

THE ROLE OF FINANCIAL REPORTING AND TRANSPARENCY IN CORPORATE GOVERNANCE

1. INTRODUCTION

We review the recent corporate governance literature that examines the role of financial reporting in resolving agency conflicts among a firm's managers, directors, and capital providers.¹ We view governance as the set of contracts that help align managers' interests with those of shareholders, and we focus on the central role of information asymmetry in agency conflicts between these parties. In terms of the firm-specific information hierarchy, the literature typically views management as the most informed, followed by outside directors, then shareholders. We discuss research that examines the role of financial reporting in alleviating these information asymmetries and the role that financial reporting plays in the design and structure of incentive and monitoring mechanisms to improve the credibility and transparency of information.

Most of this research is large-sample and does not pay

¹ Certainly, financial reporting provides valuable information in other contracting relationships beyond those involving capital providers (suppliers, customers, auditors, regulators, tax authorities, etc.). In this article, we confine our discussion to contracts involving capital providers for three reasons: (1) they are a major focal point in the literature, (2) the literature on agency conflicts between managers and capital providers constitutes a natural, interconnected subset of articles that lends itself to a relatively cohesive discussion, and (3) we wish to keep the scope of our review manageable.

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particular attention to industry-specific characteristics that may influence a firm's governance structure. For example, the firm-specific governance structure and financial reporting systems of financial institutions and other regulated industries are expected to be endogenously designed. The design is also expected to be conditional on (in other words, take into account) the existence of certain external monitoring mechanisms (for example, regulatory oversight and constraints), which may either substitute for or complement internal mechanisms, such as the board. Similarly, the rationale for regulation in certain industries (for example, the existence of natural monopolies) is also expected to influence firms' governance structures. These and other differences between firms in different industries suggest that inferences drawn from studies spanning multiple industries may not necessarily hold for specific industries or research settings.² The same point can also be made about extrapolating inferences drawn from U.S. firms to their international counterparts. Different countries have their own (often unique) laws, regulations, and institutions that influence the design, operation, and efficacy of a firm's governance mechanisms as well as the output of its financial reporting system.

² Further underscoring this concern, it is not uncommon for governance studies to exclude firms that belong to historically regulated industries, such as financial institutions and utilities.

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We also highlight the distinction between formal and informal contracting relationships, and discuss how both play an important role in shaping a firm's overall governance structure and information environment. Formal contracts, such as written employment agreements, are often quite narrow in scope and are typically relatively straightforward to analyze. Informal contracts, govern implicit multiperiod relationships that allow contracting parties to engage in a broad set of activities for which a formal contract is either impractical or infeasible. For example, the complexity of the responsibilities and obligations of a firm's chief executive officer make it difficult to draft a complete state-contingent contract with the board that specifies appropriate actions under every possible scenario the firm could face. Consequently, although some CEOs have formal employment contracts, these contracts are necessarily incomplete and relatively narrow in scope. As a result, the board and the CEO develop informal rules and understandings that guide their behavior over time.

Much of the governance literature emphasizes informal contracting based on signaling, reputation, and certain incentive structures. The general conclusion in this literature is that financial reporting is valuable because contracts can be more efficient when the parties commit themselves to a more transparent information environment.

Another key theme of this article is that a firm's governance structure and its information environment evolve together over time to resolve agency conflicts. That is, certain governance mechanisms and financial reporting attributes work more efficiently within certain operating environments. Consequently, one should not necessarily expect to see every firm converge to a single dominant type of corporate governance structure or compensation contract, or to adopt a similar financial reporting system. Instead, one should expect to observe heterogeneity in these mechanisms that is related to differences in firms' economic characteristics. In our opinion, the corporate governance literature seems to be unduly burdened by the normative notion that certain governance structures can be categorically labeled as "good" or "bad."³

In Section 2, we briefly discuss the general nature of contracts related to governance and the properties of financial reporting that are relevant to various governance structures. Section 3 discusses the role of information asymmetry and credible commitment to transparent financial reporting in corporate governance. In Section 4, we discuss the relationship of regulatory supervision and oversight to the governance

³ Governance structures frequently characterized as categorically (or unconditionally) bad include a board with a high proportion of inside directors, a CEO who also serves as chairman of the board, a CEO with relatively low equity incentives, and relatively weak shareholder rights.

structure of firms in the banking and financial services sectors. We also discuss how certain governance mechanisms can facilitate the production of information and enhance transparency, which may in turn contribute to financial stability. Section 5 provides brief concluding remarks.

2. THE ROLE OF FINANCIAL REPORTING IN CORPORATE GOVERNANCE

We view corporate governance as the subset of a firm's contracts—both formal and informal—that help align the interests of managers with those of shareholders. Therefore, corporate governance consists of the mechanisms by which shareholders ensure that the interests of the board of directors and management are aligned with their own.⁴ We also view this definition to be broad enough to encompass *all* of the firm's contracts that assist in aligning the incentives of the firm's shareholders, directors, and managers. For example, when a firm's creditors have the right to monitor the firm's financial reporting, those creditors may help align the interests of managers and shareholders; therefore, a debt contract that allows such monitoring could constitute a governance mechanism.

Corporate governance research typically focuses on one of two types of agency problems that give rise to a conflict of interest between managers and shareholders. The first type arises when the interests of the board of directors and shareholders are assumed to be aligned (that is, the board is composed of individuals who make decisions that are in the best interest of shareholders), but the interests of management are not aligned with those of the board and shareholders. Research on this type of conflict includes studies that examine executive compensation plans, incentive structures, and other monitoring mechanisms used to ensure that managers act in the interest of shareholders.⁵

The second type of agency problem arises when the interests of the board and management are assumed to be aligned with each other (that is, the board is composed of directors who are beholden to the CEO), but their interests are not completely aligned with the interests of shareholders. Research on this type of conflict includes studies on

⁴ This definition is broadly consistent with the views of authors such as Jensen (1993), Mehran (1995), Shleifer and Vishny (1997), Core, Holthausen, and Larcker (1999), Holderness (2003), and Core, Guay, and Larcker (2003).

⁵ See, for example, Ahmed and Duellman (2007), Carcello and Neal (2003), and Francis and Martin (2010).

board independence, entrenched CEOs, and shareholder actions to influence, challenge, or overturn board decisions (such as shareholder proxy contests, class action lawsuits, and “say-on-pay” proposals).⁶

Corporate governance mechanisms that have the potential to reduce these agency conflicts include both formal and informal contracts. Formal contracts—including corporate

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charters, employment contracts, exchange listing requirements (such as board independence rules), and executive stock ownership guidelines—constrain the contracting parties’ behavior and specify certain responsibilities and requirements in the event of certain foreseeable contingencies. These contracts, however, tend to be relatively narrow in scope. Informal contracts constitute a broad set of unwritten or implicit arrangements that allow the contracting parties to engage in activities that would otherwise be either prohibitively costly or infeasible to memorialize in a formal contract. Many important governance functions are carried out via informal contracts. Boards establish reputations regarding their independence from management, their expertise in advising management, and their work ethic. Reputations develop over time, in part on the basis of board characteristics such as the proportion of inside versus outside directors, the size of the board, the expertise of directors, and the number of board meetings, as well as by the consistency of the board’s decision-making processes and its stewardship of shareholder value. As we explain below, various attributes of a firm’s financial reporting play a key role in both formal contracts (in part because these contracts are sometimes based on financial reporting numbers) and informal contracts (because of the importance of financial reporting and credible disclosure in establishing reputations and sustaining working relationships).

A key objective of this article is to highlight the important role that financial reporting plays in reducing the informational advantage of managers over outside directors, shareholders, and other stakeholders (for example, regulators).

⁶ See, for example, Klein (2002b), Zhao and Chen (2008), and Duchin, Matsusaka, and Ozbas (2010).

Managers typically have better firm-specific information than outside directors and shareholders, but they are not always expected to truthfully report information that is detrimental to their personal interests, such as information about poor performance or their consumption of private benefits (Verrecchia 2001).

Boards, which largely consist of outside directors, and shareholders, are therefore typically assumed to be at an informational disadvantage when monitoring managers. Jensen describes these informational problems as follows:

Serious information problems limit the effectiveness of board members in the typical large corporation. For example, the CEO almost always determines the agenda and the information given to the board. This limitation on information severely hinders the ability of even highly talented board members to contribute effectively to the monitoring and evaluation of the CEO and the company’s strategy. (1993, 864)

Indeed, in the absence of information asymmetries, boards would likely be able to mitigate many, if not most, agency conflicts with managers. The reason is that boards retain considerable discretion to discipline managers and could therefore take immediate action upon receiving new information. Thus, one potential role for financial reporting is to provide outside directors and shareholders with relevant and reliable information to facilitate their mutual monitoring of management and, in the case of shareholders, their monitoring of directors. Further, to the extent that financial reporting serves to reduce information asymmetries, one expects to observe corresponding variation in the governance mechanisms that are associated with financial reporting characteristics.

3. THE ROLE OF INFORMATION IN STRUCTURING CORPORATE BOARDS

The board of directors plays a key role in monitoring management and in constructing mechanisms that align managers’ objectives with shareholders’ interests. A large body of theoretical and empirical literature examines the role of boards in performing two broad functions: (1) advising senior management, which requires expertise and firm-specific knowledge, and (2) monitoring senior management, which additionally requires independence from management.⁷ The ways in which boards are structured

⁷ For example, see Fama and Jensen (1983), Raheja (2005), Boone et al. (2007), Drymiotis (2007), Lehn, Patro, and Zhao (2009), Linck, Netter, and Yang (2008), and Harris and Raviv (2008).

to achieve these goals—especially the latter—has been the subject of considerable research, with the distinction between outside and inside directors being the most commonly examined dimension of board structure.

Corporate boards typically consist of both outside and inside directors.⁸ For example, in a broad sample of U.S. firms that were publicly traded between 1990 and 2004, Linck, Netter, and Yang (2008) found 67 percent to be the median percentage of outside directors on a board. Outside directors are typically experienced professionals, such as CEOs and executives of other firms, former politicians and regulators, university deans and presidents, and successful entrepreneurs. The value of having outside directors on the board derives, in part, from their broad expertise in areas such as business strategy, finance, marketing, operations, and organizational structure. Further, outside directors can bring an independence that carries with it an expectation of superior objectivity in monitoring management's behavior. Their diligence in this respect may stem partially from the monetary incentives associated with serving as a director (Yermack 2004), but possibly even more important may be their desire to enhance, cultivate, and protect their significant personal reputational capital.

