

TRANSPARENCY, ACCOUNTING DISCRETION, AND BANK STABILITY

1. INTRODUCTION

Bank transparency can be defined as the availability to outside stakeholders of relevant, reliable information about the periodic performance, financial position, business model, governance, and risks of banks. Outside stakeholders include depositors, investors, borrowers, counterparties, regulators, policymakers, and competitors. Transparency is the joint output of a multifaceted system whose component parts collectively produce, gather, and validate information and disseminate that information to participants outside the bank. Components include mandated, publicly available accounting information; information intermediaries such as financial analysts, credit rating agencies, and the media; and supervisory disclosures (including stress-test disclosures), banks' voluntary disclosures, and information transmitted by securities prices (Bushman and Smith 2003; Bushman, Piotroski, and Smith 2004). While access to information is a necessary condition for transparency, transparency also relies on the active efforts of information receivers, as dictated by their incentives to gather, interpret, and incorporate available information into decision-making processes (see, for example, Freixas and Laux [2012]; Mehran and Mollineaux [2012]).¹

¹ For example, a high likelihood that explicit or implicit government guarantees will come into play if a bank gets into trouble can dampen the incentives of market participants to gather and process information (see, for example, Nier and Baumann [2006]; Furlong and Williams [2006]).

An important unresolved issue is the extent to which bank transparency promotes or undermines bank stability. A large theory literature explores bank transparency and how it affects the risk profile of individual banks and the financial system as a whole. Overall, this literature finds that while credible public information about individual banks can enhance the ability of regulators and market participants to monitor and exert discipline on banks' behavior, there are also endogenous costs associated with transparency that can be detrimental to the banking system.

Consider the positive effects of transparency. Transparency plays a fundamental corporate governance role in all industries, supporting monitoring by boards of directors, outside investors, and regulators, as well as the exercise of investor rights granted by existing laws. Credible, publicly available information is used to assess and reward the actions and performance of top executives and is incorporated into the design of incentive compensation contracts and decisions about when to fire executives (Bushman and Smith 2001; Armstrong, Guay, and Weber 2010). For banks, however, the role of information transcends the classic governance objective of aligning the behavior of executives with the interests of shareholders. Banks face distinctive governance challenges because they must balance the demands of being value-maximizing entities with those of serving the public interest (Mehran and Mollineaux 2012; Mehran, Morrison, and Shapiro 2011). High leverage combined with

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The author thanks Hamid Mehran, Brad Hendricks, Christopher Williams, and Jianxin (Donny) Zhao for helpful comments, and the Kenan-Flagler Business School, University of North Carolina at Chapel Hill. The views expressed in this article are those of the author and do not necessarily reflect the position of the Federal Reserve Bank of New York or the Federal Reserve System.

The author declares that he has no relevant or material financial interests that relate to the research described in this article.

subsidized deposit insurance, government guarantees, and bank opacity creates motives and opportunities for risk taking that can be optimal from the point of view of shareholders, given limited liability, but not from that of the economy as a whole if it raises systemic risk through an increased probability of failure.²

For example, Anginer et al. (2014) find that for an international sample of banks, shareholder-friendly corporate governance is positively associated with bank insolvency risk and, consistent with increased risk taking, is also associated with a higher valuation of the implicit insurance provided by the financial safety net. Also consistent with a conflict between firm-level governance and bank stability concerns are the findings of Fahlenbrach and Stulz (2011) that during the financial crisis of 2007-08, the price per-

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formance of bank shares was worse for banks in which the CEO's incentives were better aligned with shareholders' interests ex ante.

The banking literature suggests that, in addition to supporting corporate governance mechanisms, transparency can promote bank stability by enhancing the market discipline of banks' risk-taking decisions (see, for example, Rochet [1992]; Blum [2002]; Cordella and Yeyati [1998]). Transparency can also limit regulatory forbearance by providing a basis for market participants to exert pressure on bank supervisors to intervene promptly in troubled banks (Rochet 2005). Market discipline can operate through the direct influence that market participants exert on a bank's risk-taking behavior. For example, transparency may enhance ex ante discipline as bank managers anticipate that informed investors will quickly discern increased risk taking and demand higher yields on their investments. Market discipline can also operate through regulatory intervention triggered by market signals, such as the price movements of bank securities (see, for example, Stephanou [2010]; Flannery [2001]).

