed model still requires substantial modification before issuance.

Ohlson et al. (2011)

In this comment piece, the American Accounting Association Financial Accounting Standards Committee (AAAFASC) addresses the current FASB and IASB revenue recognition proposal. The committee discusses the well documented problems with the existing revenue recognition guidance and comments on the low likelihood of improvement with the proposed model. A framework for a generic, straightforward revenue recognition model is provided which uses concrete language and understandable descriptions.

In contrast to the FASB/IASB proposed standard which emphasizes the balance sheet valuation of performance obligations, the AAAFASC framework (which the authors distinguish as the forerunner to specific standards) emphasizes income measurement and comes from a traditional historical cost perspective, drawing upon conservatism as the driver for profit recognition. In this framework, revenue recognition is tied to customer payment (as defined in the paper) and profit is tied to the resolution of uncertainty. The paper does a thorough job of describing the model and provides a useful comparison between the AAAFASC framework and the FASB/IASB model and includes an illustration of the AAAFASC framework.

Zhang and Zheng (2011)

SEC Regulation G (Reg G) requires companies to provide a quantitative reconciliation of pro forma earnings to GAAP earnings. Zhang and Zheng investigate the relation between stock mispricing (a measure based on the correlation between pro forma earnings disclosures and abnormal returns) and Reg G reconciliation quality. The authors model the determinants of reconciliation quality and use the residual from this model as the measure of quality. *Pro forma* disclosures are then put into a low (below the median) or

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high (above the median) quality category for the analysis of stock mispricing.

The relation between stock mispricing and reconciliation quality is examined in periods before and after Reg G and the results indicate significant mispricing in the low reconciliation quality category in the pre-Reg G period. In the post-Reg G period, there is no evidence of an association between mispricing and reconciliation quality. Additional tests are conducted to exclude competing explanations and the authors conclude that their results are consistent with the SEC's contention that reconciliations under Reg G reduce mispricing.

Financial reporting: international financial reporting standards (Table 4)

The 2005 European Union (EU) mandatory IFRS adoption provided a rich natural setting for researchers interested in the effects of harmonization and the potential for improvements to US earnings quality. DeFond et al. and Tan et al. examine changes to comparability following the mandated harmonization, with authors in both studies concluding that comparability can be improved with harmonization when enforcement is strong and the change in standards is significant. Byard et al. consider the information environment of analysts after the forced harmonization and find that, similar to the studies cited above, the strength of enforcement and the degree of change are the driving factors behind an improved information environment. Güunther and Novotny-Farkas use the mandatory IFRS adoption as the setting for an analysis of IAS 39-mandated changes to the loan loss provision reporting for banks in 12 EU countries, while Atwood et al. examine earnings persistence and cash flow predictability across multiple reporting regimes, including US GAAP, over a time period encompassing mandatory IFRS adoption. These two studies provide evidence that IFRS adoption may result in some unintended consequences with limited improvement. A study by Sun et al. comes to a similar conclusion for US policymakers. Two studies, Shima and Gordon and Khurana and Michas, analyze foreign investment allocations following mandatory IFRS adoption and find that there has been some re-allocation to countries following IFRS but only where the enforcement is strong and the change to IFRS has been a significant change, consistent with the findings reported by others. Reilly provides a commentary on the US and IFRS adoption and the study by Larson and Herz points out the limited role academics have played to this point in the global standard setting process.

DeFond, Hu, Hung, and Li (2011a)

DeFond et al. use the 2005 IFRS adoption in EU nations to analyze whether or not mandated uniformity of reporting standards leads to improved comparability. Using the FASB/IASB definition of comparability, which refers to the quality of information that enables users to identify similarities in and differences between two sets of economic phenomena, the authors investigate changes in foreign mutual fund investment in firms impacted by the mandatory adoption of IFRS in the periods before and after the mandated adoption of IFRS. A measure of earnings quality is used to establish the implementation credibility of the mandated reporting changes along with a measure of changes in credible uniformity across industry peers within and across the countries affected. The empirical test examines 5460 IFRS adopters in the periods 2003–2004 (pre-IFRS) and 2006–2007 (post-IFRS). Implementation credibility is found to be positively associated with significant comparability improvements when there is a credible increase in uniformity. While the evidence indicates that uniformity does not always lead to comparability, the authors conclude that a mandated uniform set of accounting standards can improve comparability.

Tan, Wang, and Welker (2011)

Tan et al. investigate whether the comparability effects of harmonization lead to changes in analyst following and forecast accuracy subsequent to mandatory IFRS adoption. The primary focus of the study is the number of foreign analysts following a firm and the foreign analysts' forecast

Table 4
International Financial Reporting Standards.

DeFond et al. (2011a)	Find evidence that mandated uniform accounting standards can improve comparability when implementation credibility is high and increases in uniformity are large.
Tan et al. (2011)	Find increased comparability following mandatory IFRS adoption, using analyst forecast measures.
Byard et al. (2011)	Provide evidence that the information environment is improved following mandatory harmonization when the mandated change is substantial and strongly enforced.
Güunther and Novotny-Farkas (2011)	Document a decrease in income smoothing and a delay in loan loss recognition following the mandatory IFRS adoption in a sample of banks from 12 EU countries.
Atwood et al. (2011)	Evaluated earnings persistence and cash flow predictability across many countries and many reporting regimes over the period encompassing mandatory IFRS adoption, including a comparison to US GAAP, and found that US GAAP performed as well or better than other regimes.
Sun et al. (2011)	Find evidence of improved earnings quality following mandatory IFRS adoption, with caveats regarding implications for the U.S.
Shima and Gordon (2011)	Document that US firms are not allocating foreign investment based upon standards alone.
Khurana and Michas (2011)	Find a decrease in U.S. investment home-bias toward countries with the greatest GAAP to IFRS changes and the strongest enforcement.
Reilly (2011)	Commentary on US adoption of IFRS
Larson and Herz (2011)	Provide analysis of the academic community's participation in the global accounting standard setting process.

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accuracy in the periods before and after IFRS adoption. The empirical tests use a sample of 12,010 firm-years representing 3280 firms from 25 countries. The authors identify the location of analysts using the *Nelson's Directory of Investment Research* in order to distinguish between foreign and local analysts following a specific firm and further restrict the analysts group to include only analysts who were active continuously before and after adoption of IFRS.

The authors find an increase in the number of foreign analysts following the sample firms in the post IFRS period, with the most significant increases found in countries where the foreign analyst's home country also adopted IFRS at the same time and for analysts who were already experienced with IFRS before the mandatory adoption.

The evidence indicates improved forecast accuracy on average in the post-IFRS period as predicted but there is no significant improvement in forecast accuracy for the analysts with IFRS experience or for those whose home country adopted IFRS at the same time. The evidence also supports predictions that larger GAAP to IFRS differences and larger reductions of GAAP differences between the firm's country and the analyst's country were associated with an increased analyst following but predictions of improved forecast accuracy were not supported. The authors interpret these results as evidence that comparability is improved as a result of harmonization.

Byard, Li, and Yu (2011)

Byard et al. examine whether IFRS adoption improved the information environment. To this end, the authors examine analysts' forecast errors and forecast dispersion before and after the 2005 EU mandatory IFRS adoption. The authors identify a sample of mandatory IFRS adopters and a control sample of firms that voluntarily adopted IFRS prior to 2005. The voluntary adopter group is used to control for concurrent EU actions that might otherwise confound the analysis of the mandatory adopters. The quality of the information environment is deemed to be improved if there are decreases in absolute forecast errors and forecast dispersion and if there are increases in analyst following. Analyst forecast information from IBES is gathered for pre-IFRS and post-IFRS adoption periods and absolute forecast errors, forecast dispersion and analyst following are compared across period for the mandatory and voluntary adopters.