Inside directors, who are typically executives of the firm, can facilitate effective decision making because they are a valuable source of firm-specific information about constraints and opportunities (see, for example, Raheja [2005], Harris and Raviv [2008], and Adams, Hermalin, and Weisbach [2010]). As Jensen and Meckling (1992) note, the allocation of decision (or control) rights within an organization is a fundamental building block of organizational structure. And because it can be costly to transfer information within the corporate hierarchy, it can be efficient to assign decision rights to the individuals who possess the information necessary to best make decisions, even in the face of agency conflicts (Aghion and Tirole 1997). In addition to their decision-making responsibilities, inside directors can also be particularly helpful in educating outside directors about the firm's activities (Fama and Jensen 1983). Inside directors, who typically hold relatively large amounts of the firm's stock and options, as

⁸ Pursuant to Item 470(a) of Regulation S-K of the U.S. Securities and Exchange Commission, firms must disclose whether each director is "independent" within the definition prescribed by the exchange on which the firm's shares are traded. Directors are typically classified as insiders, outsiders, and affiliates (or gray directors). Insiders are current employees of the firm, such as the CEO, CFO, president, and vice presidents. Outsiders have no affiliation with the firm beyond their membership on its board of directors. Affiliates are former employees of the firm, relatives of its CEO, or those who engage in significant transactions and business relationships with the firm as defined by Items 404(a) and (b) of the regulation. Directors on interlocking boards are also considered to be affiliated, where interlocking boards are defined by Item 402(j)(3)(ii) as "those situations in which an inside director serves on a non-inside director's board."

well as have their human capital tied to the firm, may also have stronger incentives than outside directors to exert effort and to maximize shareholder value.

At the same time, however, inside directors are potentially conflicted in their incentives to monitor because of their lack of independence from the CEO and a desire to protect their own

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private benefits.⁹ Further, even though well-informed outside directors are likely to be more effective in advising the CEO, insiders may be reluctant to share their information if it will be used to interfere with the CEO's strategic decisions (Adams and Ferreira 2007). This scenario is particularly true if the information could be used to discipline the executives or to curtail their private benefits.

Holmstrom (2005, 711-2) provides a succinct characterization of the issues related to information flow between management and outside directors:

Getting information requires a trusting relationship with management. If the board becomes overly inquisitive and starts questioning everything that the management does, it will quickly be shut out of the most critical information flow—the tacit information that comes forward when management trusts that the board understands how to relate to this information and how to use it. Management will keep information to itself if it fears excessive board intervention. A smart board will let management have its freedom in exchange for the information that such trust engenders. Indeed, as long as management does not have to be concerned with excessive intervention, it wants to keep the board informed in case adverse events are encountered. Having an ill-informed board is also bad for management, since the risk of capricious intervention or dismissal increases.

⁹ However, see Drymiotis (2007) for a situation in which an increase in the number of inside directors might actually improve the efficiency of the board's monitoring role. In his model, outside directors have an incentive to shirk their monitoring duties and to shortchange the CEO with respect to his performance ex post. Inside directors, who represent the CEO's interests, can commit themselves to expending monitoring effort ex post, thereby increasing the CEO's incentive to exert productive effort.

Thus, a key advantage of inside directors is also a key disadvantage of outside directors: the differential cost and difficulty of obtaining adequate information with which to make decisions. Such information transfer between insiders and outsiders is not trivial, and it is the focus of much of the literature on corporate governance. Outside directors are typically busy individuals who already have other demands on their time. It is unrealistic to expect that an outside director can or will invest the time and effort necessary to become as well informed as the firm's executives. Further compounding these informational problems is the fact that outside directors must largely rely on the executives they are monitoring and advising to provide them with the information necessary to facilitate effective corporate governance, although auditors, regulators, analysts, the media, and other information intermediaries may also assist outside directors in this regard.

Bushman et al. (2004, 179) summarize the trade-offs in choosing the relative proportion of inside and outside directors on a board:

An important question of board composition concerns the ideal combination of outside and inside members. Outsiders are more independent of a firm's CEO, but are potentially less informed regarding firm projects than insiders. Insiders are better informed regarding firm projects, but have potentially distorted incentives deriving from their lack of independence from the firm's CEO.

Thus, a board composed entirely of insiders may not be effective because of the potential for allowing managerial entrenchment. Conversely, a board with no insiders may not be effective if the directors have a limited understanding of the firm with no way to remediate this informational disadvantage. Although researchers have advanced a variety of hypotheses related to the optimal mix of inside and outside directors (Hermalin and Weisbach 2003; Adams, Hermalin, and Weisbach 2010), we focus our discussion on those related to the information environment. In general, these information-based hypotheses predict that when outside directors face greater information acquisition and processing costs, they will be less effective advisors and monitors, and are less likely to be invited to sit on boards.

Regarding the board's advisory role, a common prediction is that in firms with significant investment opportunities and complex investments—such as substantial research and development (R&D), and intangible assets—considerable firm-specific knowledge may be necessary to effectively advise management. In these situations, the informational advantage that insiders have over outsiders may impede

the advisory role of outside directors and lead to a greater proportion of inside directors (see, Coles, Daniel, and Naveen [2008]).

With respect to the board's monitoring and oversight responsibilities, hypotheses frequently emphasize that the firm's operations and information environment influence the monitoring costs and benefits of certain board structures. Specifically, it has been argued that firms in more uncertain business environments—such as high-growth firms with substantial investment in R&D, intangible assets, and earnings and stock price volatility—are more difficult (that is, costly) to monitor, in large part because of greater information asymmetries between managers and outside directors (see, for example, Demsetz and Lehn [1985]; Gillan, Hartzell, and Starks [2006]; and Coles, Daniel, and Naveen [2008]). Because it is costly for outside directors to acquire and process the information necessary to effectively monitor managers, firms characterized by greater information asymmetry between managers and outsiders are predicted to have a higher proportion of inside directors.

A growing body of empirical literature examines the relation between information processing costs and board structure.¹⁰ Information acquisition and processing costs are

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generally thought to increase with information asymmetry, where information asymmetry (and monitoring difficulty in general) is typically measured using proxies such as the market-to-book ratio (or Tobin's Q), R&D expenditures, stock-return volatility, firm size, number of analysts, analyst forecast dispersion, and the magnitude of analyst forecast errors.

Across a variety of research designs and samples, empirical evidence generally supports the idea that the proportion of outside directors is lower at firms with greater information asymmetry between insiders and outsiders, and at firms where idiosyncratic (that is, firm-specific) knowledge is more likely to be important (see, for example, Linck, Netter, and Yang [2008]; Lehn, Patro, and Zhao [2009]; and Cai, Qian, and

¹⁰ See, for example, Boone et al. (2007), Coles, Daniel, and Naveen (2008), Linck, Netter, and Yang (2008), Lehn, Patro, and Zhao (2009), and Cai, Qian, and Liu (2009).

Liu [2009]). Although the empirical evidence is largely consistent, establishing the direction of causality of this relation is more elusive.

A recent study by Armstrong, Core, and Guay (2014) attempts to discern the direction of causality by examining regulatory requirements that require certain firms to increase their proportion of outside directors. They find evidence that a mandatory increase in the proportion of outside directors is associated with a decrease in information asymmetry, as measured by an increase in the frequency and precision of management forecasts and an increase in coverage by financial

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analysts. Armstrong, Core, and Guay (2014) interpret their results as evidence that firms can and do alter certain aspects of their transparency to accommodate the information demands of independent directors.

In a related study, Duchin, Matsusaka, and Ozbas (2010) find that regulations that increase the proportion of outside directors resulted in lower firm performance when information acquisition costs are high. In other words, because some firms optimally have a smaller proportion of independent directors, regulators should use caution when considering whether to require firms to decrease insider representation on their boards.

The results of these studies are inconsistent with the view often articulated by researchers that boards with a higher percentage of outside directors facilitate better governance by acting to ensure lower information asymmetry with management. The results instead suggest that firms' inherent information transparency, which is largely dictated by characteristics of their operating environment, drives the choice regarding the optimal proportion of outside directors.

Another aspect of board structure that has received attention in the literature is the CEO's role on the board—particularly whether the CEO is also the chairman of the board, as is currently the case for about 60 percent of the firms in the Standard & Poor's 500 index. Brickley, Coles, and Jarrell (1997) argue that the prospect of becoming the chairman of the board acts as an incentive mechanism for CEOs, suggesting that more successful and talented CEOs are more likely to be awarded chairmanship of the board. A prediction more closely related to our discussion is that because CEOs typically have the most detailed firm-specific information,

CEOs are more likely to be delegated greater control at firms with greater information asymmetry between insiders and outsiders (Brickley, Coles, and Linck 1999).

Some studies also predict that the CEO's ability influences the evolution of board independence. In particular, CEOs with superior ability and a history of strong performance may acquire significant bargaining power, which they can use to surround themselves with loyal directors, thereby reducing the independence of the board (Hermalin and Weisbach 1998). At the same time, shareholders may decide that more board independence is necessary to monitor a powerful CEO, particularly when information asymmetry has the potential to lead to agency conflicts (although the feasibility of structuring a strong independent board in this situation is an empirical question). Collectively, these CEO-related hypotheses do not lead to an unambiguous prediction about the relation between information transparency and the combined roles of CEO and chairman. Accordingly, it may not be surprising that Linck, Netter, and Yang (2008) fail to find a significant relation between information asymmetry and the incidence of the combined roles of CEO and chairman.

Even if we accept the premise that outside directors require high-quality information to perform their monitoring and advisory roles, they are unlikely to know precisely the extent of their information disadvantage; hence they must rely on credible commitment mechanisms to ensure that the information environment is transparent. That raises the question of how managers can credibly pledge to truthfully convey (or how they can be compelled by outside directors, shareholders, and other parties to so convey) their private information about the firm's activities and financial health. Leuz and Verrecchia (2000) provide a lucid discussion of the important distinction between a commitment to disclosure and voluntary disclosure. The former is an ex ante decision to provide information regardless of its content, whereas the latter is an ex post decision of whether to provide information after observing its content. The authors discuss a commitment to disclosure in the context of a firm's cost of capital, but their arguments translate to the governance setting, in which boards require mechanisms to compel managers to disclose information regardless of whether doing so is in the managers' interests.

The accounting literature on board structure has identified several mechanisms that entail a commitment to transparent financial reporting, including:

- committing to report timely financial accounting information in general (for example, earnings timeliness);

- making a more specific commitment to report information about losses in a timely manner (for example, conservative financial reporting);
- hiring a high-quality auditor who reports to an independent audit committee;
- inviting financially sophisticated outsiders to sit on the board, and;
- maintaining or encouraging the monitoring efforts of more active investors.