Beyond market discipline, transparency can mitigate indiscriminate panic and rollover risk by reducing the

²For more extensive discussions of what makes banks special in terms of corporate governance, see Laeven (2013) and Adams and Mehran (2003; 2008, revised 2011).

uncertainty of depositors and other short-term lenders about the solvency of individual banks (Ratnovski 2013; Gorton and Huang 2006). For example, it has been posited that recent bank liquidity crises were caused by increased uncertainty over banks' solvency as assessed by participants in wholesale funding markets (Shin 2009; Goldsmith-Pinkham and Yorulmazer 2010; Huang and Ratnovski 2011). Transparency can also reduce the financing frictions imposed on banks seeking to raise capital in response to negative balance sheet shocks (Bushman and Williams 2015; Beatty and Liao 2011). The existence of financing frictions driven by asymmetric information underpins theories of monetary policy transmission through a bank lending channel (Kashyap and Stein 1995, 2000) and capital-crunch theories suggesting that regulatory capital concerns cause banks to restrict lending during economic downturns (Bernanke and Lown 1991; Bolton and Freixas 2006; Van den Heuvel 2009).³

On the negative side, theory holds that transparency can lead to inefficient bank runs driven by coordination failures (Morris and Shin 2002; Chen and Hasan 2006); create reputational contagion when disclosure of a bank's failure causes creditors in other banks to lose confidence in the bank regulator's competence (Morrison and White 2013); adversely affect incentives of bank managers and lead them to make inefficient investment decisions (Goldstein and Saprà 2014); restrict interbank risk-sharing arrangements (Goldstein and Leitner 2013); and undermine banks' ability to produce private money (Gorton 2013; Dang et al. 2014).

The tension between positive and negative effects of transparency is usefully illustrated in the context of the Dang et al. (2014) model. In the model, an important aspect of the benefits provided by banks is their ability to conceal information about the performance of firms to whom they have made loans and discourage the collection of information by outsiders. This suppression of information allows banks to provide risk-sharing benefits to depositors that cannot be achieved by a full-information capital market mechanism. Dang et al. (2014) do not consider agency problems and assume that banks act to maximize overall surplus in the economy. However, opacity is not free. While opacity provides positive benefits for liquidity and risk sharing, banks also face significant agency and governance problems in which opacity can dampen outside discipline on the decision making of bank executives. Why

³Granja (2013) suggests another benefit of bank transparency, showing that disclosure requirements mitigate information asymmetries in the auctions for failed banks. Specifically, Granja finds that, when failed banks are subject to more comprehensive disclosure requirements, regulators incur lower costs of closing a bank and retain a lower portion of the failed bank's assets, while bidders that are geographically more distant are more likely to participate in the bidding for the failed bank.

would depositors put their money in a bank if there is no transparency to ensure the accountability of bank managers? Dang et al. (2014) observe that to support the benefits of opacity, the government examines and regulates banks for which, significantly, bank regulators often keep the results of their examinations confidential (for example, DeYoung et al. [2001]).⁴ But this practice raises a number of important issues. Who monitors the regulators? What role does public information play in supporting the public's trust in the regulators and regulatory processes? To what extent does public information inform the regulatory oversight process? What incremental benefits does transparency—operating through corporate governance mechanisms, market discipline, and reduced financing frictions—contribute to bank stability?

The conflicting views on transparency revealed in the theory literature create a demand for empirical research that can provide insights into the nature of transparency and when, where, and how it positively or negatively affects banks and the banking system. However, bank transparency is a subtle construct that emerges as an indirect output from the interaction of disclosure and incentives of both bank managers and market participants. This complexity raises a number of empirical challenges. In this regard, financial accounting information is an integral component of transparency and as such is a powerful point of entry for empirical investigation into the nature of bank transparency and its economic consequences.