The evidence indicates no significant change in the information environment for mandatory adopters on average, but significant improvements to the information environment are observed for firms in countries with strong enforcement regimes and high home GAAP to IFRS differences. The authors conclude that the information environment is improved only when IFRS changes are substantial and strongly enforced.

Güunther and Novotny-Farkas (2011)

Mandatory adoption of IFRS in the EU in 2005 provides a natural setting for examining accounting quality impacts. In this study, Güunther and Novotny-Farkas examine IAS39-mandated changes to the recognition and measurement of the loan loss provision in a sample of financial statements of banks from 12 EU countries.

The authors investigate two aspects of accounting quality – income smoothing behavior and loss recognition timeliness, in the period before and after mandatory IFRS adoption. The more detailed guidance on loan loss provisions provided by IAS39, specifically the emphasis on incurred loan losses, is predicted to lead to a decrease in income smoothing and the evidence supports this prediction. The effect is predicted and is found to be less significant in stricter regulatory environments and in banks with widely dispersed ownership. The findings also indicate a weaker effect for EU banks cross-listed in the US. The authors attribute this finding to less income smoothing for this group pre-IFRS adoption and perhaps SEC scrutiny.

In addition, the authors predict and find that loan loss recognition is delayed under IAS39 relative to the period before IFRS adoption. In contrast to most other research published in 2011, the evidence from this study is interpreted as consistent with reduced earnings quality and perhaps an unintended consequence of IFRS.

Atwood, Drake, Myers, and Myers (2011)

Atwood et al. compare the usefulness of earnings reported under IFRS to earnings reported under a variety of domestic accounting standards. The authors empirically evaluate earnings persistence and future cash flow predictions using Compustat data from 58,832 firm-year observations taken from 33 countries over the period of 2002–2008. They find no significant difference between the earnings persistence observed under IFRS and under domestic accounting standards. Interestingly, losses reported under IFRS are significantly less persistent than losses reported under U.S. GAAP.

Regarding cash flow predictions, the earnings reported under U.S. GAAP were better predictors of future cash flows than were earnings reported under IFRS or under other non-US domestic accounting standards. The authors note the importance of these findings for regulators and policy makers as the debate continues over IFRS adoption for US firms.

Sun, Cahan, and Emanuel (2011)

Sun et al. use the IFRS adoption experience of foreign firms cross-listed in the U.S. to empirically analyze the possible earnings quality impacts of IFRS adoption on U.S. firms. The authors examine multiple measures of earnings quality using a sample of cross-listed firms and a matched sample of U.S.-listed firms (the control sample that did not adopt IFRS). The findings are mixed for the five different measures of earnings quality examined, with significant increases found for earnings persistence and a significant decrease in small positive earnings (the EPS target-beaters). No significant differences were noted for absolute discretionary accruals, timely loss recognition, or earnings response coefficients. The authors interpret their findings as indicative of improved earnings quality following IFRS adoption, but provide caveats to the conclusion that U.S. firms would experience improved earnings quality if IFRS was mandated.

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Shima and Gordon (2011)

In another empirical study of foreign investment under IFRS adoption by E.U. countries, Shima and Gordon frame the analysis in terms of information asymmetry between "home" country investors (i.e., investments in companies in the investor's home country) and foreign firms. The analyses seek to discern changes to this asymmetry following IFRS adoption. The authors use a sample of U.S. firms with foreign equity holdings as reported in the U.S. Treasury Department Survey and analyze the allocation decisions made by the companies. Factor analysis is used for measures of a country's legal standards and its regulatory environment.

The evidence does not indicate an association between a country's use of international financial reporting standards (IFRS) and an increased allocation of U.S. foreign equity investments. The authors also find that, as predicted, a larger allocation of foreign equity investment dollars goes to countries with stronger enforcement regimes.

Exploring an interaction between IFRS and enforcement regimes, the results show that foreign equity allocations are increased in countries with both IFRS and strong enforcement. The authors interpret the results as evidence that U.S. firms are not increasing their foreign equity investments in countries based on standards alone.

Khurana and Michas (2011)

Khurana and Michas investigate U.S. investors' stock portfolios for evidence of a shift toward investments in countries that mandate IFRS adoption. The sample uses the U.S. Treasury Department report of U.S. Holdings of Long-term Foreign Investments to identify the holdings in various countries for each of the years in the sample period of 2003–2007, splitting the time-series of holdings by country into pre- and post-IFRS periods. Data from the World Bank is used to calculate the U.S. home bias by country for each year (this is a market wide calculation of the ratio of U.S. investment in a country to that country's weight in total world market capitalization) to assess whether there has been a decrease in what is known as "home-bias" (overweighting of domestic stocks) from the pre-to the post-IFRS period.

The results indicate that there is a decrease on average. The decrease is strongest for countries with (1) larger home-GAAP to IFRS differences, (2) stricter rule of law under a common law legal origin, and (3) significant incentives for high-quality financial information is highest. The authors conclude that the common standards matter to US investors and that enforcement of standards is a key factor in foreign investment decisions.

Reilly (2011)

In this paper, Reilly comments on the U.S. movements toward IFRS and raises questions regarding the enforcement of a global set of standards and the different ways capital markets function within different countries. The author shares concerns that the cost and effort of a switch may not be worth it for U.S. firms.

Larson and Herz (2011)

Larson and Herz provide evidence on the level of engagement by the academic community in the global standard-setting process. The academic community's involvement in the standard setting process in general is discussed, with relevant research findings and various calls from standard setters cited.

The authors analyze comment letters received by the IASB for the period of 2001–2008 covering 55 IASB Issues and 24 IFRIC Draft Interpretations. Academics accounted for 3% of the responders across the 79 different calls for comment. The authors found a concentration of individual academic writers (almost 20% of the individual writers were three people). Academic letter writers were predominantly from English-speaking countries, consistent with concerns of the EU over the IASB standard setting process, but non-Anglo countries provided the majority of academic responses in the 2006–2008 period. The findings indicate that there is not a trend of increased participation over time.

Sarbanes–Oxley

During 2011, audit regulation research continued to focus on Sarbanes–Oxley and the rulings of the PCAOB. Much of the research attempted to evaluate whether the effects of SOX and the PCAOB improved audit quality and whether restrictions on the provision of non-audit services reduced auditor independence issues (Table 5).

Some researchers looked at the effect of increased regulation on market participants. It was widely believed that frequent financial statement restatements after SOX would cause investor confusion. Burks provides evidence that they did not. Gao finds that foreign firms issued bonds on U.S. markets far less frequently post-SOX, which suggests that SOX compliance imposes costs in excess of benefits. DeFond et al. found significant negative bond price reactions to events leading up to the passage of Sarbanes–Oxley, indicating that implementation of the new regulations reduced cash flows and possibly reduced audit quality. Kalelkar and Nwaeze looked at the valuation weights of earnings components and concluded that SOX improved confidence in earnings reports for uninformed investors. Dee et al. found significant abnormal stock price returns for Deloitte clients following PCAOB sanctions in the Ligand Pharmaceuticals case.

A good deal of research was devoted to the effect of SOX and PCAOB restrictions on the provision of non-audit services. Providing non-audit services can compromise auditor independence, leading to degradation in the quality of audits and financial statements, or it can have "spillover" effects, allowing auditors to have superior information about the firm, leading to improvements in audit quality. Several 2011 studies examined this issue. Krishnan et al. found that firms with larger reductions in non-audit services in the past-SOX period had larger income decreasing discretionary accruals, indicating increased audit quality, possibly from increased auditor independence. Seetharaman et al. found that firms that purchased non-audit tax services during 2003–2005 had fewer financial statement restatements, indicating that tax services have spillover effects that can

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Table 5
The impact of SOX and the PCAOB on audit quality.