3.1 Timeliness of Financial Reports

Bushman et al. (2004) note that outside directors require timely information to assist them in carrying out their monitoring and advising responsibilities, and timely financial reporting in general, and the timely reporting of earnings in particular, have the potential to help satisfy these informational demands. However, the authors discuss the difficulty in formulating a prediction with respect to the relation between the timely reporting of earnings and board structure. On one hand, the foregoing theoretical arguments suggest that outside directors are likely to be less effective at a firm that has not made a commitment to reduce information asymmetry between insiders and outsiders. Thus, one might expect to find a positive relation between the proportion of outside directors and timely financial reporting (as a proxy for low information asymmetry).¹¹ On the other hand, Bushman et al. also argue that low transparency can increase the scope for agency conflicts between shareholders and managers, thereby necessitating a greater proportion of outside directors to monitor management in situations where earnings are less timely.

With regard to the latter argument, it is instructive to consider how outside directors can be effective monitors in the face of low transparency. One possibility might be that low transparency is “correctable” and that outside directors will work to improve transparency so that they can more effectively monitor and advise management. If

¹¹ Financial accounting properties such as earnings timeliness may or may not be good proxies for information asymmetry between managers and outside directors. Earnings timeliness is likely to be influenced by both firm- and industry-specific characteristics as well as by manager-specific characteristics. Thus, low earnings timeliness does not necessarily imply that a company has substantial information asymmetry between managers and outside directors. For example, even when managers are doing their best to convey their private information, they may be unable to credibly convey relevant and reliable information about their firm through the financial reporting process if their firm is growing fast in an uncertain business environment.

this were true, however, the negative relation between earnings timeliness and outside directors should be temporary (observed only until the outside directors correct the transparency problems). Possibly as a result of these conflicting forces, Bushman et al. (2004) fail to find a significant relation between earnings timeliness and the proportion of outside directors.

3.2 Conservative Financial Reporting

Ahmed and Duellman (2007) also recognize the tension that outside directors require high-quality timely information to effectively monitor and advise managers, but, at the same time, that managers may have incentives to distort or conceal their private information. In contrast to the focus of Bushman et al. on the overall timeliness of earnings, Ahmed and Duellman emphasize the timeliness with which “bad news” is reported. Bad news can reasonably be viewed as central to the informational conflict between management and outside parties (including outside directors), as it will paint management’s performance in an unfavorable light. (See, for example, discussions by Watts [2003]; Ball and Shivakumar [2005]; and Kothari, Shu, and Wysocki [2009].)

In the accounting literature, the term “conservatism” is ascribed to the property of accounting reports that subjects bad news to a lower verification standard than good news and thus provides more timely recognition of bad news than good news in earnings. The more timely recognition of bad news is achieved through a variety of reporting rules and choices that commit managers to recognize and disclose difficult-to-verify information about losses more quickly than information about gains. For example, a decline in the value of inventory, goodwill, and other long-lived assets is recognized in a timely manner (such as recording an impairment charge), but a commensurate increase in value is recognized only when it is easy to verify—typically when there is an external arm’s-length sale or exchange. Thus, it seems reasonable to characterize conservatism as the set of financial accounting rules and conventions that facilitate more complete and timely corporate disclosure by committing managers to report bad news sooner than it might otherwise surface (Guay and Verrecchia 2007).

Notwithstanding issues related to the measurement of conservatism, which are not unique to their paper, Ahmed and Duellman (2007) find that the degree of conservatism in accounting earnings is greater for firms with a higher proportion of outside directors. This result is consistent with the hypothesis that timely recognition of bad news aids these directors in carrying out their monitoring and advisory roles.

This result does not, however, speak to the direction of causality. Thus, shareholders may choose to appoint more outside directors when the firm's accounting is relatively more conservative (thus providing the timely information outside directors require to effectively govern); or instead, outside directors may facilitate the timely recognition of bad news through their efforts to elicit such information from management.

3.3 The Audit Committee of the Board of Directors

Outside directors on the audit committee are likely to bring greater independence in monitoring management's financial reporting activities and, like outside directors in general, they are thought to require more information transparency to fulfill their responsibilities. However, regardless of their efforts, outside directors on the audit committee are unlikely to understand the firm's financial reporting process as well as inside directors do.

Klein (2002a, b) examines hypotheses similar to those in Bushman et al. (2004) but in the context of outside directors on the audit committee rather than on the board as a whole. Klein (2002a) predicts and finds that more complex firms, and firms with greater uncertainty and growth opportunities, are less likely to have outside directors on the audit committee. This result is consistent with outside directors being asked to serve only in settings where there is sufficient information transparency to allow them to effectively fulfill their advising and monitoring roles.

Klein (2002b) and Krishnan (2005) document that the proportion of outside directors on the audit committee is negatively related to the incidence of internal control problems, as publicly disclosed on U.S. Securities and Exchange Commission (SEC) Form 8-K when a change of auditor occurred. The results in these two papers are consistent with outside directors having both an incentive and the ability to monitor the financial reporting process, and with outside directors curtailing earnings management that is not in shareholders' interests. However an alternative interpretation, which is also consistent with the collective evidence, is that management and shareholders recognize the need for their corporate financial reporting process to be transparent when they invite more outside directors to sit on the board (or that outside directors will agree to join the board only when the firm has made a commitment to transparent financial reporting). This alternative interpretation emphasizes shareholders', and potentially management's, incentives to proactively mitigate agency conflicts that arise when financial reporting is not transparent. Empirical evidence also indicates

that shareholders recognize the difficulties that directors face in monitoring the financial reporting process and provide greater remuneration to audit committee members when monitoring demands are greater.¹²

3.4 Adding Outside Financial Experts to the Board

In the wake of several high-profile accounting scandals in the early 2000s and the passage of stricter disclosure rules in the Sarbanes-Oxley Act of 2002, the role of financial experts on boards of directors became a timely issue in accounting research. Financial experts are thought to have better capabilities with respect to monitoring and advising on financial reporting and disclosure issues than their non-expert counterparts.

Although we are not aware of a well-accepted definition of "financial expert" in the academic literature on corporate governance, it seems intuitive that a director with a background in public accounting, auditing, or financial operations—such as a chief financial officer (CFO), controller, or treasurer—would possess financial expertise.¹³ However, the Sarbanes-Oxley Act uses a broader definition of how a director can obtain financial expertise. The definition includes, for example, experience in managing individuals who carry out financial reporting and financial operations. As a result, the Sarbanes-Oxley definition of "financial expert" includes individuals such as CEOs and company presidents who do not necessarily have expertise in analyzing financial reports or accounting practices.

In the absence of regulatory requirements, a firm will presumably invite a financial expert to sit on its board for one of the following reasons: (1) management requires advice on corporate finance or financial reporting strategy, (2) management wants to credibly commit itself to more intense monitoring of corporate finance or financial reporting strategies, or (3) shareholders (for example, blockholders) pressure or require management to add an expert to the board because of concerns about insufficient monitoring. In the first case, an outside financial expert can perform an advisory role only if the firm's financial reporting and information environment

¹² Engel, Hayes, and Wang (2003).

¹³ In the SEC's Regulation S-K, Item 401, the qualifications of an audit committee financial expert include an understanding of accounting standards and financial statements; an ability to assess the general application of accounting principles; experience in preparing, auditing, or analyzing financial statements; an understanding of internal control over financial reporting; and an understanding of audit committee functions.

are transparent. Thus, one might expect a positive relation between information transparency and the presence of financial experts on the board. In the second and third cases, an outside financial expert may be asked to sit on the board when the firm's financial reporting and information environment are not sufficiently transparent and additional monitoring and advice from a financial expert will make it more so. In this scenario, one might expect to observe a negative relation between information transparency and the presence of financial experts that becomes positive over time as a result of a financial expert's actions to increase transparency. Thus, in cross-sectional tests, one could find a negative, positive, or no relation between information transparency and the presence of financial experts on the board.

Empirical research on these hypotheses is mixed but generally supports the prediction of a positive—although not necessarily causal—relation between information transparency and the presence of financial experts on the board. Xie, Davidson, and DaDalt (2003) show that board and audit committee members with corporate or financial expertise are associated with lower discretionary

Empirical research on these hypotheses is mixed but generally supports the prediction of a positive—although not necessarily causal—relation between information transparency and the presence of financial experts on the board.

accruals (which the authors assume are used by managers to reduce transparency). Agrawal and Chadha (2005) find that the frequency of an earnings restatement is lower in companies with an outside financial expert director on either the board or the audit committee. In addition, Farber (2005) finds that firms subject to an SEC enforcement action have fewer financial experts on their audit committees. And Krishnan (2005) and Hoitash, Hoitash, and Bedard (2009) show that the financial expertise of audit committee members is negatively related to the incidence of internal control problems.

When interpreting the results of these studies, it is important to note that a positive relation between the presence of a financial expert on the board and transparency in financial reporting does not necessarily imply

that financial experts *cause* greater transparency. Having a financial expert on the board may improve transparency, but instead it can also signal that a firm's financial reporting practices are of high quality. In particular, financial experts will presumably investigate the firm's financial reporting practices before agreeing to sit on the board and will do so only if the financial reporting practices are deemed to be of acceptable quality. In addition—or perhaps simultaneously—having a financial expert sit on the board can signal that management is committed to transparent financial reporting practices and is actively seeking advice and monitoring to achieve this objective. (Of course, the financial expert may be reluctant to accept a position that requires significant effort to ensure or establish transparency.) In work consistent with this signaling hypothesis, DeFond, Hann, and Hu (2005) find a positive stock price reaction when a director with accounting expertise is appointed to the audit committee, although this result is not found for nonaccounting experts who meet the broader Sarbanes-Oxley definition of a financial expert (see also Engel [2005]).

In a related vein, recent research examines the role of the CFO in transparent financial reporting. The CFO is a key individual with substantial decision-making authority over financial reporting, and therefore it seems reasonable to predict that a fastidious CFO with appropriate incentives could have a positive influence on the quality of financial reporting.¹⁴ Bedard, Hoitash, and Hoitash (2014) provide evidence of higher financial reporting quality when the CFO holds a seat on the board of directors. This finding suggests either that board membership of CFOs enables other directors to better monitor the financial reporting process or that high-quality financial reporting is indicative of a high-quality CFO who is likely to be valuable on the board. Li, Sun, and Ettredge (2010) find that firms with internal control weaknesses as defined in Sarbanes-Oxley (sec. 404) have CFOs with lesser professional qualifications, and that newly hired CFOs with greater qualifications are associated with improvements in auditor opinions about internal control weaknesses.

¹⁴ As evidence supporting the incentives of CFOs to maintain high-quality financial reporting systems, Hoitash, Hoitash, and Johnstone (2012) and Wang (2010) document that CFOs of firms with weak internal controls receive lower compensation. Further, Wang (2010) and Li, Sun, and Ettredge (2010) show that CFOs of firms with internal control weaknesses experience a higher rate of forced turnover.