Publicly disclosed financial statements represent a textured quantitative depiction of the financial position and performance of individual banks. The value of financial accounting information derives in part from its emphasis on the reporting of objective, verifiable, firm-specific information. The emphasis on verifiable outcomes produces a rich set of variables that can support a wide range of enforceable contractual arrangements and that form a basis on which outsiders can monitor and discipline the actions and statements of insiders. While diverse information about banks emanates piecemeal from many different sources, banks' financial statements provide a global, integrated representation of the financial position and performance of a banking entity and, as such, provide a frame of reference for interpreting information signals from a variety of other sources.⁵ Accounting information can also

⁴ This idea of secret keeping is reflected in the recent debate over how much information bank regulators should disclose about individual banks under the new stress-testing regimes (see, for example, Goldstein and Sapra [2014]).

⁵ This is illustrated by the finding in Peristiani, Morgan, and Savino (2010, revised 2013) that the market had largely deciphered on its own which banks would have capital gaps before regulatory stress-test results were revealed, but that the market was informed by the size of the gap revealed by the stress-test disclosures.

provide a basis for building public trust in the regulatory process because statements and disclosures by bank supervisors can be assessed relative to the economics depicted in banks' financial statements. Furthermore, the prospect that credible financial information will be disclosed in the future can discipline the voluntary disclosures of bank managers today by allowing for the ultimate confirmation of managers' statements (Ball 2001; Gigler and Hemmer 1998).

The connection between accounting information and transparency is complex. A bank's financial statements provide a depiction of reality, not reality itself. The properties of transparency derive from how closely a bank's true underlying fundamentals map into reported accounting numbers. While the accounting rules themselves are a crucial determinant of

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bank transparency, the application of accounting rules to specific economic situations often allows substantial scope for privately informed bank managers to exercise their own judgment. Accounting discretion is a double-edged sword. On the one hand, discretion creates scope for informational benefits by facilitating incorporation of private information into banks' accounting reports. On the other hand, it increases the potential for opportunistic accounting behavior by managers that can degrade bank transparency. A lack of transparency can induce investor uncertainty about banks' intrinsic value, weaken market discipline over risk-taking behavior, and provide opportunities for banks to suppress negative information that could generate future concerns over capital adequacy when ultimately revealed. Thus, an important research objective is to better understand the relationship between accounting choices and bank transparency, and between transparency and bank stability.

In the remainder of this article, I discuss key insights from recent research that investigates the relationship between bank transparency, as viewed through the lens of financial accounting, and bank stability, and provide suggestions for

future research.⁶ I will emphasize the role that managerial discretion over accounting decisions plays in influencing bank stability through two distinct accounting channels: bank transparency and the role of accounting numbers as numerical inputs into the calculations of regulatory ratios such as bank capital ratios.

The article is organized as follows. Section 2 describes the role of accounting rules and managerial discretion in determining the properties of bank transparency. Section 3 provides an overview of the literature on accounting discretion in banking and then focuses on accounting policy choices that delay the recognition of expected loan losses in banks' reported profits. It includes discussion of recent empirical research on the influence of delayed loan loss recognition on bank transparency and stability. Research into the consequences of accounting discretion and transparency for market discipline of bank risk-taking behavior is discussed in Section 4. Section 5 considers the effects of accounting discretion on the downside tail risk of individual banks and codependence of such risk among banks, while Section 6 discusses recent research on relations among accounting discretion, bank transparency, and regulatory forbearance.

2. FINANCIAL STATEMENTS AS A DEPICTION OF BANK REALITY: RULEVER SUS DISCRETION

Banks, like business firms in other industries, must attract outside funding in competitive capital markets, face competition in product and labor markets, and deal with corporate governance issues deriving from managerial self-interest and asymmetric information. As a result, the role of transparency in banking is similar to that in any other industry. However, in other respects, banks are special and introduce additional considerations unique to the financial sector. It is often asserted that banks are inherently less transparent than nonfinancial firms (Morgan 2002; Flannery, Kwan, and Nimalendran 2004, 2013). An inherent lack of transparency is presumed to derive from the fact that banks' investment decisions are based on private information that is not available to those outside the bank (for example, Diamond [1984]; Boyd and Prescott [1986]). Banks may also have incentives to suppress public information about their assets to support their role as liquidity providers (Gorton 2013; Dang et al. 2014).