Panel A: The impact of SOX and the PCAOB on audit quality – general	
Burks (2011)	Does not find support for the conjecture that post-Sarbanes–Oxley restatements caused investor confusion.
Gao (2011)	Finds that foreign firms issued bonds on U.S. markets far less frequently post-SOX, which suggests that SOX compliance imposes net costs on issuers.
DeFond et al. (2011b)	Find significant negative bond price reaction to legislative events leading to the passage of Sarbanes–Oxley.
Kalelkar and Nwaeze (2011)	Conclude that SOX led to improved investor confidence in earnings reports for uninformed investors.
Carcello et al. (2011a)	Find evidence that PCAOB inspections of Big Four auditors lead to improved audit quality.
Dee et al. (2011)	Find significant negative abnormal returns for Deloitte clients following PCAOB sanctions in the Ligand Pharmaceuticals case.
Panel B: The impact of SOX on audit quality – nonaudit services	
Krishnan et al. (2011c)	Find that firms with larger reductions in non-audit services in the post-SOX period had larger discretionary accruals, but the result was limited to income-decreasing accruals.
Seetharaman et al. (2011)	Find that firms that purchased non-audit tax services during 2003–2005 had fewer tax-related financial statement restatements.
Gleason and Mills (2011)	Find that corporations that purchase Auditor Tax Services (ATS) have more adequate reserves for IRS disputes, and show less evidence of earnings management.
Paterson and Valencia (2011)	Find that auditor-provided recurring tax services have a significant negative association with financial statement restatements and auditor provided nontax services have a significant positive association with financial statement restatements. Results are enhanced when the sample is divided by type of restatements and abnormal returns.

improve audit quality. Gleason and Mills found that corporations that purchase non-audit tax services have more adequate reserves for IRS disputes and show less evidence of earnings management, again supporting the argument that non-audit tax services can improve audit quality. Paterson and Valencia looked at recurring versus nonrecurring tax services and found that recurring tax services have a significant negative association with restatements, while recurring nontax services have a positive association, indicating that tax services improve audit quality while nontax services degrade it.

The impact of SOX and the PCAOB on audit quality – general

Burks (2011)

Burks evaluates the notion that increased financial statement restatements after the passage of SOX would confuse investors. He examined the stock price and trading volume reaction to financial statement restatements to see whether investors under-reacted or over-reacted to news of the restatements. Even after controlling for the less egregious nature of post-SOX restatements, he found that reactions to restatements became less negative after SOX, with no significant increase in trading volume. These results do not support the contention that the increase in restatements caused by SOX confused investors.

Gao (2011)

Gao examines the impact of Sarbanes–Oxley Act (SOX) on the U.S. bond market. If compliance generates net benefits, foreign firms are more likely to choose to issue in the U.S. Conversely, if compliance generates net costs, foreign firms are likely to forego the U.S. bond market post-SOX. She finds that foreign firms issued bonds in U.S. markets 86% less frequently post-SOX (after controlling for firm characteristics, bond features, home-country attributes, and market conditions). She does not see a similar decrease in foreign firms issuing on the Eurodollar and Rule 144A markets, which are not subject to SOX.

There are three situations when foreign firms still issue debt in the U.S. bond markets at similar rates post-SOX. First, foreign firms with equity listed on U.S. exchanges still choose to issue debt in U.S. markets with similar frequency. Since these firms are subject to SOX by virtue of equity issuance, they incur no incremental SOX-related costs when they issue bonds. Second, firms that adopt IFRS issue debt on U.S. debt markets post-SOX at similar frequencies. She interprets this finding as suggesting that informational benefits and governance implications related to IFRS generate advantages regarding SOX compliance. Third, firms that are issuing huge bond issues still tend to use the U.S. debt markets post-SOX. She interprets this as suggesting that larger issues can experience cost of debt advantages from SOX-induced benefits such as less risk taking and lower default risk.

Overall, these results support findings in DeFond et al. (2011a) that SOX imposes net costs on bondholders of some U.S. firms – especially smaller public firms.

DeFond, Hung, Carr, and Zhang (2011b)

DeFond et al. examined the bond market reaction to news leading up to the passage of Sarbanes–Oxley. They argue that, since SOX was written for the benefit of shareholders, the effect on bondholders was unclear. Bondholders might have benefitted from measures that would reduce default risk and improve the quality of financial reporting, allowing better monitoring and assessment of default risk. On the other hand, it could hurt bondholders because the implementation costs would reduce cash flows and restrictions on non-audit services may reduce audit quality.

To answer this question, the authors computed the cumulative unexpected change in bond yield spreads surrounding 16 legislative events leading to the passage of SOX (the events had been previously identified by Zhang). In a sample of 769 bonds issued by 229 corporations, the

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authors found a significant unexpected increase in bond yield spreads. In cross-sectional tests, they found a greater effect for riskier bonds and for bonds of firms that made more changes in response to SOX. These results document a significant negative bond price reaction to news related to the passage of Sarbanes–Oxley.

Kalelkar and Nwaeze (2011)

Kalelkar and Nwaeze examined how Sarbanes–Oxley caused shifts in the valuation weights of earnings components. In addition, they examined how these weight shifts differed for informed and uninformed investors. Using the pre-SOX period as a control period, the authors regressed stock returns on earnings, various earnings components, and several control variables (firm size, growth, earnings volatility, leverage, risk, Enron failure, and loss). They expected the weights associated with earnings and earnings components to be higher after the passage of SOX, due to increased investor confidence. They did find such an increase for earnings, cash flow from operations and total accruals. They found that the results for accruals were driven by discretionary accruals. Results were mixed for non-discretionary accruals.

To test the valuation difference for informed vs. uninformed investors, the authors divided the sample by institutional ownership (greater than 15%). They found that the results disappeared for firms with higher institutional ownership. They conclude that this finding suggests that the effect of SOX on investors' valuation of earnings is largely confined to unsophisticated investors who, until SOX, lacked resources and skill to unravel various reporting and disclosure problems. SOX does appear to have mitigated this problem.

Carcello, Hollingsworth, and Mastrolia (2011a)

Carcello, Hollingsworth and Mastrolia examined the effect of Sarbanes–Oxley mandated PCAOB inspections of auditing firms to determine whether such impacts have improved audit quality. They examined abnormal accruals for clients of Big Four auditors in the years following the audit firm's first two PCAOB audits. The authors found that, for client firms with positive abnormal accruals, there was a significant decline in abnormal accruals in the first year after the audit firm's PCAOB inspection, with even larger declines in the second year following the inspection. For client firms with negative abnormal accruals, there was no significant decline after the inspection.

Gramling, Krishnan, and Zhang (2011)

Gramling et al. examined the audit decisions of firms that are triennially inspected by the PCAOB. These are audit firms with less than 100 publicly traded issuers as clients. The authors examined the propensity of these firms to issue going concern opinions for financially distressed clients. The study examines 2004–2006 PCAOB triennial inspections of 202 audit firms and 1648 of their clients. Firms that had PCAOB-identified audit deficiencies issued more going concern opinions after the PCAOB inspection report than before, indicating that the inspection process caused the firms to become more vigilant. The authors also found evidence that audit firms with clean PCAOB inspection reports issued more going concern opinions following the inspection process, but the increase in the rate of going concern opinion issuance was less pronounced.

The authors also examined actual bankruptcies in the next 18 months to test the accuracy of the auditors' going concern opinions. They identified Type I errors (where GCs are issued but there is no subsequent bankruptcy) and Type II errors (where no GCs are issued but there are subsequent bankruptcies). They found that, even though the auditors with PCAOB-identified deficiencies issued more going concern opinions, the incidence of both Type I and Type II errors did not change after the PCAOB inspection for firms with deficiencies and those without.