3.5 Outside Directors as a Mechanism to Mitigate Agency Conflicts with Creditors and Other Contracting Parties

A number of recent papers explore the notion that in addition to mitigating agency costs between managers and shareholders, outside directors can also help resolve agency conflicts between managers (acting on behalf of shareholders) and other stakeholders, such as creditors, employees, customers, and suppliers. Outside directors may do so given their reputational capital, which may temper their willingness to follow managers in taking ex post opportunistic actions—including financial reporting decisions—that benefit managers and shareholders but are detrimental to other stakeholders (see, for example, Fama and Jensen [1983], Gerety and Lehn [1997], and Srinivasan [2005]).

Further, outside directors and other external parties have many of the same informational demands. For example, firms that use transparent financial reporting to credibly convey timely and reliable information to outside directors can simultaneously convey this information to external stakeholders and contracting parties. At the same time, inside directors, most of whom are executives with substantial equity ownership, may have difficulty convincing stakeholders that management will not distort financial reports when it is in management's interest to do so. Thus, while outside directors are commonly viewed as champions of shareholders' interests in their monitoring of managers, it may be that outside directors are also more willing, ex post, to take actions that are *counter* to shareholders' interests when such actions conflict with the interests of other contracting parties.¹⁵ This, of course, does not mean that outside directors are ex ante detrimental to shareholders. Rather, shareholders may maximize value ex ante by committing to constitute a board that will internalize other contracting parties' interests ex post, thereby reducing agency conflicts and contracting costs with these other parties.

¹⁵ Adding to the richness of this perspective is the legal view that directors are generally regarded as having a primary fiduciary responsibility to shareholders rather than to the firm's other contracting parties. Huebner and McCullough (2008) note that in 2007 the Delaware Supreme Court summarized the duties of directors as follows: "It is well established that the directors owe their fiduciary obligations to the corporation and its shareholders. While shareholders rely on directors acting as fiduciaries to protect their interests, creditors are afforded protection through contractual agreements, fraud and fraudulent conveyance law, implied covenants of good faith and fair dealing, bankruptcy law, general commercial law and other sources of creditor rights. Delaware courts have traditionally been reluctant to expand existing fiduciary duties. Accordingly, 'the general rule is that directors do not owe creditors duties beyond the relevant contractual terms.'" (North American Catholic Educational Programming Foundation, Inc. v. Gheewalla, 930 A.2d 92 [Del. 2007])

Carcello and Neal (2000, 2003) allude to this role for outside directors by arguing that outside directors take actions to protect the independence of the auditor and the integrity of the financial reporting system even when it might not be in shareholders' interests to do so. Bhojraj and Sengupta (2003) explicitly examine the role of outside directors in reducing agency conflicts with creditors. They document that firms are able to borrow at lower rates when they have a higher proportion of outside directors on the board. Anderson, Mansi, and Reeb (2004) also find this relation between the cost of debt and overall board independence, as well as a negative relation between the independence of the audit committee and the cost of debt.

These results are consistent with two non-mutually exclusive explanations. One is that causality runs from outside directors to the cost of debt: The independence and personal reputational concerns of outside directors induce them to monitor and constrain managers' ability to engage in self-interested actions. If these self-interested actions are detrimental to either the value of the firm as a whole or to the value of creditors' claims in particular, the proportion of outside directors is expected to be negatively related to the cost of debt. The second possibility is that because outside directors require timely information to effectively monitor and advise management, firms that are more informationally transparent are able to attract a greater proportion of outside directors to sit on the board. And if a more transparent information environment facilitates less costly contracting with creditors, one again expects to find that the proportion of outside directors is negatively related to the cost of debt. (Note, however, that this latter possibility does not imply that outside directors *cause* a lower cost of debt.)

3.6 Active Investors

Jensen (1993, 867) discusses the merits of active investors as a governance mechanism:

Active investors are individuals or institutions that simultaneously hold large debt and/or equity positions in a company and actively participate in its strategic direction. Active investors are important to a well-functioning governance system because they have the financial interest and independence to view firm management and policies in an unbiased way. They have the incentives to buck the system to correct problems early rather than late when the problems are obvious but difficult to correct.

To make efficient investing decisions, active investors require timely and reliable information that enables them to monitor management's actions and to participate in the firm's strategic direction. Further, as Jensen (1993) notes, active investors have the financial incentives and clout to influence

Active investors have the financial incentives and clout to influence management's decisions regarding the timeliness and reliability of the information conveyed to outsiders.

management's decisions regarding the timeliness and reliability of the information conveyed to outsiders. These arguments suggest that information transparency and the presence of active investors are complementary and should therefore be positively correlated.

In an alternative hypothesis, proposed by Demsetz and Lehn (1985) and Bushman et al. (2004), active investors and other effective monitors are most valuable in situations with relatively low information transparency, which leads to a negative relation between transparency and the presence of active investors. Shleifer and Vishny (1997) offer a competing view, suggesting that investors with a relatively large share of a company's equity or debt (blockholders) can influence management and secure private benefits at the expense of diffuse shareholders and creditors. And if timely and reliable disclosures constrain the ability of blockholders to secure such private benefits, one expects a negative relation between blockholders and information transparency. Therefore, determining the direction of causality of the negative relation between active investors and information transparency may require further tests. Specifically, do active investors gravitate to low transparency firms because that is where their monitoring ability is most valuable? Or do these investors instead seek firms with low transparency in an attempt to secure private benefits to the detriment of diffuse shareholders? Perhaps reflecting an amalgamation of these conflicting effects, the empirical evidence is mixed on the relation between various types of active investors and the degree of information transparency.¹⁶

¹⁶ See Bushman et al. (2004), Farber (2005), Agrawal and Chandra (2005), Bhojraj and Sengupta (2003), and Ashbaugh, Collins, and LaFond (2006).

Active investors also operate in the market for corporate control, where active investors may choose to acquire a controlling interest in a firm in an attempt to resolve extreme agency conflicts. Ferreira, Ferreira, and Raposo (2011) emphasize the role of the information environment in facilitating the market for corporate control as an alternative to board monitoring. They find that price informativeness, measured by the probability of informed trade, is negatively associated with board independence, and that this result is stronger for firms with more institutional investors and greater exposure to the market for corporate control. These findings suggest that liquid markets with informative security prices can facilitate monitoring by investors, which can sometimes substitute for monitoring by outside directors.

The role of financial reporting in facilitating activity in the market for corporate control has recently gained attention from researchers seeking to understand how potential acquirers obtain the information necessary to make efficient investment decisions. Zhao and Chen (2008) advance a so-called quiet-life hypothesis to explain why weakening the market for corporate control might be associated with greater transparency in financial reporting. They argue that when managers are protected from discipline from the market for corporate control, there is less reason to engage in earnings management to distort the information environment. In a finding consistent with this hypothesis, they show that firms with staggered (or classified) boards, which make a hostile takeover more difficult, have a lower incidence of accounting fraud and smaller absolute abnormal accruals. In a related paper, Armstrong, Balakrishnan, and Cohen (2012) find that firms improved the quality of their financial reporting following the passage of state antitakeover laws, which weakened the efficacy of the market for corporate control.

3.7 The Difficulty in Identifying “Good” and “Bad” Governance

Underlying our discussion of financial reporting and agency problems is the broad notion that contracting costs and frictions limit the extent to which contracting parties can mitigate these agency problems. The cost of transferring the relevant financial and nonfinancial information to outside directors and shareholders is one such friction. The costs and benefits of transferring information between managers, directors, and shareholders differ across firms, industries, and countries, as well as over time; so one should expect firm-, industry-, and country-specific variation, as well as time-series variation in governance mechanisms. In other

words, since the most efficient, value-maximizing governance structure can differ both across firms and over time, it is usually unproductive to seek one-size-fits-all best practices in corporate governance.

We recognize that many studies (as well as many researchers) explicitly or implicitly take a different view of time-series and cross-sectional variation in governance structures, labeling certain structures (for example, a high proportion of outside directors and high-powered pay-for-performance compensation plans) as being unconditionally “good” (strong) or “bad” (weak). Our understanding of this literature leads us to conclude that bad (weak) governance is broadly intended to mean that serious agency conflicts exist between shareholders and managers, and that some (often unarticulated) contracting cost or friction prevents shareholders from implementing good, or at least better, governance mechanisms that would mitigate these agency conflicts.

In many cases, however, this view ignores the extensive economic arguments and empirical evidence showing that firms considered to have bad governance may have sometimes, in fact, appropriately (and endogenously) selected the most efficient governance structure given the circumstances. For example, many papers designate firms with a relatively high proportion of outside directors as having a good governance structure, implying that firms with the highest proportion of outside directors have the best governance. These and other normative labels are ascribed to different firms even though, as described above, extensive theory and empirical evidence indicate that a board with relatively few outside directors is sometimes optimal.

We also emphasize that the mere existence of an agency conflict, or the observation of an action that might be a symptom of an unresolved (or residual) agency conflict (such as earnings management or even accounting fraud) does not imply a deviation from shareholders’ preferred governance structure. As Jensen and Meckling (1976) point out, no governance structure is likely to eliminate all agency conflicts. Thus, researchers should expect to observe symptoms of residual agency conflicts in the actions of executives even at what seem to be well governed firms.¹⁷ Guay (2008) makes a related point regarding

¹⁷ As an example, consider that as directors hire and fire CEOs over time, successful CEOs become more powerful as an increasing function of their success and tenure. It is tempting to view agency conflicts related to powerful CEOs—such as perquisite consumption, empire building, and accounting distortions—as indicative of a breakdown of the governance system. However, as Hermalin and Weisbach (1998) note, a successful CEO will gain bargaining power that can be used to extract rents, such as high annual pay or large perquisites. For example, Baker and Gompers (2003) find evidence consistent with successful CEOs being able to bargain for less independent boards. Therefore, what might look like an agency problem stemming from a

boards’ delegation of control rights to CEOs. In widely held corporations, it is well understood that shareholders delegate substantial decision rights to the board of directors, in part because of the considerable information acquisition and coordination costs that shareholders would have to incur to make

Since the most efficient, value-maximizing governance structure can differ both across firms and over time, it is usually unproductive to seek one-size-fits-all best practices in corporate governance.

many key decisions themselves. In turn, and for many of the same reasons, it is efficient for the board of directors to delegate many, if not most, decision rights to executive management, even while recognizing the possibility that managers will sometimes take self-interested actions at the expense of shareholders.