⁶ This article is not intended to be a review of the large literature on financial accounting in the banking industry. For a more comprehensive discussion of accounting research in banking, I refer the reader to Beatty and Liao (2014) and Ryan (2012).

The fact that banks take on risks that are opaque and difficult to verify raises concerns about excessive risk taking by individual banks and the contribution of individual banks to the risk of the financial system (see, for example, Financial Stability Forum [2009]; Brunnermeier et al. [2009]; Hanson, Kashyap, and Stein [2011]).

In addition, the role of banks as efficient allocators of scarce capital to the economy and as important providers of liquidity makes bank balance sheets special as well. Consider the balance sheet of a bank or the aggregate balance sheet of the entire banking system. Distinct from most other industries, the balance sheet itself represents the productive output of the banking business. The asset side represents the supply of bank financing to the

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real economy and is the product of private information collection, delegated monitoring activities, and capital allocation decisions. While it is common to view the right-hand side of the balance sheet in terms of capital structure, for banks, debt is a factor of production and is in some cases itself a key output that is used as money, whether as demand deposits, repurchase agreements, or as other forms of short-term debt (Gorton 2013), and as off-balance-sheet items such as lines of credit and loan commitments (Kashyap, Rajan, and Stein 2002). The bank balance sheet can also be conceptualized as a transmission mechanism that broadcasts economic shocks and monetary policies to the wider economy (see, for example, Kashyap and Stein [2000]). To the extent that the balance sheets of many banks are simultaneously vulnerable to the same downside risk exposures, negative economic shocks can cause banks to co-move, thus amplifying shocks across the entire economy (Adrian and Brunnermeier 2008, revised 2011; Acharya et al. 2015).

However, the true bank balance sheet is itself unobservable. What we actually observe is the *accounting* balance sheet, which is a quantitative depiction of a bank's economic reality constructed through the application of managerial judgment and discretion to existing accounting rules. Given that regulators and investors make decisions based on what is observable,

financial accounting exerts a potentially significant influence on outcomes in the banking sector.

The recent financial crisis focused a spotlight on the importance of the accounting rules governing fair values of assets and liabilities, asset securitizations, derivatives, repos, and loan loss provisioning. The recognition by regulators that accounting rules can fundamentally affect bank stability is reflected in proposals issued by the Financial Stability Forum (2009) and the U.S. Department of the Treasury (2009) recommending that both the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board (IASB) reevaluate fair-value accounting, accounting for loan losses, and hedge accounting, among other issues. However, accounting standard setters and bank regulators have different objectives. General-purpose financial reporting is concerned with providing information to those outside the firm to support a wide range of decision contexts and contractual arrangements.⁷ In contrast, prudential bank regulation seeks to limit the frequency and cost of bank failures and to protect the financial system as a whole by limiting the frequency and cost of systemic crises (see, for example, Wall and Koch [2000]; Rochet [2005]).

Financial statements are shaped by the accounting rules governing how a number of complex transactions and events are mapped into accounting numbers. A flawed rule that produces a poor mapping between fundamentals and accounting numbers can introduce significant noise into banks' financial statements. In this spirit, Barth and Landsman (2010) argue that the transparency of information associated with securitizations and derivatives was likely insufficient to allow investors to assess values and risks properly. The rules govern the recognition of quantities in the primary financial statements as well as quantities reported outside the financial statements in footnotes and in management discussions of operations and risks. For example, while accounting standards in the United States require disclosure of the fair values of all financial assets in the footnotes, only a fraction of the assets recognized in bank balance sheets is reflected at fair value. As of December 31, 2012, on average only 20 percent of banks' total assets are recognized at fair value in reported balance sheets (Beatty and Liao 2014).