Dee, Lulseged, and Zhang (2011)

Dee et al. examined the effect of the PCAOB 2007 sanctions against Deloitte for the audit of Ligand Pharmaceuticals. This was the PCAOB's first action taken against a Big Four audit firm. The authors hypothesize that news of the action will affect the stock price returns of other Deloitte clients, because of the effect on Deloitte's reputation for conducting quality audits (reputation effect) and the increased ability of investors to sue Deloitte to recoup investment losses (insurance effect). The authors identify three possible outcomes of the stock price tests on Deloitte clients:

- The market reaction may be negative because of the reputation effect and the insurance effect.
- The market reaction may be neutral if it is perceived that the Ligand audit was not relevant to other Deloitte clients.
- The market reaction may be positive because of the actions Deloitte agreed to take to improve its quality control procedures particularly as they relate to the monitoring of audit partners and directors.

Using the Schipper–Thompson method to control for cross-sectional dependence in residuals, the authors found a significantly negative market reaction for Deloitte clients for the 1 and 3-day event windows surrounding the announcement of PCAOB sanctions against Deloitte. This effect was not found for clients of other Big Four auditors, indicating that there was no spillover effect to other auditing firms. The authors found that Deloitte clients had no reaction to other events specifically related to the Ligand audit failure (such as news of restatement) that predate the sanctions. Thus, the effect seems to be from information about the control weaknesses at Deloitte rather than events specific to the Ligand audit. In cross-sectional tests, the authors found a more negative reaction to news of the PCAOB sanctions against Deloitte for firms that are financially distressed, providing evidence of both the reputation effect and the insurance effect.

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The impact of SOX on audit quality – nonaudit services

Krishnan, Su, and Zhang (2011c)

Krishnan et al. examine firms that had used non-audit services (NAS) before Sarbanes–Oxley. It compares NAS fees and discretionary accruals in the pre-SOX period (2000–2001) and a post-SOX period (2004–2005) for a sample of 1768 firms. About 72% of the firms showed a decline in NAS fees from the pre-SOX to the post-SOX period. A few firms have increases in NAS fees, but the increases were of smaller magnitude than the decreases.

Using discretionary accruals to examine earnings management, the authors find that the larger the reduction in NAS fees from the pre- to post-SOX period, the greater the absolute value of discretionary accruals in the pre-SOX period. This difference is not obtained after SOX. This evidence indicates that reduction in NAS was associated with a reduction in earnings management.

The authors then divided the sample into positive and negative discretionary accruals. For negative (income decreasing) discretionary accruals, the relationship between NAS and accruals in the pre-SOX period hold, but for positive (income increasing) accruals it does not. Impairment of auditor independence resulting from NAS is observed only for downward earnings management. The authors posit that providers of NAS were more reluctant to encourage income increasing earnings management because of the threat of increased scrutiny or litigation, while such risks were less severe for income decreasing management (such as creating “cookie jar” reserves).

Seetharaman, Sun, and Wang (2011)

Sarbanes–Oxley prohibits audit firms from providing many kinds of non-audit services, but does not prohibit certain types of non-audit tax services (NATS). NATS may be provided if they are approved by the client firm’s audit committee. The rationale for allowing NATS may be the expectation of more precision in the financial statement assertions about the company’s tax positions if those services are provided by the audit firm rather than performed in-house or provided by third-party tax services vendors.

Seetharaman et al. test these assertions for the period of 2003–2005 by examining a sample of 259 tax-related financial restatements and a matched control sample. The authors find no significant relationship between the provision of NATS and financial statement restatements in general. Some had proposed the idea that allowing NATS shifted the source of independence concerns from other non-audit services (which were prohibited under SOX) to non-audit tax services (which were allowed). This evidence fails to support that idea. However, the authors do find that for tax-related restatements, as the ratio of tax fees to total fees paid to auditors increases, the likelihood of tax-related restatements decreases. This supports the idea that auditor provided non-audit tax services can result in superior reporting of tax obligations on the financial statements.

Gleason and Mills (2011)

Gleason and Mills aim to determine whether auditor-provided tax services (ATS) impair auditor independence or create knowledge spillover effects which improve financial reporting. FAS No. 5, Accounting for Contingencies, requires that firms record a reserve for possible IRS disputes. The reserve for a particular tax year is updated from time to time in response to new information, until the eventual settlement of the return or lapse in the statute of limitations. The study focuses on financial reporting years in which the IRS completes a tax return examination, ensuring that the corporation receives new information about the contingent tax liability during that year. The authors posit that smaller adjustments in the examination year indicate that the original reserve was adequate, implying superior financial reporting. Larger adjustments would indicate that the original reserves were inadequate, indicating less independence on the part of the auditors.

Examining 4976 tax returns from tax years 2000 and 2002, the study finds that firms that employ ATS have smaller changes in the tax reserve in response to new information provided by an IRS examination. This indicates that these firms had more adequate tax reserves before the examination. Further tests showed that firms employing ATS had less evidence of earnings management than firms that did not. These results support the notion that ATS provides knowledge spillover effects that improve financial reporting, and that ATS does not impair auditor independence.

Paterson and Valencia (2011)

Paterson et al. examine auditor provision of tax services and other non-audit services on subsequent financial statement restatements, distinguishing between recurring services and nonrecurring services. Because an initial audit engagement involves startup costs, providing recurring services results in significant cost savings to the audit firm. Depending on how audit fees are structured, recurring engagements can increase profitability for the audit firm, increasing conflicts of interest, or increase cost efficiency for the client.

The authors examined financial statement restatements that occurred between 2003 and 2006. Sample selection included 3232 restatements and 15,087 nonrestatement firms. Replicating prior work, the authors found that restatements were associated with audit fees, tax non-audit service fees, audit-related non-audit service fees, other fees, and merger activity. This replication illustrates that prior research results hold for the post-Sarbanes–Oxley period.

The sample was then tested for the significance of recurring and nonrecurring fees. Recurring tax compliance service fees were negatively associated with restatements, while recurring other non-audit service fees were positively associated with restatements. This test shows that the knowledge spillover effects of tax service activities was improved in the recurring relationship, while the independence concerns associated with other service fees were exacerbated. Nonrecurring tax fees had no significant relationship

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with restatements, while nonrecurring other fees did have a positive association.

The authors next divided the sample into 848 firms with “high concern” restatements (e.g., those involving fraud) and 737 with “low concern” restatements (unintentional errors). The “high concern” restatement group strongly supported the relationship between recurring engagements and restatements, while the “low concern” restatement group failed to support the null hypotheses. The authors also partitioned the sample based on cumulative abnormal returns. The results were also stronger for the group with abnormal returns below the mean.

The impact of SOX on audit quality: internal control testing and corporate governance (Table 6)

The requirement of the annual mandatory audit of internal controls for accelerated SEC filers that became effective in 2004 in the USA (but was not duplicated in most other countries) represents a revolutionary change in the U.S. audit environment and significantly transformed the audit process for companies that are subject to this regulation. As a result, the impact of this and other related PCAOB regulations on audit quality and corporate governance remains the focus of the interest of the accounting researchers. We divide the audit quality studies into those related to internal controls testing and those related to corporate governance and oversight of the audit process by the audit committee. Another series of papers examines the relative costs and benefits of SOX. Bedard and Lynford demonstrate that such audits provide variety of financial reporting benefits above and beyond those of management testing imposed by Section 302.

Researchers also demonstrate that financial markets are cognizant of the positive impact of this regulation and adverse opinions on internal control effectiveness often lead to changes in corporate management and tangible monetary outcomes. For example, Dhaliwal et al. report that material weaknesses in internal control increase the cost of the company’s publicly traded debt. Johnstone et al.

Table 6
The Impact of Sox: Internal Control Testing, Corporate Governance, and Costs and Consequences.