An alternative way of characterizing these points is to suggest that the notions of good and bad corporate governance should, at a minimum, be conditioned on a consideration of a firm’s relevant economic characteristics, such as its operating and information environment and its use of complementary and substitute governance mechanisms. Only then can one begin to make statements about whether certain governance structures are good or bad.¹⁸ We also note that this procedure should also entail a certain symmetry: After conditioning the analysis on the appropriate economic characteristics, one must consider that too much *or* too little of a particular governance mechanism may render a firm’s governance structure “bad.” For example, firms can have too few or too many outside directors, and in both cases, this should be considered “bad.”

For a firm with a conditionally unusual governance structure, a natural question to ask is, why does it have that structure? A broad interpretation of the governance literature suggests at least three possibilities: (1) Some economic determinant of the governance structure or some firm-specific variation in the costs and benefits of certain governance structures is unknown to the researcher and not captured in the governance expectation model (that is,

Footnote 17 (continued)

suboptimal governance structure *ex post* (that is, after the CEO has achieved a period of success) could have been optimal from an *ex ante* perspective (when the CEO was originally hired).

¹⁸ However, see Brickley and Zimmerman (2010) for a further cautionary discussion about potential problems with even this type of conditional benchmarking.

certain variables are omitted from the model). (2) Economic frictions prevent shareholders at some firms from instituting the desired (“good”) governance structure, or alternatively the frictions slow down the process (recognizing that it can take time for shareholders and boards to learn about evolving governance structures). (3) Shareholders behave heuristically or irrationally and do not attempt to implement governance mechanisms that maximize shareholder value.

The first of these possibilities was the focus of our foregoing discussion, and we emphasize that research has already shown that financial reporting characteristics are important determinants of governance structures. We encourage researchers to ensure that their governance models are appropriately specified and incorporate these determinants. The third possibility may be relevant, but the heuristic/irrational perspective is beyond the scope of this article.¹⁹ It is the second possibility, that frictions inhibit the adoption of certain governance structures, that warrants further discussion.

If shareholders recognize that certain governance structures are better (that is, more efficient) than the existing structures—which seems to be the case if one accepts the common argument that good and bad governance structures can be identified with relative ease—it begs the question, what are these frictions that prevent shareholders from making adjustments, and how do they vary across firms and over time?

To begin, we suggest that the stage of a firm’s life cycle is likely to be important in explaining observed governance practices. Early in their life cycle, most firms are closely held, with equity ownership concentrated among entrepreneurs, venture capitalists, private equity firms, or other institutional and sophisticated investors. These owners have strong incentives to implement an optimal governance structure to ensure that they maximize the price at which they eventually sell their claims to outside investors. Further, at this stage of development, the selection of governance structures may be less hampered by frictions—including regulations—that exist in widely held firms (although there may be frictions stemming from the process by which owners learn about the merits of alternative firm-specific governance structures). Over time, however, firms change. Closely held firms become widely held, creating a variety of frictions, informational demands, and free-rider problems with respect to adjusting governance structures. Growing firms mature. Firms that originally had

¹⁹ For researchers who view heuristic or irrational behavior as a probable explanation for observed governance structures, frictions in the market for corporate control seem to be a fruitful area for research. That is, if groups of irrational shareholders persist in controlling firms with suboptimal governance structures, an obvious question is, what are the frictions that prevent a well-functioning market for corporate control from acting as a correction mechanism?

difficulty conveying information related to their operating strategy and potential for creating value find that financial reporting systems and other disclosure mechanisms are better able to reduce informational asymmetries between managers and outside investors.

We encourage researchers not only to identify and quantify the costs and frictions that prevent or impede firms from adjusting their governance structures, but also to examine how these frictions vary cross-sectionally and over time. The determinants of cross-sectional variation in frictions are likely to include organizational structure, ownership structure, information asymmetry between managers and shareholders, and geography. An example of the influence of geography is provided by Knyazeva, Knyazeva, and Masulis (2013), who show that firms located near smaller pools of prospective directors have fewer independent directors and less-experienced directors overall and that this friction can be costly. Similarly, John, Knyazeva, and Knyazeva (2008) argue that the geographic distance between a firm’s headquarters and its investors affects the firm’s information environment which, in turn, affects the firm’s dividend policies.

4. GOVERNANCE IN BANKS AND OTHER FINANCIAL INTERMEDIARIES

In this section, we discuss how some of the key concepts developed in the previous section apply to banks and other financial intermediaries. We place a particular emphasis on how certain features that are unique to financial institutions—and banks in particular—influence their governance structures. In the course of our discussion, we also highlight some important aspects of financial institutions’ governance that have not been examined in the academic research that was the focus of our earlier discussion. Much of the research on the governance of nonfinancial firms abstracts away from the influence of regulations.

In the financial services sector, however, regulatory oversight is an integral part of bank operations. Consequently, regulatory oversight and compliance play a prominent role in the governance of banks. In addition, much of the regulatory supervision that is unique to banks takes the form of regulators communicating with and gathering information from directors who are largely out of sight to external parties such as equity and credit analysts.

Ultimately, the set of governance mechanisms found in banks is likely to reflect not only those mechanisms implemented by shareholders to resolve agency conflicts with directors and managers, but also those instituted by

bank regulators to serve the interests of various public constituencies. Banks are thus beholden to a larger set of stakeholders—many of whom may have disparate objectives and incentives that can conflict with those of the banks’ managers, directors, and shareholders. The more complex set of agency conflicts that arise in banks pose additional challenges for researchers. For example, regulatory capital requirements often constrain the assets and investments of financial institutions. The shadow cost of these and other regulatory constraints can be high in certain cases, such as when banks attempt to make acquisitions and divestitures (such as selling off branches), or when regulators evaluate a bank’s compliance with statutes.²⁰

The presumed objective of many laws, regulations, and oversight—whether explicit or implicit, observed or unobserved—is the public’s interest in safe and sound financial institutions. The public’s interest in the soundness of the banking system stems from banks being unique financial intermediaries in the economy, as well as being insured depository institutions. Banks provide liquidity as well as access to the U.S. payment system. The recent financial crisis serves as a reminder that the failure of a large, interconnected financial institution can rapidly propagate throughout the financial system and can result in far-reaching adverse effects on the domestic and global economy. Although the public expects safety, investors demand performance, which necessarily entails taking risks. The tension between these two objectives is a ripe topic for future research.

A related challenge for researchers—especially during the last three decades—has been to understand what is special about banks and other financial institutions in the evolving economic, political, and regulatory landscape (and in the context of the theory of the firm). That challenge also applies to understanding the structure of financial firms and their conduct in response to deregulation and subsequent reregulation.²¹ A better understanding of these issues is important for effective and informed public policy.

²⁰ For example, under the Community Reinvestment Act (CRA), regulators are required to consider a bank’s record of providing credit to low- and moderate-income neighborhoods and individuals when considering the bank’s application for a merger or acquisition. Building on this idea, Bostic et al. (2005) test the hypothesis that banks contemplating mergers or acquisitions act strategically by increasing their lending to low- and moderate-income individuals to influence regulators. Bostic et al. find evidence that is consistent with this type of strategic behavior. Thus, the dynamic interaction between banks and regulators makes it difficult to generalize some of the findings from earlier studies on governance, board structure, and conduct (such as evidence on economies of scale and cost efficiency in banking).

²¹ For example, the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, which eliminated restrictions on interstate banking and branching; the 1999 Gramm-Leach-Bliley Act, which repealed the

The evolving nature of banking, regulation, and the public’s expectations for safe financial institutions adds an additional layer of complexity when examining the governance and information environments of these institutions. Some of the more pressing questions that need to be addressed are given below:

- Are the internal and informal governance mechanisms of banks a substitute for, or a complement to, supervision and regulation?
- Should boards—whose mandate is to ensure effective internal governance of a financial firm—consider bank regulators as partners or adversaries? Similarly, should regulators consider bank boards to be their partners? If so, what are the potential benefits and costs of such a relationship?
- What economic models could shed light on issues such as delegation of authority, assignment of responsibility, and design of incentive-compatible tasks?

To help frame these and other important questions, we highlight several unique features of bank governance that have been emphasized in banking studies.

4.1 What Is Different about the Governance of Banks and What Governance Structure Is Most Efficient?

Earlier research has documented a number of prominent differences between the governance structures of financial and nonfinancial institutions. For example, relative to their nonfinancial counterparts, banks tend to have larger boards, more outside directors and more committees, less equity-based compensation and insider ownership, less block ownership by institutions, and more CEOs who also serve as chairman of the board.²² These differences do not necessarily imply that these are efficient arrangements for the financial stability of the banking system. They may be transitory, and the optimal governance structure for shareholders may deviate from the structure that would be optimal from a social welfare perspective.

Footnote 21 (continued)

1933 Glass-Steagall Act; and in the wake of the global financial crisis, the 2010 Dodd-Frank Act, which imposed extensive regulations on banks.

²² See, for example, Adams and Mehran (2003), Hayes et al. (2004), Core and Guay (2010), Adams and Mehran (2012), and Mehran, Morison, and Shapiro (2012).

Moreover, previous evidence on structure gathered in periods when bank bailouts were expected, may well have become outdated because of subsequent regulatory reforms in the Dodd-Frank Act and elsewhere. Those reforms may have moderated expectations about the likelihood of future bailouts and increased expectations about the likelihood of “orderly resolutions” of distressed financial institutions. It is therefore possible, and perhaps even likely, that financial institutions will alter their governance structures going forward, either voluntarily or by law. Indeed, early evidence from 2014 proxy filings (Form DEF-14A) with the Securities and Exchange Commission

The Dodd-Frank Act’s introduction of so-called living wills and its explicit prohibition against future bailouts are two of the law’s key elements that are likely to influence the dynamics of governance mechanisms.

suggests that the number of banks choosing to have a standing risk committee at the board level has risen.

The Dodd-Frank Act’s introduction of so-called living wills and its explicit prohibition against future bailouts are two of the law’s key elements that are likely to influence the dynamics of governance mechanisms. We conjecture that these regulatory changes are likely to affect stakeholders’ perceptions of the risk associated with banks and may also affect banks’ cost of capital. Consistent with this idea, Mehran and Mollineux (2012) discuss how the new regulations affect equity analysts’ risk perceptions. In particular, they argue that banks are likely to enhance their voluntary disclosure and proactively seek ways to ensure that they pass the annual stress test of capital adequacy required under Dodd-Frank. These actions should, in turn, expand the information available to bank stakeholders, including investors, as we note below.

We also suggest that annual stress testing, one of the more conspicuous aspects of recent reforms, may provide different incentives for financial institutions’ various stakeholders. The test is likely to both reduce the incentive for information production by analysts (Mehran 2010; Goldstein and Sapra 2013) and enhance management’s incentives to make voluntary disclosures. Regarding the second point, just as firms that expect to miss earnings targets frequently make preemptive announcements, banks may benefit from proactively disclosing negative information about their capital conditions before regulators release the news after their

annual review.²³ In doing so, management can influence how stakeholders interpret the negative test results and potentially ameliorate the negative consequences the firm may face in the equity and credit markets. Further, regular voluntary disclosures could be perceived by investors as a commitment to transparency (the benefits of which are discussed in Guay and Verrecchia [2007]) and as an indication of a cooperative relationship between management and regulators.