There is no consensus in the accounting literature about whether recognition versus disclosure of information affects users' decisions. While one might presume that investors would view recognized and disclosed quantities identically,

⁷ For example, Financial Accounting Standards Board (2010, paragraph OB2) states, "The objective of general purpose financial reporting is to provide financial information about the reporting entity that is useful to existing and potential investors, lenders, and other creditors in making decisions about providing resources to the entity."

investors may perceive differences in the reliability of recognized versus disclosed items, or face higher costs of processing information disclosed in footnotes (Beatty, Chamberlain, and Magliolo 1995; Barth, Clinch, and Shibano 2003; Ahmed, Kilic, and Lobo 2006). As a result, transparency, which derives from interactions between information and information processing by market participants, can be affected by the form in which information is disclosed.

While they are important, accounting rules are only part of the story. The complexity of the banking environment together with private information possessed by bank managers creates a wide scope for judgment and discretion in accounting choices. For example, bank managers have discretion in valuing Level 3 assets (Song, Thomas, and Yi 2010; Altamuro and Zhang 2013), determining loan loss provisions and loan charge-offs (Ryan 2012), and timing the recognition of securities' gains and losses (Beatty, Ke, and

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Petroni 2002). However, discretion cuts two ways. To address information asymmetries between informed managers and less-informed outside stakeholders, bank managers may make accounting choices to convey their private information. Or they may opportunistically exploit accounting discretion to prop up reported earnings in response to downward pressure on bank profits and capital market or regulatory pressures. Opportunistic accounting choices can be driven by executive compensation issues, career motives, private benefits, and capital adequacy concerns (Beatty and Liao 2014, sec. 5).

The manipulation of accounting numbers by banks may be optimal from the perspective of shareholders, possibly at the expense of other stakeholders such as debt holders and taxpayers, or it may represent a corporate governance breakdown from which managers seek to extract private benefits. For example, strategic reporting behavior can increase the gap between reported regulatory capital and the economic capital available to absorb unexpected losses. This may benefit shareholders by deterring regulatory intervention and allowing risk-shifting behavior while simultaneously increasing the risk of bank insolvency and potential costs to taxpayers and the economy. It is also possible that bank regulators permit or encourage opportunistic accounting choices to facilitate

regulatory forbearance that delays intervention by regulators in troubled banks (see, for example, Bushman and Landsman [2010]; Gallemore [2013]).

Gao and Jiang (2014) clearly illustrate the dual nature of accounting discretion. Their model analyzes the economic consequences of reporting discretion in the context of bank runs. In the model, maturity mismatches expose banks to the possibility of runs owing to strategic complementarities among creditors' decisions to withdraw. That is, a creditor's benefit to withdrawing its funds increases with the number of other creditors that choose to withdraw. Bank runs take two forms: fundamental-based runs on insolvent banks that impose market discipline and panic-based runs that shut down banks that could have survived with better coordination among investors. Relative to a setting with no reporting discretion, Gao and Jiang (2014) show that, in equilibrium, reporting discretion allows banks to influence creditors' decisions through misreporting and actually decreases the incidence of runs. However, while reporting discretion reduces panic-based runs, it can reduce the probability of runs so much that even some insolvent banks can survive with inflated reports. By impeding fundamental-based runs, excessive reporting discretion can weaken market discipline on banks.

In the next section, I discuss the literature on accounting discretion. I then focus the discussion on accounting policy choices that delay the recognition of expected loan losses and describe an empirical approach for connecting delayed loss recognition to bank transparency.

3. ACCOUNTING DISCRETION AND BANK TRANSPARENCY

The application of accounting rules to complex transactions requires significant judgment and discretion. In essence, the accounting rules define the boundaries within which accounting discretion plays out. A large literature examines accounting discretion in banking (Beatty and Liao 2014; Ryan 2012). The literature provides evidence that banks use accounting discretion to signal strength⁸ and to manage earnings.⁹ There is more recent evidence that banks exploited accounting discretion

⁸ This research includes Beaver et al. (1989), Elliott, Hanna, and Shaw (1991), Griffin and Wallach (1991), Wahlen (1994), Liu and Ryan (1995), and Beaver and Engel (1996).