Panel A: The impact of SOX on audit quality: internal control testing	
Bedard and Lynford (2011)	Analyze internal control deficiencies detected by auditors in the process of Section 404 internal control audits and conclude that such audits provide benefits beyond those of the client-driven control testing imposed by Section 302.
Dhaliwal et al. (2011)	Report that the adverse opinion on the effectiveness of the internal control increases the cost of the company’s publicly traded debt, especially for non-monitored firms.
Hoag and Hollingsworth (2011)	Demonstrate that remediation of the material weaknesses in ICFR reduces audit fees in the consequent years but this reduction does not happen immediately and companies with prior adverse opinions still pay higher audit fees in the consequent years than their peers which never received such opinions.
Munsif et al. (2011)	Document that smaller companies, companies with the foreign operations, and companies in financial stress are more likely to receive an adverse opinion on ICFR and that companies with adverse ICFR opinion are paying audit fee premium in comparison with their peers with clean opinions even years after they remediated material weaknesses.
Goh and Li (2011)	Provide evidence that companies with reported material weaknesses in internal controls are less conservative in the financial reporting than their peers with effective controls.
Singer and You (2011)	Conclude that Section 404 was effective in improving the overall earnings quality and in increasing investor confidence in accounting numbers.
Ettredge et al. (2011)	Find that companies that receive the adverse opinion on internal control are more likely to switch the auditors than their peers with unqualified opinion and that they usually switch to higher quality auditors such as Big 4 auditors or industry specialists.
Panel B: The impact of SOX on accounting quality: corporate governance and audit committees	
Krishnan et al. (2011a)	Conclude that social ties between senior management and formally independent Board members increase probability of earnings management but the threat of such ties to the quality of the financial statements decreases post-SOX, confirming the effectiveness of the related regulatory scrutiny.
Carcello et al. (2011b)	Report that CEO’s involvement in the selection of the Board members does not directly increase probability of material misstatement but rather reduces earlier documented monitoring benefits of the independent and knowledgeable audit committee.
Rupley et al. (2011)	Capture perceptions of audit committee members on variety of issues and report that both legal liability and required time commitments are crucial impediments for attracting qualified professionals to serve on the board.
Johnstone et al. (2011)	Suggest that the disclosure of a material weakness in ICFR increases the probability of the next year change in corporate leadership, including turnover of the board, CEO, CFO, and audit committee members turnover, and demonstrate that successful remediation of the material weaknesses the next year is positively associated with various corporate governance characteristics such as the increased independence and financial expertise of the audit committee members.
Panel C: Costs and unintended consequences of recent PCAOB standards	
Krishnan et al. (2011b)	Document the decrease of audit fees (all other factors constant) under AS No. 5 in comparison than with AS No. 2 environment and suggest that this decrease was especially pronounced for complex firms with multiple business segments and international activities.
Bronson et al. (2011)	Report that the stricter regulatory requirements of AS No. 2 and AS No. 3 increased the audit report lag while market pressures for more timely information motivated corporate management to trade-in earnings disclosure timeliness for earnings reliability.
DeFond and Lennox (2011)	Provide evidence that stricter audit requirements in post-SOX period prompted many small audit firms with the lower quality controls to exit voluntarily the audit market for SEC companies.

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demonstrate that negative news about internal control qualities increase the probability of turnover of the key corporate governance executives, including CEO, CFO, and Board members.

At the same time, researchers continue to debate whether this increased quality warrants such substantial compliance costs and draw attention to other unintended consequences of the regulation. In this connection, both Hoag and Hollingsworth and Munsif et al. report that quick remediation of the material weaknesses in ICFR reduces audit fees in the consequent years but this reduction does not happen immediately. As a result, firms with prior reported material weaknesses continue to pay higher audit fees in the consequent years in comparison with their peers with "clean reports". Bronson et al. draw attention to the unintended consequences of AS No. 2 and AS No. 3 that extend beyond those cost consideration. In particular, Bronson et al. document the increased audit report lag, which is the time period between the end of the fiscal period and the date of the audit report, due to the increased amount of audit work imposed by AS No. 2 and AS No. 3. In this condition, management often chooses to disclose earnings before the date of the audit report due to the investor demand for timely information. Such behavior leads to the decreased reliability of the disclosed accounting earnings and threatens public trust in the financial reporting system.

The impact of SOX on audit quality: internal control testing

Bedard and Lynford (2011)

Bedard and Lynford examine internal control deficiencies detected by the external auditors in the process of direct testing of clients' controls as a part of section 404 audit. The goal is to analyze those deficiencies from the perspective of types and levels of deficient controls (e.g., entity-wide vs. assertion-specific), applied detection methods or audit procedures that lead to discovery, and criteria of auditors' judgments about the severity of these deficiencies.

The authors use a database of 2004–2005 audit engagements of smaller accelerated filers (with revenues of $1 billion or less) in non-regulated industries. The final sample includes 76 audit engagements for 44 distinctive clients companies. In the process of these 76 engagements, the auditors identified a total of 3990 internal control deficiencies, and 2942 of these deficiencies remained uncorrected at year-end. In addition, for 15 of the 44 client companies, auditors considered these deficiencies to be severe enough to meet the criteria of a material weakness.

The authors find that management misses many severe and pervasive internal control deficiencies (especially those in the entity-level controls), and commonly downplays the severity of the already identified deficiencies. Also, auditors are more likely to assess the deficiency (or their combination) as a material weakness if (1) the misstatement in financial statements actually occurred as a result, (2) the deficiency relates to design rather than to documentation issues, (3) the deficiency signals a weak control environment or a problem with the other entity-level controls (as opposed to process-level controls), and (4) the deficiency relates to a high-risk accounting area such as revenue recognition or tax accruals.

Overall, the findings suggest that the mandatory audit of internal controls under section 404 leads to stronger controls and provides benefits above and beyond those of the client-driven control testing imposed by Section 302. Also, Bedard and Lynford speculate that the audit strategy to rely exclusively on detected misstatements to identify control flaws will not be as effective as testing control effectiveness since many currently identified control deficiencies that have not yet led to actual misstatements would have remained undetected under this strategy.

Dhaliwal, Hogan, Trezevant, and Wilkins (2011)

Dhaliwal et al. examine the financial impact of an adverse opinion on the effectiveness of internal controls over financial reporting (ICFR) on the cost of the company's publicly traded debt. They hypothesize that stakeholders will associate ineffective controls with higher risk of fraud and with lower reliability of financial statement numbers. As a result, creditors will expect higher rewards for the higher risk. Hence, the disclosure of a material weakness in internal controls will increase the cost of the company's debt. The authors also hypothesize that this effect will be more pronounced for non-monitored firms than for monitored firms since stakeholders are more likely to know the true state of controls of monitored companies long before the official disclosure of the material weaknesses.

The sample consists of 577 Section 404 audit reports that were included in 10-Ks between 2004 and 2006. In the sample, there were 46 adverse opinions and 531 clean opinions. To test the hypotheses, the authors examine the change in credit spreads around the announcement of material weaknesses. They find that firms that report a material weakness in internal controls experience marginally higher increases in the credit spread ($p = 0.099$) than firms that report effective internal controls. They also find that the impact of the adverse opinion on ICFR is especially pronounced for the non-monitored firms. Overall, Dhaliwal et al. conclude that a Section 404 report does provide new information to the public debt market. They call for more research that compares the impact of the various monitoring agents on the cost of equity and cost of debt.

Hoag and Hollingsworth (2011)

Hoag and Hollingsworth examine the impact of the disclosure of material weaknesses in internal control over financial reporting (ICFR) and the speed of its consequent remediation on long-term audit fees. The sample is accelerated filers that provided Section 404 audit reports from 2004 to 2007.

The authors find that remediation of the material weaknesses in ICFR leads to a reduction in audit fees, but not immediately. For example, a company that received an adverse opinion on ICFR but remediated the weakness the next year would, on average, experience a reduction in audit fees in each of the first 2 years after remediation. However, these companies still pay a 19% audit fee premium 3 years after the initial remediation of the control weaknesses

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compared to companies that never received an adverse opinion on ICFR. In addition, audit fees nearly double for companies that receive adverse opinions 2 years in a row in comparison with the companies that receive an adverse opinion but remediate the weakness in the following year. Also, the fees are significantly higher if the material weakness relates to a company-level rather than account-level control.