4.2 Banks’ Information Environment and Opacity

The efficacy of capital markets in monitoring the health and riskiness of financial institutions is an important research question—particularly in the wake of the recent financial crisis. Extant research that compares the transparency of banks with that of nonfinancial firms provides mixed results.²⁴ For example, Morgan (2002) examines bond analyst ratings and finds that the dispersion of ratings is larger for banks than for other firms. He interprets this finding as supporting the notion that banks’ assets are “opaque.” In contrast, Flannery, Kwan, and Nimalendran (2004) report that banks and nonfinancial firms have equity bid-ask spreads of similar magnitude; the authors, in general, do not find empirical support for the notion that banks are more opaque than nonfinancial firms.

Other research examines whether security prices of banks react differently to news about corporate developments and financial condition than do securities prices of nonfinancial firms. One potential reason for a differential reaction is the influence of bank regulators on both bank strategic decisions and bank disclosure. For example, investors may differentially react to equity issuances, given that banks typically issue equity to maintain regulatory capital, whereas nonfinancial firms tend to do so to fund investment opportunities. The reactions to news about poor financial health may also differ because of investor uncertainty about the regulatory response to the news—for example, regulators may intercede on the bank’s behalf, or prevent or require certain corrective actions, or suppress or encourage certain disclosures. The results from

²³ At the same time, firms may also have incentives to strategically time their disclosure of negative information. For example, if it is likely to reduce the price a firm expects to receive from a pending sale, then it may delay disclosure until the sale is completed.

²⁴ See Beatty and Liao (2014) and Bushman (2014) for a comprehensive review of the literature on financial reporting and transparency in financial institutions.

this literature are generally mixed. The main finding is that the market reaction is more pronounced for firms that face larger information asymmetries.²⁵

Flannery, Kwan, and Nimalendran (2013) extend these ideas, examining whether the greater opacity of banks relative to nonfinancial firms varies with the state of the economy. Their results indicate that although banks and other firms exhibit similar degrees of opacity during periods of stability, banks are relatively more opaque during financial crises, where opacity is measured using bid-ask spreads and the price impact of trades. These results raise a question about the roles of managers, investors, creditors, and regulators in influencing transparency at various points in time. The following scenario discusses and illustrates these roles and the incentives that the various parties face.

Suppose that three parties are involved in the production of information in the banking sector: bank managers, equity and credit analysts, and regulators. Now consider each party's incentives for information disclosure.

- *Bank managers:* Bank management is expected to be reluctant to release timely bad news if it perceives that its disclosure could result in a shift of its control rights to regulators, creditors, or other stakeholders. Thus, bad news might be concealed from regulators, which would make early discovery of problems harder for regulators. Bad news would also likely reach other stakeholders relatively late. Thus, the amount of managements' adverse private information could be large during normal times and even larger during times of crisis.
- *Analysts:* Given the asymmetric nature of the payoffs to equity and debt securities, equity analysts are likely to be more active than credit analysts in their coverage of a firm when its equity price is high. Conversely, when the equity price is low, equity analysts are likely to be relatively passive and credit analysts relatively active. In fact, many firms are unlikely to have equity analyst coverage in the six months prior to their bankruptcy filings (Mehran and Peristiani 2006), while credit analysts may begin to devote effort to valuing the assets-in-place in anticipation of a sell-off or other forms of restructuring. However, credit analysts have less of an incentive to evaluate banks in financial distress because of their expectation of regulatory supervision and intervention as well as the potential for a bailout.

²⁵ See, for example, Ryan (2012) for an overall review of this literature on market reactions to news; Cornett et al. (2014) regarding news of stock issuances; and Gupta, Harris, and Mehran (2015) for news of mergers and acquisitions.

- *Regulators:* It is not clear whether regulators strategically time the release of bad news about banks. Moreover, the size of potential losses may be uncertain at the time that regulators disclose this information to stakeholders. With later disclosure, the effect on security prices might be large.

The foregoing description of each party's incentives may evolve in light of recent banking reforms, such as living wills. If the reforms improve the value of information and consequently enhance the incentive for its production, banks' security prices may become more informative about growth and risk under a wider range of circumstances. Further research on this topic would be helpful for the effective regulation of banks.

4.3 Bank Governance during Financial Distress

An important challenge for bank stakeholders is preventing financial distress and, if it should arise, localizing and containing any adverse consequences. Potential defaults and subsequent runs by creditors and fire sales of assets witnessed during the recent financial crisis are a reminder of the potential social costs associated with the distress and failure of systemically important financial institutions.²⁶ The risk of such negative outcomes is largely due to the nature of banks' assets and the relatively rapid speed at which the value of their assets can deteriorate. These features of the banking system can make workouts and bankruptcy more challenging.²⁷ Similarly, governance changes in the face of financial distress, including replacing management and the board, can be more difficult in the banking sector, notwithstanding the view often expressed that banks should be held to a higher level of accountability.²⁸ It will be interesting to see whether the Dodd-Frank resolution model that allows banks to fail will impose new discipline on banks' choice of governance structures.

A related issue is management's control of information in bad times and the potential for information asymmetry with respect to the board and regulators. As we indicated

²⁶ Firms with substantial intangible assets, including financial institutions, are likely to be especially vulnerable to negative news about their financial health and viability.

²⁷ See Skeel (2015) for further discussion.

²⁸ A potential exception might be government-assisted acquisitions, which occurred in a few cases during the recent financial crisis.

earlier, in difficult times, CEOs are more likely to withhold bad news about their poor performance or news that could otherwise be detrimental to their interests. This incentive may be particularly pronounced for bank managers if they perceive that the information could result in a loss of control rights to regulators and other stakeholders. In addition, if managers privately know that their bank is in distress, their expectation of a bailout—whether justified or not—may provide them with strong risk-taking incentives: they would benefit from the upside, but would be at least somewhat protected on the downside (although their assessment could be complicated by marketwide shocks and correlated risks). Alternatively, managers' personal costs of taking action are particularly high during times of financial distress, this could dampen their incentives, especially if the benefits accrue largely to other stakeholders.

The foregoing discussion highlights the fact that management typically has more information than the board, and that the information disparity is expected to be more pronounced during bad times—particularly when the information is firm-specific rather than related to market and industry conditions. Thus, the board and regulators are likely to be at their greatest informational disadvantage relative to management when shareholders and the public are most in need of well-informed directors. This issue is of vital importance in the financial services industry, where timely decision making is crucial during crises because of the potentially systemic effects of these decisions.

4.4 Considerations for Improving Information Flow

As highlighted above, information flow between insiders and outside stakeholders is an important component of efficient governance for all institutions. We now discuss several mechanisms with which financial institutions could increase the flow of timely information to outsiders. Modifying governance structures to achieve a desired result entails both costs and benefits that warrant careful evaluation. The following measures seem well worth considering.

Separating the Positions of CEO and Board Chair

A number of studies highlight the benefits and costs of splitting the roles of CEO and board chair. A potential benefit of an independent board chair is an incentive to accurately disclose timely information to regulators, especially information that may help avert large losses to stakeholders. An alternative to separating the CEO and chair positions is providing a strong

lead director who can act as a check on the information flow from management. If the change is initiated from the regulatory side, the authorities could provide flexibility by requiring that the board either separate the roles of CEO and board chair or publicly explain why it chose not to do so.

Succession Planning

Identifying successors to replace key individuals in the executive management team (including the CEO and CFO), should the need arise, is likely to contribute to an effective transition and a smoother flow of information. Although succession planning can generate tension between the incumbent executives and their designated replacements, the incumbents should recognize that they may be replaced under some eventuality, and thus their objective might be to avoid the realization of those situations. Moreover, some executives may not be able to execute their duties or may be forced to step down quickly because of unanticipated events. Naming and training potential replacements before a crisis strikes ensures continuity in the flow of information to stakeholders. Furthermore, a credible replacement could assist regulators and the board in the event that they need to quickly replace the CEO of a distressed institution. (The question of who knows the bank's assets and could manage the bank if the management of a large institution were to be terminated was a widely discussed issue during the financial crisis.)

Identifying a credible replacement may also incentivize incumbent CEOs to work harder and smarter, and may also reduce their appetite for risk. In addition, potential successors (assuming they are internal candidates) are likely to communicate serious problems to the board because it increases the likelihood of their becoming CEO; delaying the disclosure of current problems may adversely affect their personal reputation and remuneration if the information is subsequently released during their tenure. Again, regulators may consider requiring financial institutions to either publicly disclose, or privately disclose to regulators, a viable and ongoing succession plan for certain executive offices.

Information Sharing with Supervisors

Regulators and managers can be encouraged to work together as a team to identify and address nascent issues.²⁹ As noted earlier, bank insiders generally know about problems before regulators do and have a much better understanding of

²⁹ See Harris and Raviv (2014) for an alternative approach to providing incentives for sharing bad news with regulators.

firm-specific deficiencies and vulnerabilities. A regulatory system could be developed that rewards bank managers who inform regulators in a timely manner about bad news concerning their firm or industry. For example, information that is shared sooner could command a larger reward (or entail a lesser punishment).³⁰ Rewarding the prompt disclosure of bad information can be justified on the grounds that it promotes cooperation with regulators.³¹ Further, it could reduce the likelihood of incurring even larger social costs from bank failures and possibly widespread market failure. Regulators could induce competition for early disclosure by rewarding banks that share information both with regulators and each other.

Sharing the Results of Director Peer Assessments and Board Self-Evaluations with Regulators

Peer assessments can arguably provide valuable information about the performance of specific directors and, ultimately, about the efficacy of the board as a whole. Directors are likely to differ in their reputation risk, which can lead to negative selection, whereby less reputable or less competent directors remain on the board while superior directors do not seek additional terms. Peer assessment, board self-evaluation, and sharing those results with regulators can facilitate the removal of ineffective directors, which benefits the remaining directors and other stakeholders.

Encouraging Activists in the Credit Market

Adams and Mehran (2003) argue that equity blockholders are relatively more passive in the banking industry because of the constraining effects of regulation on blockholders' actions. Consequently, the potential benefits of activist investor

³⁰ For some evidence, see "Financial Crime: Unsettling Settlements," *The Economist*, May 23, 2015.