⁹ See Moyer (1990), Collins, Shackelford, and Wahlen (1995), Beatty, Chamberlain, and Magliolo (1995), Beatty and Harris (1999), Ahmed, Takeda, and Thomas (1999), Beatty, Ke, and Petroni (2002), and Riepe (2014), among many others.

during the 2007-09 financial crisis. Vyas (2011) estimates financial reporting transparency by comparing the timing of banks' actual write-downs of assets in their financial statements relative to the timing of losses reflected in exposure-specific benchmark indexes. Vyas finds that accounting write-downs are generally less timely than losses implied by benchmark indexes, in which the timeliness of write-downs varies significantly across banks. Consistent with the degrading of transparency through accounting choices, Vyas (2011) finds that investors discover information about loss exposures of risky assets faster when write-downs are timelier. Huizinga and Laeven (2012) find that banks with higher levels of

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private-label mortgage-backed securities (MBS) on their balance sheets were more likely to overstate the carrying value of assets by failing to take timely write-downs, delaying loan loss provisions, and reclassifying MBS from available-for-sale to held-to-maturity when their fair values were below carrying values. One explanation for these results is that bank regulators permitted opportunistic accounting choices to facilitate regulatory forbearance, a topic I will return to below. In the remainder of this section, I focus on connections between discretionary loan loss provisioning and transparency.

Banking allows a textured examination of accounting policy choices by focusing on loan loss provisioning behavior. Loan loss provisioning is a key accounting policy choice that directly influences the volatility and cyclicity of bank earnings, as well as the information properties of banks' financial reports with respect to reflecting the risk attributes of loan portfolios. While both the FASB and the IASB have long required the use of the incurred-loss model for loan loss provisioning, the complexity of loan portfolios allows substantial scope for discretion within the prescribed rules (Financial Stability Forum 2009; Dugan 2009).¹⁰ Recent accounting research captures cross-bank variation in

¹⁰ The incurred-loss model specifies that loan losses are recognized only when a loss is probable, based on past events and conditions existing at the financial

accounting policy choices by exploiting differences in the discretionary application of loan loss accounting rules across banks and across countries to estimate the extent to which banks delay expected loan loss recognition in current provisions (see, for example, Beatty and Liao [2011]; Bhat, Lee, and Ryan [2014]; Bushman and Williams [2012, 2015]; Nichols, Wahlen, and Wieland [2009]).

Conceptually, loan loss provisions and related loan loss reserves can be viewed as providing a cushion against *expected* losses, while bank capital is a buffer against *unexpected* losses (see, for example, Laeven and Majnoni [2003]). When banks opportunistically delay recognition of expected losses, a current expense is not recorded for some portion of losses expected to occur in the future. This has several implications. First, delayed loss recognition can mask a loan portfolio's risk attributes and obscure the true capital cushion by mingling unrecognized expected losses together with capital available to buffer unexpected losses. Second, because unrecognized expected losses will be recognized on average in the future, delayed recognition creates an overhang of unrecognized expected losses that carry forward to the future. Loss overhangs can increase capital adequacy concerns during economic downturns by compromising the ability of loan loss reserves to cover both unexpected recessionary loan losses and loss overhangs from previous periods. Thus, delayed loss recognition can directly affect a bank's ability to meet regulatory thresholds. Can delaying loss recognition also affect bank transparency?