The authors call for research exploring whether the delay in reductions of audit fees after remediation of the material weakness reflects auditors' perceptions of the higher client risks due to prior problems or auditor's inertia in decreasing the audit work in response to diminished risk.

Munsif, Raghunandan, Rama, and Singhvi (2011)

Munsif et al. examine characteristics of companies that receive adverse opinions on ICFR and study the impact of remediation of material weaknesses on audit fees. Their sample includes 1610 companies that provided Section 404 audit reports between 2004 and 2007. Of these companies, 398 received an adverse opinion at least once during the period examined. The remaining 1212 firms in the sample received only unqualified opinions on ICFR. Of the firms with an adverse opinion, 264 firms reported a material weakness in just 1 of the years examined, 87 reported a material weakness in 2 of the years, 32 reported a material weakness in 3 of the years, and 15 reported a material weakness in each of the 4 years.

Providing further insights into characteristics associated with the adverse ICFR opinion, Munsif et al. document that companies are more likely to report material weaknesses in the first year of Section 404 implementation and that the proportion of the companies with an adverse opinion on ICFR decreases consistently across the examined period from 13.7% in 2004 to 6.3% in 2007. Munsif et al. also report that smaller companies, companies with foreign operations, and companies in financial distress are more likely to receive an adverse opinion on ICFR.

Regarding audit fees following remediation, the authors find that companies that remediated internal control weaknesses the first year after detection (i.e., firms with one adverse opinion year) paid 20% lower audit fees over the period than firms that reported material weaknesses 2 years in a row and remediated them in the third year. However, remediating companies still paid an audit fee premium in the consequent years relative to firms that never received an adverse opinion on ICFR. The premiums were approximately 35% in the remediation year, 32% in the year after remediation, and 21% in the second year after the remediation. The audit fee premium was also higher for companies that reported entity-wide rather than account-specific weaknesses.

Similar to Hoag and Hollingsworth, Munsif et al. call for research that explores the underlying reasons for the audit fee stickiness. Those reasons can include extra audit work due to prior report of the material weakness as well as real or perceived incremental audit risk.

Goh and Li (2011)

Goh and Li examine the relationship between the strength of internal controls and conservative financial reporting including testing opposite predictions about the direction of the relationship. Positive accounting theory favors conservatism for the restraints that it puts on management ability to inflate earnings and assets. Therefore, this view links conservatism to decreased litigation costs and more efficient contracting. Hence, companies with strong internal controls should strive for more conservative financial statements to obtain those benefits. Proponents of fair value accounting oppose conservatism as a desirable financial reporting attribute. Under this view, conservatism distorts the economic reality. Thus, under this view strong internal controls will be associated with lower conservatism.

Their sample consists of 1146 firm-years for "weak internal controls" firms (firms that disclosed one or more material weaknesses in their internal controls under either SOX 302 or SOX 404 testing during the period from January 2003 to November 2005) and 6401 "effective controls" firm-years. The authors found that companies with material weaknesses in internal controls are less conservative than peers with effective controls. In addition, companies that remediated material weaknesses within a year demonstrate more conservatism in financial reporting than firms that continue to report material weaknesses next year. Overall, the evidence is consistent with the positive accounting view.

The authors also stress that financial reporting conservatism reflects a management philosophy while earnings management represents an episodic response to the situation when the reported earnings fail to meet a relevant benchmark. As such, conservatism and earnings management can coexist. Hence, findings on the relation of internal control and conservatism complement findings in prior studies related to abnormal accruals and earnings management.

Singer and You (2011)

Singer and You explore whether Section 404 testing improved earnings quality. To this end, they focus on relative changes in reliability and relevance of earnings and changes in investor confidence in reported earnings post-404 testing. Earnings reliability is measured as the magnitude of absolute abnormal accruals. Earnings relevance is defined as ability of current earnings to predict future earnings and cash flows. Investor confidence is the reaction to earnings surprises.

Singer and You divide the sample into three periods: pre-SOX (January 2001–July 2002), post-SOX but pre-404 (August 2002–December 2003), and post-404 (January 2004–December 2005) and use a "differences-in-differences" design comparing post-404 changes in earnings characteristics for Section 404 compliant firms and their non-compliant peers. The group of non-complying peers consists of Canadian firms that were either dual listed in Canada and on a U.S. exchange or listed only on a U.S. exchange.

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The authors find that earnings reliability for SOX 404-compliant firms increased more Section 404-compliant firms. They also find that complying firms had a larger reduction in the asymmetry between the use of negative and positive special items and the asymmetry between reported earnings that marginally exceeded versus marginally missed analyst forecasts decreased. The authors interpret this finding as evidence that Section 404 testing reduced *intentional* misstatements.

Regarding investor confidence post-SOX, the authors find that the relevance of the earnings of the complying firms increased more than the relevance of non-complying peers and the relation between abnormal returns and analyst earnings forecast errors became stronger for complying firms but weaker for non-complying firms. This suggests that investor confidence in reported amounts did increase post-SOX 404.

Ettredge, Heintz, Chan, and Scholz (2011)

Ettredge et al. examine the causes and consequences of auditors' switches around receipt of adverse audit opinions on ICFR. Since an adverse opinion on ICFR can lead to negative market reactions and increased costs of capital, the authors believe there are two possible explanations why firms might dismiss auditors after the receipt of an adverse ICFR opinion. First, the audit committee might be shopping for an auditor that is less likely to issue an adverse opinion in the future ("flight from quality scenario"). If this is the case, the financial reporting quality would deteriorate as a result of the switch. On the other hand, the audit committee might be seeking a higher quality auditor to assist with the remediation of control deficiencies and to send the strong signal to the markets about the increased financial reporting quality ("remediation efforts scenario").

The sample includes 13,722 firm-year observations for companies that provided auditors' opinion on ICFR for fiscal years from November 2004 to December 2007 (i.e., accelerated filers). Of this total, 1026 observations received adverse ICFR opinions and 117 subsequently dismissed the auditors. The total number of auditor dismissals in the sample was 598 (117 and 481 with (without) an adverse opinion).

The authors find that companies are more likely to dismiss the auditors after the adverse opinion on ICFR. In addition, while on average, companies that dismissed auditors during this period were switching to lower quality auditors (e.g., from Big 4 to non-Big 4), companies with previously reported material weaknesses in ICFR were more likely to switch to "higher quality auditors" such as Big 4 auditors or industry specialists. Overall, Ettredge et al. conclude that "remediation effort scenario" is more consistent with the behavior of the companies that dismiss their auditors following receipt of adverse opinions on ICFR.

The impact of SOX on accounting quality: corporate governance and audit committees

Krishnan, Raman, Yang, and Yu (2011a)

Krishnan et al. examine the impact on earnings management of social ties between senior management and Directors. Social ties (non-formal non-familial relationships arising from prior common employment, educational or other shared activities) reflect common experiences and promote sympathy between management and members of the Board. As a result, independence might be undermined (either consciously or subconsciously) even when formal independence requirements have been met.

Krishnan et al. hypothesize that companies with strong social ties between senior management (the CFO and CEO) and Board members are more likely to practice earnings management than a company where such ties are absent or weak. The authors speculate that this association will become weaker post-SOX due to increased regulatory scrutiny over corporate activity and harsher sanctions for non-compliance.

The authors use three traditional measures of earnings management: the propensity to meet or beat analyst earnings forecasts, not to report a loss, or not to report the decline in earnings. The CFO or CEO are assumed to be socially tied with a Board member if they graduated from the same university (not necessarily at the same time), have been employed by the same company at the same time, or are affiliated with the same club or charitable organization. The data on CFO, CEO and Board background and social activities comes from BoardEx and the independent variable is the percentage of the formally independent directors who have any of such social ties with the CFO or CEO.