³¹ Alternatively, rewarding the disclosure of bad news can be more formally justified by appeal to the mechanism design literature and the requirement that truth-telling be incentive compatible.

involvement that have been documented in nonfinancial firms that are either in financial distress or troubled by inefficiencies associated with large agency problems are less likely to be available to financial institutions. However, bank creditors remain a potential source of greater activism. Mehran and Mollineaux (2012) find that bank creditors tend to be highly concentrated among large institutions. In a regulatory regime without bailouts, prices of debt securities at issuance are more likely to reflect default probability. Anticipating relatively large losses in the event of financial distress, creditors could become more proactive monitors, as argued by Shleifer and Vishny (1997).

5. CONCLUSION

We review the recent corporate governance literature that examines the role of financial reporting in resolving agency conflicts among a firm's managers, directors, and shareholders. Although most of the research we review is large-sample and not specific to a particular industry, we transpose several arguments in this literature to consider the firm-specific governance structures and financial reporting systems of financial institutions.

Financial reporting plays an important role in reducing the information asymmetries that exist between managers and both outside directors and shareholders. Our discussion highlights the distinction between formal and informal contracting relationships and shows how both help shape a firm's overall governance structure and information environment. We stress that a firm's governance structure and its information environment evolve together over time to resolve agency conflicts. Consequently, we expect to observe different governance structures and financial reporting choices in different economic environments.

In the financial sector, the observed bank governance structures are likely the result of not only endogenous design, but also the existence of certain external monitoring mechanisms, including regulators. These may partly substitute for internal monitoring mechanisms, and they may evolve to serve the interests of shareholders and other stakeholders.

REFERENCES

- Adams, R. B., and D. Ferreira. 2007. "A Theory of Friendly Boards." *JOURNAL OF FINANCE* 62, no. 1 (February): 217-50.
- Adams, R. B., B. E. Hermalin, and M. S. Weisbach. 2010. "The Role of Boards of Directors in Corporate Governance: A Conceptual Framework and Survey." *JOURNAL OF ECONOMIC LITERATURE* 48, no. 1 (March): 58-107.
- Adams, R., and H. Mehran. 2003. "Is Corporate Governance Different for Bank Holding Companies?" *Federal Reserve Bank of New York ECONOMIC POLICY REVIEW* 9, no. 1 (April): 123-42.
- . 2012. "Bank Board Structure and Performance: Evidence for Large Bank Holding Companies." *JOURNAL OF FINANCIAL INTERMEDIATION* 21, no. 2 (April): 243-67.
- Aghion, P., and J. Tirole. 1997. "Formal and Real Authority in Organizations." *JOURNAL OF POLITICAL ECONOMY* 105, no. 1 (February): 1-29.
- Agrawal, A., and S. Chadha. 2005. "Corporate Governance and Accounting Scandals." *JOURNAL OF LAW AND ECONOMICS* 48, no. 2 (October): 371-406.
- Ahmed, A. S., and S. Duellman. 2007. "Accounting Conservatism and Board of Director Characteristics: An Empirical Analysis." *JOURNAL OF ACCOUNTING AND ECONOMICS* 43, no. 2-3 (July): 411-37.
- Anderson, R. C., S. A. Mansi, and D. M. Reeb. 2004. "Board Characteristics, Accounting Report Integrity, and the Cost of Debt." *JOURNAL OF ACCOUNTING AND ECONOMICS* 37, no. 3 (September): 315-42.
- Armstrong, C. S., K. Balakrishnan, and D. Cohen. 2012. "Corporate Governance and the Information Environment: Evidence from State Antitakeover Laws." *JOURNAL OF ACCOUNTING AND ECONOMICS* 53, no. 1-2 (February-April): 185-204.
- Armstrong, C. S., J. E. Core, and W. R. Guay. 2014. "Do Independent Directors Cause Improvements in Firm Transparency?" *JOURNAL OF FINANCIAL ECONOMICS* 113, no. 3 (September): 383-403.
- Armstrong, C. S., W. R. Guay, and J. P. Weber. 2010. "The Role of Information and Financial Reporting in Corporate Governance and Debt Contracting." *JOURNAL OF ACCOUNTING AND ECONOMICS* 50, no. 2-3 (December): 179-234.
- Ashbaugh-Skaife, H., D. W. Collins, and R. LaFond. 2006. "The Effects of Corporate Governance on Firms' Credit Ratings." *JOURNAL OF ACCOUNTING AND ECONOMICS* 42, no. 1-2 (October): 203-43.
- Baker, M., and P. A. Gompers. 2003. "The Determinants of Board Structure at the Initial Public Offering." *JOURNAL OF LAW AND ECONOMICS* 46, no. 2 (October): 569-98.
- Ball, R., and L. Shivakumar. 2005. "Earnings Quality in UK Private Firms: Comparative Loss Recognition Timeliness." *JOURNAL OF ACCOUNTING AND ECONOMICS* 39, no. 1 (February): 83-128.
- Beatty, A., and S. Liao. 2014. "Financial Accounting in the Banking Industry: A Review of the Empirical Literature." *JOURNAL OF ACCOUNTING AND ECONOMICS* 58, no. 2-3 (November-December): 339-83.
- Bedard, J., R. Hoitash, and U. Hoitash. 2014. "Chief Financial Officers as Inside Directors." *CONTEMPORARY ACCOUNTING RESEARCH* 31, no. 3 (Fall): 787-817.
- Bhojraj, S., and P. Sengupta. 2003. "Effects of Corporate Governance on Bond Ratings and Yields: The Role of Institutional Investors and Outside Directors." *JOURNAL OF BUSINESS* 76, no. 3 (July): 455-75.
- Boone, A., L. C. Field, J. M. Karpoff, and C. G. Raheja. 2007. "The Determinants of Corporate Board Size and Composition: An Empirical Analysis." *JOURNAL OF FINANCIAL ECONOMICS* 85, no. 1 (July): 66-101.
- Bostic, R., H. Mehran, A. Paulson, and M. Saldenberg. 2005. "Regulatory Incentives and Consolidation: The Case of Commercial Bank Mergers and the Community Reinvestment Act." *B.E. JOURNAL OF ECONOMIC ANALYSIS AND POLICY* 5, no. 1 (April): 1-27.
- Brickley, J. A., J. L. Coles, and G. Jarrell. 1997. "Leadership Structure: Separating the CEO and Chairman of the Board." *JOURNAL OF CORPORATE FINANCE* 3, no. 3 (June): 189-220.
- Brickley, J. A., J. S. Link, and J. L. Coles. 1999. "What Happens to CEOs after They Retire? New Evidence on Career Concerns, Horizon Problems, and CEO Incentives." *JOURNAL OF FINANCIAL ECONOMICS* 52, no. 3 (June): 341-77.
- Brickley, J. A., and J. L. Zimmerman. 2010. "Corporate Governance Myths: Comments on Armstrong, Guay, and Weber." *JOURNAL OF ACCOUNTING AND ECONOMICS* 50, no. 2-3 (December): 235-45.

REFERENCES (CONTINUED)

- Bushman, R. M.* 2014. "Thoughts on Financial Accounting and the Banking Industry." *JOURNAL OF ACCOUNTING AND ECONOMICS* 58, no. 2-3 (November-December): 384-95.
- Bushman, R., Q. Chen, E. Engel, and A. Smith.* 2004. "Financial Accounting Information, Organizational Complexity, and Corporate Governance Systems." *JOURNAL OF ACCOUNTING AND ECONOMICS* 37, no. 2 (June): 167-201.
- Cai, J., Y. Qian, and Y. Liu.* 2009. "Information Asymmetry and Corporate Governance." Drexel College of Business Research Paper no. 2008-02. Available at <http://dx.doi.org/10.2139/ssrn.1082589>.
- Carcello, J., and T. Neal.* 2000. "Audit Committee Composition and Auditor Reporting." *ACCOUNTING REVIEW* 75, no. 4 (October): 453-67.
- . 2003. "Audit Committee Characteristics and Auditor Dismissals Following 'New' Going-Concern Reports." *ACCOUNTING REVIEW* 78, no. 1 (January): 95-117.
- Coles, J. L., N. D. Daniel, and L. Naveen.* 2008. "Boards: Does One Size Fit All?" *JOURNAL OF FINANCIAL ECONOMICS* 87, no. 2 (February): 329-56.
- Core, J. E., and W. R. Guay.* 2010. "Is There a Case for Regulating Executive Pay in the Financial Services Industry?" In Y. Fuchita, R. Herring, and R. Litan, eds., *AFTER THE CRASH: THE FUTURE OF FINANCE*, 115-40. Washington: Brookings Institution Press.
- Core, J. E., W. R. Guay, and D. F. Larcker.* 2003. "Executive Equity Compensation and Incentives: A Survey." Federal Reserve Bank of New York *ECONOMIC POLICY REVIEW* 9, no. 1 (April): 27-50.
- Core, J. E., R. W. Holthausen, and D. F. Larcker.* 1999. "Corporate Governance, Chief Executive Officer Compensation, and Firm Performance." *JOURNAL OF FINANCIAL ECONOMICS* 51, no. 3 (March): 371-406.
- Cornett, M. M., H. Mehran, K. Pan, M. Phan, and C. Wei.* 2014. "CDS and Equity Market Reactions to Stock Issuances in the U.S. Financial Industry: Evidence from the 2002-13 Period." Federal Reserve Bank of New York *STAFF REPORTS*, no. 697.
- DeFond, M. L., R. N. Hann, and X. Hu.* 2005. "Does the Market Value Financial Expertise on Audit Committees of Boards of Directors?" *JOURNAL OF ACCOUNTING RESEARCH* 43, no. 2 (May): 153-93.
- Demsetz, H., and K. Lehn.* 1985. "The Structure of Corporate Ownership: Causes and Consequences." *JOURNAL OF POLITICAL ECONOMY* 93, no. 6 (December): 1155-77.
- Drymotes, G.* 2007. "The Monitoring Role of Insiders." *JOURNAL OF ACCOUNTING AND ECONOMICS* 44, no. 3 (December): 359-77.
- Duchin, R., J. G. Matsusaka, and O. Ozbas.* 2010. "When Are Outside Directors Effective?" *JOURNAL OF FINANCIAL ECONOMICS* 96, no. 2 (May): 195-214.
- Engel, E.* 2005. "Discussion of 'Does the Market Value Financial Expertise on Audit Committees of Boards of Directors?'" *JOURNAL OF ACCOUNTING RESEARCH* 43, no. 2 (May): 195-204.
- Engel, E., R. M. Hayes, and X. Wang.* 2003. "CEO Turnover and Properties of Accounting Information." *JOURNAL OF ACCOUNTING AND ECONOMICS* 36, nos. 1-3 (December): 197-226.
- Fama, E., and M. Jensen.* 1983. "Separation of Ownership and Control." *JOURNAL OF LAW AND ECONOMICS* 26, no. 2 (June): 301-25.
- Farber, D.* 2005. "Restoring Trust after Fraud: Does Corporate Governance Matter?" *ACCOUNTING REVIEW* 80, no. 2 (April): 539-61.
- Ferreira, D., M. A. Ferreira, and C. C. Raposo.* 2011. "Board Structure and Price Informativeness." *JOURNAL OF FINANCIAL ECONOMICS* 99, no. 3 (March): 523-45.
- Flannery, M. J., S. H. Kwan, and M. Nimalendran.* 2004. "Market Evidence on the Opacity of Banking Firms' Assets." *JOURNAL OF FINANCIAL ECONOMICS* 71, no. 3 (March): 419-60.
- . 2013. "The 2007-09 Financial Crisis and Bank Opacity." *JOURNAL OF FINANCIAL INTERMEDIATION* 22, no. 1 (January): 55-84.
- Francis, J. R., and X. Martin.* 2010. "Acquisition Profitability and Timely Loss Recognition." *JOURNAL OF ACCOUNTING AND ECONOMICS* 49, nos. 1-2 (February): 161-78.