Bushman and Williams (2015) hypothesize that delayed expected loss recognition is a manifestation of opportunistic loan-provisioning behavior that degrades bank transparency and increases investor uncertainty over banks' fundamentals, especially during economy-wide crisis periods. To investigate this hypothesis, Bushman and Williams (2015) build on an extensive literature linking transparency to stock market illiquidity and illiquidity risk (see, for example, Amihud, Mendelson, and Pedersen [2005]). Illiquidity risk reflects how closely bank-level stock market illiquidity co-moves with aggregate market illiquidity and stock returns.¹¹ Brunnermeier

Footnote 10 (continued)

statement date. Both the FASB and the IASB have developed new rules for financial instruments that will substantially change loan loss accounting. In general, the new rules drop the incurred-loss model and adopt a more forward-looking "expected loss" model that requires banks to recognize not only credit losses that have already occurred but also expected future losses. The FASB and IASB rules offer different approaches to implementing an expected loss framework. The question as to whether the new rules will increase or decrease the role of accounting discretion in loan loss accounting is a topic for future research.

¹¹ See Pástor and Stambaugh (2003) and Lou and Sadka (2011) for alternative measures of illiquidity risk.

and Pedersen (2009) and Vayanos (2004) show that liquidity can dry up in crises when liquidity providers flee from assets with high levels of uncertainty about fundamental value. Brunnermeier and Pedersen (2009) argue that systematic shocks to the funding of liquidity providers can generate co-movement in liquidity across assets, particularly for stocks with greater uncertainty about intrinsic value. Further, Lang and Maffett (2011) empirically document that nonfinancial firms with lower transparency suffer greater increases in illiquidity risk during crisis periods. Thus, to the extent that delayed loss recognition degrades bank transparency, greater delays in loss recognition should be associated with greater bank illiquidity and greater illiquidity risk, with these associations being stronger during crisis periods.

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Consistent with this transparency hypothesis, Bushman and Williams (2015) find that delayed expected loss recognition (DELR) is associated with higher stock market illiquidity and a higher correlation between bank-level illiquidity and aggregate banking sector illiquidity and market returns during recessions. While it has been documented that stock illiquidity in general significantly increases during economic recessions,¹² Bushman and Williams (2015) show in a banking setting that recessionary increases in stock illiquidity and illiquidity risk are more severe for banks with high levels of DELR. This within-banking-sector analysis of DELR and illiquidity complements Flannery, Kwan, and Nimalendran (2013) across industry analysis showing that crises raise the adverse selection costs of trading bank shares relative to trading shares of nonbank control firms. The Flannery, Kwan, and Nimalendran (2013) results are consistent with the intensity of investors' incentives to seek out information about banks increasing relatively more for banks than for nonbanks during crises, resulting in greater adverse selection issues for banks. While the Bushman and Williams (2015) results are also consistent with the assumption that bank

¹² See Naes, Skjeltorp, and Ødegaard (2011) and Hameed, Kang, and Viswanathan (2010),

investors become hungry for information during crises, their results suggest that bank opacity prevents investors from resolving uncertainty about a bank's fundamentals and leads to increased illiquidity risk.

The Bushman and Williams (2015) results have implications for the downside risk of individual banks and for codependence in downside risk among banks. First, illiquidity and illiquidity risk are associated with higher costs of equity financing.¹³ Higher equity financing frictions associated with delayed loss recognition can restrict access to new equity financing and thus exacerbate banks' capital adequacy concerns by hampering efforts to replenish capital levels depleted by recessionary losses. Furthermore, while Bushman and Williams (2015) find a relation between DELR and equity financing frictions, diminished transparency may also affect the availability of credit funding and the terms demanded by creditors to supply such funding (see, for example, Kashyap and Stein [1995, 2000]; Hanson, Kashyap, and Stein [2011]; Ratnovski [2013]). This is a potentially important issue for future research.

Because delayed expected loss recognition can increase illiquidity risk, it also has implications for systemic risk. Increased co-movement between bank-level illiquidity and banking-sector illiquidity and returns suggests that banks with high DELR will simultaneously face elevated financing frictions and potential capital inadequacy concerns when the banking sector is experiencing distress. In addition, bank opacity associated with DELR can reduce market discipline over risk-taking behavior for high DELR banks as a group during a crisis period.