In the sample, 21.3% of independent Board members had such ties with senior management during the study sample period. The education-based ties were the most common, and fewer directors have social ties with the CFO than with the CEO. The authors find that social ties between senior management and formally independent Board members are related to more earnings management. However, SOX did reduce the frequency of earnings management. Interestingly, the post-SOX reduction of earnings management is more pronounced for firms with strong social ties between senior management and Board members.

Carcello, Neal, Palmrose, and Scholz (2011b)

Carcello et al. investigate whether the CEO's involvement in the selection of the members of the Board of Directors affects Audit Committee effectiveness. Under SOX and SEC regulations, Board members must meet independence requirements to serve on the Audit Committee. While this rule became effective in 2004, many companies adopted the practice earlier, responding to recommendations of the Blue Ribbon Committee Report (issued in 1999) and the consequent listing requirements.

The authors speculate that the CEO is motivated to promote the nominations of the Board members who meet the formal requirements of independence (i.e., appear independent), but share social connections and demographic characteristics with the CEO. Due to common background and ties, such members are likely to have the similar perspective as the CEO and cannot be truly objective in evaluating the CEO's recommendations or performance (i.e., are lacking independence in fact).

If this is the case, the monitoring function of an audit committee is compromised and the "independent in

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appearance" audit committee becomes less effective in overseeing questionable accounting practices. Therefore, Carcello et al. hypothesize that the earlier reported negative association between audit committee independence and the likelihood of earnings restatements will decrease or disappear when the CEO is involved in the Board members' selection process. The authors also hypothesize that the objectivity of the financial expert on such committees might be compromised due to social ties, even if the expert is formally independent. As a result, the presence of the financial expert on the audit committee will have a lower impact on reducing the likelihood of misstatements in such circumstances.

The authors use a matched sample of 104 firms that announced restatements in 2000 and 2001. These restatements involved corrections of 1999 or 2000 10-Ks or 2000 or 2001 10-Qs (i.e., years immediately after the Blue Ribbon Committee Report) and 104 firms that did not restate. The independent variable is whether the CEO was involved in the board members' selection process in the year before the first misstated period. The CEO is assumed to be involved in the nomination process if one of the following took place: (1) nominations were solicited through a committee, and the CEO was a member of the committee, (2) no special nomination committee exists and the entire board is responsible to select directors, and (3) no special nomination committee exists but the proxy statement recognizes the involvement of senior management in the selection process. Of the sample firms, these criteria were met for 32 restating firms and 34 control firms.

The authors find that the independent audit committee and the presence of the financial expert do reduce the probability of restating earnings. However, this positive monitoring effect of independent audit committee and financial expertise disappears when the model is adjusted for the impact of the CEO involvement in the selection process. While CEO involvement in the selection process does not *directly* affect the probability of misstatement, the involvement seems to affect the quality of the financial reporting oversight through its impact on the audit committee's effectiveness as illustrated by the evidence from the coefficients on the interaction variables between (1) the CEO involvement and audit committee independence and (2) between the CEO involvement and audit committee financial expertise. Overall, Carcello et al. conclude that the CEO involvement in the Board members' selection process does in fact reduce earlier documented monitoring benefits associated with independent and knowledgeable audit committee.

Rupley, Almer, and Philbrick (2011)

Rupley et al. use a survey to examine perceptions of audit committee members about the effectiveness of their committees in the post-SOX environment. The survey measures audit committee effectiveness based on composition, authority, resources, and diligence. Composition is the independence of the audit committee members and the presence of a financial expert. Authority is the extent of formal responsibilities of members and their actual ability to exercise control over financial reporting, internal audit, and critical decisions related to external audit arrangements. Resources reflect direct access to the management and audit personnel. Diligence captures the frequency of the audit committee meetings.

Based on responses from 80 audit committee members of public companies from a variety of industries, the authors find that legal liability and time constraints dissuade qualified people from serving as board members. However, once such people agree to serve, these factors do not affect their willingness to be designated as financial experts. Respondents also self-reported very low extent of personal relationships with management and external audit team and few interlocking directorships.

Regarding responsibilities, committee members recognized their significant involvement in the review of annual and quarterly financial statements, internal controls over financial reporting, key management estimates, general oversight of the external audit process, and extensive interaction with the internal audit function. However, they were involved much less in review of the security of the information system. Respondents also reported that they had on average eight annual meetings, met on average six times with external auditors, five times with internal auditors, and spend on average from 50 up to 150 hours performing audit committee work during the year.

The members also reported average cash compensation of $40,000 plus, in many cases, additional compensation through stock options. They believed that they had adequate information to exercise their functions and considered their audit committee to be effective. Among the factors that would further improve audits, the respondents cited better knowledge of committee members, time availability, and timely updates by auditors on current trends in corporate governance.

Johnstone, Li, and Rupley (2011)

Johnstone et al. explore the impact of an adverse opinion on ICFR on the corporate governance. The authors propose that such negative event destabilizes the existing equilibrium of corporate power and prompts the change in the overall composition of the senior management team, Board of Directors, and Audit Committee, leading to more optimal governance arrangements. In particular, the changes include the turnover of the board or audit committee members or top management in the year *after the material weakness is disclosed* (phase one) and the turnover and the improvement of the relevant characteristics of the board or audit committee members or top management in the year *when the material weakness is remediated* (phase two).

Johnstone et al. tests these propositions using separate models for each phase. For phase one, the dependent variable is the presence of turnover for each of the following (four separate logistic regressions are evaluated): non-management turnover of the board, audit committee turnover, CEO turnover, CFO turnover. The final sample consists of 733 firms with fiscal years ending in 2004 through 2007 that reported material weakness and 3602 firms that received unqualified opinion on their ICFR. Empirical results suggest that the disclosure of a material weakness in ICFR

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increases the probability of turnover the following year in each of the four categories.

For phase two, the authors focus on the year following remediation. For this analysis, they divide the previously reported control weaknesses in several groups according to underlying factors in the COSO framework: control environment, risk assessment, control activities, information and communication, and monitoring. The most frequently reported weaknesses in the sample related to control activities (n = 486) and control environment (n = 271). Researchers also classified all material weaknesses as belonging to general (i.e., entity-level) control versus account/assertion specific control weaknesses.

To provide further insights on the factors that promote the quick and effective correction of control weaknesses, Johnstone et al. run separate logistic regressions where the dependent variable is the next year remediation of each particular sub-type of the material weaknesses or next year remediation of the general control weaknesses. The sample for phase two includes the previously discussed 733 firms that disclosed material weakness. Of these 733 firms, 431 remediated the material weakness in the next year, while 56 (24) firms remediated 2 (3) years after the initial report. The independent variables are turnover of the board of directors, change in the proportion of independent directors on the board, change in the proportion of the shares held by independent directors, turnover of the audit committee, change of the chair of the board from non-audit committee to audit committee member and vice versa, change in the number of the audit committee members with financial expertise, change in the proportion of the shares held by audit committee members, CEO and CFO turnover, and various changes in the CFO and CEO characteristics (e.g., CPA expertise, years as CFO).

Empirical results suggest that the audit committee turnover increases companies' chances to successfully remediate the material weakness in the following year but board or senior management turnover do not carry such effect. Successful remediation the following year, however, is positively associated with the increase in independent directors on the board, an audit committee member chairing the board, increased financial expertise of the audit committee members, increased stock ownership by audit committee members, greater CFO expertise, and improvement in CEO reputation.