REFERENCES (CONTINUED)

- Gerety, M., and K. Lehn.* 1997. "The Causes and Consequences of Accounting Fraud." *MANAGERIAL AND DECISION ECONOMICS* 18, nos. 7-8 (November-December): 587-99.
- Gillan, S., J. C. Hartzell, and L. T. Starks.* 2006. "Tradeoffs in Corporate Governance: Evidence from Board Structures and Charter Provisions." University of Texas at Austin, June. Available at <http://ssrn.com/abstract=917544>.
- Goldstein, I., and H. Sapra.* 2014. "Should Banks' Stress Test Results be Disclosed? An Analysis of the Costs and Benefits." *FOUNDATIONS AND TRENDS IN FINANCE* 8, no. 1 (March): 1-54.
- Guay, W. R.* 2008. "Conservative Financial Reporting, Debt Covenants, and the Agency Costs of Debt." *JOURNAL OF ACCOUNTING AND ECONOMICS* 45, nos. 2-3 (August): 175-80.
- Guay, W., and R. Verrecchia.* 2007. "Conservative Disclosure." Unpublished paper, University of Pennsylvania, June. Available at <http://ssrn.com/abstract=995562>.
- Gupta, A., R. Harris, and H. Mehran.* 2015. "M&A Performance in the Financial Services Industry." Unpublished paper, Federal Reserve Bank of New York.
- Harris, M., and A. Raviv.* 2008. "A Theory of Board Control and Size." *REVIEW OF FINANCIAL STUDIES* 21, no. 4 (July): 1797-1832.
- . 2014. "How to Get Banks to Take Less Risk and Disclose Bad News." *JOURNAL OF FINANCIAL INTERMEDIATION* 23, no. 4 (October): 437-70.
- Hayes, R., H. Mehran, and S. Schaefer.* 2004. "Determinants of Board Committee Structures and Incentives." Unpublished paper, Federal Reserve Bank of New York.
- Hermalin, B. E., and M. S. Weisbach.* 1998. "Endogenously Chosen Boards of Directors and Their Monitoring of the CEO." *AMERICAN ECONOMIC REVIEW* 88, no. 1 (March): 96-118.
- . 2003. "Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature." Federal Reserve Bank of New York *ECONOMIC POLICY REVIEW* 9 (April): 7-26.
- Hoitash, U., R. Hoitash, and J. Bedard.* 2009. "Corporate Governance and Internal Control over Financial Reporting: A Comparison of Regulatory Regimes." *ACCOUNTING REVIEW* 84, no. 3 (May): 839-67.
- Hoitash, R., U. Hoitash, and K. Johnstone.* 2012. "Internal Control Material Weaknesses and CFO Compensation." *CONTEMPORARY ACCOUNTING RESEARCH* 29, no. 3 (September): 768-803.
- Holderness, C. G.* 2003. "A Survey of Blockholders and Corporate Control." Federal Reserve Bank of New York *ECONOMIC POLICY REVIEW* 9, no. 1 (April): 51-64.
- Holmstrom, B.* 2005. "Pay without Performance and the Managerial Power Hypothesis: A Comment." *JOURNAL OF CORPORATION LAW* 30, no. 4 (Summer): 703-13.
- Huebner, M., and H. McCullough.* 2008. "The Fiduciary Duties of Directors of Troubled U.S. Companies: Emerging Clarity." In *INTERNATIONAL COMPARATIVE LEGAL GUIDES, CORPORATE RECOVERY AND INSOLVENCY 2008*. London, Global Legal Group.
- Jensen, M.* 1993. "The Modern Industrial Revolution, Exit, and the Failure of Internal Control Systems." *JOURNAL OF FINANCE* 48, no. 3 (July): 831-80.
- Jensen, M., and W. Meckling.* 1976. "Theory of the Firm: Managerial Behavior, Agency Costs, and Ownership Structure." *JOURNAL OF FINANCIAL ECONOMICS* 3, no. 4 (October): 305-60.
- . 1992. "Specific and General Knowledge, and Organizational Structure." In L. Werin and H. Wijkander, eds., *CONTRACT ECONOMICS*, 251-74. Oxford: Blackwell.
- John, K., A. Knyazeva, and D. Knyazeva.* 2008. "Do Shareholders Care about Geography?" Unpublished paper, University of Rochester, September. Available at http://www.efmaefm.org/0EFMAMEETINGS/EFMA%20ANNUAL%20MEETINGS/2009-Milan/papers/EFMA2009_0488_fullpaper.pdf.
- Klein, A.* 2002a. "Economic Determinants of Audit Committee Independence." *ACCOUNTING REVIEW* 77, no. 3 (April): 435-52.
- . 2002b. "Audit Committee, Board of Director Characteristics, and Earnings Management." *JOURNAL OF ACCOUNTING AND ECONOMICS* 33, no. 3 (August): 375-400.
- Knyazeva, A., D. Knyazeva, and R. Masulis.* 2013. "The Supply of Corporate Directors and Board Independence." *REVIEW OF FINANCIAL STUDIES* 26, no. 6: 1561-605.

REFERENCES (CONTINUED)

- Kothari, S. P., S. Shu, and P. D. Wysocki.* 2009. "Do Managers Withhold Bad News?" *JOURNAL OF ACCOUNTING RESEARCH* 47, no. 1 (March): 241-76.
- Krishnan, J.* 2005. "Audit Committee Quality and Internal Control: An Empirical Analysis." *ACCOUNTING REVIEW* 80, no. 2 (April): 649-75.
- Lehn, K., S. Patro, and M. Zhao.* 2009. "Determinants of the Size and Composition of US Corporate Boards: 1935-2000." *FINANCIAL MANAGEMENT* 38, no. 4 (Winter): 747-80.
- Leuz, C., and R. Verrecchia.* 2000. "The Economic Consequences of Increased Disclosure. In "Studies on Accounting Information and the Economics of the Firm," supplement, *JOURNAL OF ACCOUNTING RESEARCH* 38: 91-124.
- Li, C., L. Sun, and M. Ettredge.* 2010. "Financial Executive Qualifications, Financial Executive Turnover, and Adverse SOX 404 Opinions." *JOURNAL OF ACCOUNTING AND ECONOMICS* 50, no. 1 (May): 93-110.
- Linck, J., J. Netter, and T. Yang.* 2008. "The Determinants of Board Structure." *JOURNAL OF FINANCIAL ECONOMICS* 87, no. 2: 308-28.
- Mehran, H.* 1995. "Executive Compensation Structure, Ownership, and Firm Performance." *JOURNAL OF FINANCIAL ECONOMICS* 38, no. 2 (June): 163-84.
- . 2010. "The Effect of Disclosure on Information Production by Analysts." Memo, Federal Reserve Bank of New York.
- Mehran, H., and L. Mollineaux.* 2012. "The Corporate Governance of Financial Institutions." *ANNUAL REVIEW OF FINANCIAL ECONOMICS* 4 (October): 215-32.
- Mehran, H., A. Morison, and J. Shapiro.* 2012. "Corporate Governance and Banks: What Have We Learned from the Financial Crisis?" In M. Dewatripont and X. Freixas, eds., *THE CRISIS AFTERMATH: NEW REGULATORY PARADIGMS*, 11-44. London: Center for Economic and Policy Research.
- Mehran, H., and S. Peristiani.* 2006. "Analysts Following and Financial Distress." Memo, Federal Reserve Bank of New York.
- Raheja, C.* 2005. "Determinants of Board Size and Composition: A Theory of Corporate Boards." *JOURNAL OF FINANCIAL AND QUANTITATIVE ANALYSIS* 40, no. 2 (June): 283-306.
- Ryan, S. G.* 2012. "Financial Reporting for Financial Instruments." *FOUNDATIONS AND TRENDS IN ACCOUNTING* 6, no. 3-4: 187-354.
- Shleifer, A., and R. Vishny.* 1997. "A Survey of Corporate Governance." *JOURNAL OF FINANCE* 52, no. 2 (June): 737-83.
- Skeel, D.* 2015. "The New Synthesis of Bank Regulation and Bankruptcy in the Dodd-Frank Era." University of Pennsylvania Institute for Law and Economics Research Paper, no. 15-22.
- Srinivasan, S.* 2005. "Consequences of Financial Reporting Failure for Outside Directors: Evidence from Accounting Restatements and Audit Committee Members." *JOURNAL OF ACCOUNTING RESEARCH* 43, no. 2 (May): 291-334.
- Verrecchia, R. E.* 2001. "Essays on Disclosure." *JOURNAL OF ACCOUNTING AND ECONOMICS* 32, no. 1-3: 97-180.
- Wang, X.* 2010. "Increased Disclosure Requirements and Corporate Governance Decisions: Evidence from Chief Financial Officers in the Pre- and Post-Sarbanes-Oxley Periods." *JOURNAL OF ACCOUNTING RESEARCH* 48, no. 4 (September): 885-920.
- Watts, R.* 2003. "Conservatism in Accounting, Part I: Explanations and Implications." *ACCOUNTING HORIZONS* 17, no. 3: 207-21.
- Xie, B., W. Davidson, and P. J. DaDalt.* 2003. "Earnings Management and Corporate Governance: The Role of the Board and the Audit Committee." *JOURNAL OF CORPORATE FINANCE* 9, no. 3 (June): 295-316.
- Yermack, D.* 2004. "Remuneration, Retention, and Reputation Incentives for Outside Directors." *JOURNAL OF FINANCE* 59, no. 5 (October): 2281-308.
- Zhao, Y., and K. H. Chen.* 2008. "Staggered Boards and Earnings Management." *ACCOUNTING REVIEW* 83, no. 5 (September): 1347-81.

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