Researchers also report that positive changes in various board characteristics bear the highest relevance for remediation of control environment weaknesses and weaknesses related to information and communications. On the other hand, remediation of weaknesses related to control activities and monitoring are most strongly associated with the improvements in the characteristics of the audit committee and top management. The study also provides an evidence of the interrelating and accumulating nature of the internal control weaknesses. For example, companies were less likely to remediate the control environment weaknesses in the following year if they also reported control activity weaknesses. Also, firms with specific control activity weaknesses were less likely to correct these problems next year if they simultaneously reported more general entity-related control weaknesses.

Costs and unintended consequences of recent PCAOB standards

Krishnan, Krishnan, and Song (2011b)

Krishnan et al. explore the change in audit fees in the 2 years following implementation of auditing standard No. 5 (AS No. 5) in comparison with the last year under auditing standard No. 2 (AS No. 2). Contrary to the very detail-oriented, rule-based, bottom-up approach in AS No. 2, AS No. 5 encouraged auditors to apply a top-down, principle-oriented, risk-based approach to the testing of controls. As a result, regulators expected AS No. 5 to lead to more appropriate scaling of audit engagements, increased audit efficiencies, and reductions of audit fees.

To avoid the confounding impact of switching the auditors, researchers restrict the sample to stable audit–client pairs under both standards. The final sample includes 1563 companies with 4689 firm-year observations. Using a dummy independent variable for AS5 versus AS2, a dummy independent variable for the presence of material weaknesses in internal controls, and the logarithm of audit fees as the dependent variable, Krishnan et al. document the decrease of audit fees (all other factors constant) under AS No. 5. The average decrease in audit fees during the first 2 years under AS No. 5 was 4.11%.

The impact was especially pronounced for the companies that remediated their material weaknesses and received unqualified opinions under AS No. 5 as opposed to adverse opinion under AS No. 2. Also, firms that received an adverse opinion in the first year under AS No. 5 paid lower fee premiums in the next year (15% in comparison with the similar clean firms) than their peers paid earlier in the similar situation under AS No. 2 (42%).

However, contrary to the policymakers' expectations that the smaller firms will benefit the most from better audit scaling, there was no evidence of the lower audit fees for smaller firms under AS No. 5. Quite the opposite, researchers reported that it is complex firms with multiple business segments and international operations that enjoy audit fee savings as a result of the regulatory change. Overall, empirical results suggest that new top-down risk-based approach did in fact produce efficiencies in the internal control audits, but it was the complex companies who benefited the most from the change.

Bronson, Hogan, Johnson, and Ramesh (2011)

Bronson et al. explore whether the recent significant changes in the audit environment decreased reliability of preliminary earnings releases. In particular, the authors point out that the mandatory audit of internal control under AS No. 2 and the stricter audit documentation requirements under AS No. 3 increased the amount of time necessary to complete the audit. As a result, the audit report lag, which is the difference between the date of the final audit report and the fiscal year end, increased in the examined period from 46 (50) days in 2000 (2003) to 62 (65) days in 2004 (2005).

Interestingly, this delay in the issuance of the audit report coincided with the further globalization of business and

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technological developments that made the timely disclosure of the financial information especially crucial for current and potential investors. Having recognized this expectation, the SEC imposed earlier filing deadlines for accelerated filers during the period. As a consequence, the mean filing lag (the number of days from the fiscal year-end to the 10-K filing date) decreased from 85 days in 2000 to 77 days in 2003. In these conditions, Bronson et al. hypothesize that most companies will respond to market expectations and will trade-in earnings timeliness for earnings reliability.

Consistent with predictions, the authors find that most companies have indeed chosen to announce their preliminary earnings approximately at the same time as in the periods preceding this regulation. The earnings announcement lags (EAL), which is the number of days between the end of the fiscal year and the preliminary earnings announcement date, did not change significantly during the period: the average EAL was 43 days in 2001 and 46 days in 2005. Nearly 70% of firms chose to announce earnings after audit report date in 2000 and 2001, but only 20% of firms reported after the audit date in 2005. During the years 2000 to 2003, the median firm released earnings the same day or the day after the audit report date. In 2004 the median firms were announcing earnings 18 days earlier before the audit report date.

These results were driven to the large extent by the behavior of the accelerated filers and can be attributed to one time change that happened in 2004, the year of the initial implementation of AS No. 2: 66.9% of accelerated filers released the earnings on or after audit report date in 2000 as opposed to 8.4% of accelerated filers who still waited for the audit report in 2004 to release their earnings. In comparison, the percentage of non-accelerated filers that waited until the date of the audit report to announce their earnings has decreased from 68% in 2001 to 47.4% in 2004. This reduction in the number of non-accelerated filers, who waited until the audit report date to release the earnings, could be likely explained by higher workload of the audit firms around this time as well as stricter documentation requirements under AS3 that led to increased audit report lags even for those companies who were not subject to mandatory audits of internal control.

The authors also document that firms with a richer information environment as reflected in higher market values and greater analyst following, firms with higher accounting/auditing complexity, and financial companies are more likely to announce the earnings before the date of the audit report. In addition, evidence suggests that the number of preliminary earnings announcement (PEA) revisions, measured as the number of firms that report different income before extraordinary items in its audited 10-K forms than those announced preliminary, grew from 12 in 2000 to 186 in 2005. Bronson et al. speculate that if percentage of the firms who choose to announce preliminary earnings before audit report date would remain the same after AS No. 2 and AS No. 3 became effective, PEA revisions would have been 35% lower. They also document the negative market reaction to the revisions when the revisions are announced through press release or 8-K form (path followed by 189 out of 544 firms or 35% of the sample) but not when the revision becomes evident as a result of corporate filing of 10-K form that contains the revised numbers (46% of the sample). Overall, the authors conclude that AS No. 2 and No. 3 had unintended consequences of reducing the reliability of numbers reported in preliminary earnings releases.

DeFond and Lennox (2011)

DeFond and Lennox explore whether the SOX and related regulation prompted small audit companies to exit the audit market for SEC companies and what effect such exit had on audit quality. Specifically, DeFond and Lennox stress that the PCAOB raised the performance bar for all audit firms due to stricter audit requirements, more thorough regulatory scrutiny, and higher penalties for auditor misconduct. However, the compliance burden was higher for small audit firms, who were unable to achieve economies of scale, than for their larger peers. Additionally, in cases where the PCAOB uncovers and reports deficiencies in the quality of controls of audit firms, such disclosures might have especially crucial consequences for the reputation and overall business of the small audit firms. DeFond and Lennox posit that in these conditions small audit firms of the lower quality might find it more cost-beneficial than their "better quality" peers to exit the SEC clients market.

The authors empirically test their hypotheses by applying several metrics of audit firm quality such as avoidance of AICPA peer reviews, failure to comply with PCAOB regulations, and severity of deficiencies, reported in peer reviews or PCAOB inspection reports. Small audit firms are defined as companies with fewer than 100 SEC clients. Small audit firms comprised 97% of all audit firms in the U.S. in 2008, and collectively such firms audited 34% of U.S. public companies.

Overall, the authors document the significant decrease in the number of small audit firms with SEC clients during 2001 to 2008: while 1233 small audit firms were active during this period, 607 of these firms ceased providing services to public clients during this time, and most of the exits occurred between 2002 and 2004 – the years when the crucial regulatory changes, such as PCAOB inspections, went into effect. The authors also report that although the total number of the small audit firms serving public companies decreased almost 50% during the examined period, the average number of SEC clients of each remaining small firm doubled during this period. This finding illustrates the significant shift in the composition of the market for small audit firms due to the regulation. Evidence also suggests that small audit firms that chose to exit the market for SEC clients were of lower quality than their remaining counterparts. The exiting small audit firms were also less likely to issue going concern modifications than their remaining peers who succeeded exit firms as the new client auditors. Therefore, DeFond and Lennox conclude that the PCAOB's activity improves the audit quality by prompting low quality audit firms to leave the audit market of SEC clients.

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