Finally, my discussion of opportunistic accounting discretion has focused heavily on delayed loan loss recognition. However, bank managers are likely to have other accounting levers to pull when faced with pressure on the bank (Beatty and Liao 2014). For example, Huizinga and Laeven (2012) show that during a crisis, banks with high MBS levels overstate the carrying value of their assets, delay loan loss provisions, and reclassify available-for-sale MBS as held-to-maturity. An interesting possibility for future research is to explicitly conceptualize bank accounting choices as a vector of distinct choices and seek to isolate clusters of correlated accounting behaviors that together affect overall bank transparency.

¹³ Acharya and Petersen (2005) decompose the capital asset pricing model (CAPM) beta to show that the cost of capital is a function of illiquidity levels and illiquidity risk. They provide evidence that U.S. stocks that maintain a relatively constant level of liquidity when overall markets become illiquid have a lower cost of capital because investors are willing to pay more for shares if they expect to be able to exit positions at a relatively low cost during these periods.

I turn next to a discussion of the consequences of accounting discretion for market discipline of bank risk taking.

4. TRANSPARENCY AND DISCIPLINE OF BANK RISK TAKING

Market discipline can be conceptualized as a market-based incentive scheme in which investors in bank securities penalize banks for greater risk taking by demanding higher returns on their investments. A large literature examines market discipline in banking. The thrust of much of this research is to examine whether the prices of bank securities respond to changes in bank risk in a timely fashion.¹⁴ Acharya, Anginer, and Warburton (2015) show that while a positive relationship

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exists between risk and credit spreads for medium and small institutions, the risk-to-spread relationship is significantly weaker for the largest institutions. They argue that large institutions pay a lower price for risk than other financial institutions owing to the too-big-to-fail notion, which holds that the government will not allow large financial institutions to fail if their failure would cause significant disruption to the financial system and economic activity. Berger and Turk-Ariss (2015) test whether discipline exerted by depositors decreased or increased during the recent crisis. They find that significant depositor discipline existed prior to the crisis in both the United States and the European Union but that such discipline generally decreased during the crisis, consistent with government reactions dampening market discipline (for example, expanding deposit insurance coverage and rescuing troubled institutions).

The extent to which reported accounting numbers influence the intensity of market discipline is still an open question. Nier and Baumann (2006) use cross-country data to investigate whether factors associated with the strength of market discipline lead banks to choose higher capital buffers for given asset risk. They measure the strength of market

¹⁴ See, for example, Flannery, and Nikolova (2004).

discipline along three dimensions: how transparent a bank is with respect to its risk choices, the extent of the government safety net, and the proportion of uninsured liabilities on its balance sheet. They proxy for transparency by whether the bank is listed on a primary U.S. exchange or rated by a major rating agency, and by constructing an index based on whether a bank discloses in its financial reports information on eighteen categories of disclosure related to interest rate risk, credit risk, liquidity risk, market risk, and capital. Nier and Baumann (2006) provide evidence that stronger market discipline is associated with more complete risk disclosures, that uninsured liabilities lead to larger capital buffers, and that government safety nets result in lower capital buffers.

In a related study, Bushman and Williams (2012) use a large sample of banks from twenty-seven countries to investigate the implications of accounting discretion for risk discipline. They construct two country-level measures of accounting discretion. The first is delayed expected loss recognition as developed in the previous section of this article. The second measure captures the extent to which banks use loan loss provisions to smooth earnings by recognizing loan loss provisions that are positively correlated with pre-provision earnings. The banking literature posits that smoothing can mitigate the pro-cyclicality of the financial system by allowing a buildup in reserves when earnings are high and current losses are low, and a drawdown in reserves when earnings are low and current loan losses are high (see, for example, Borio, Furfine, and Lowe [2001]; Laeven and Majnoni [2003]; Bikker and Metzmakers [2005]). However, as with accounting discretion in general, discretionary provision smoothing may obscure the underlying risk attributes of a bank's loan portfolio. Using two approaches, Bushman and Williams (2012) investigate the implications of greater delayed loan loss recognition and smoothing for the discipline of bank risk taking.

The first approach investigates how accounting discretion affects the sensitivity of changes in bank capital to changes in asset volatility.¹⁵ This analysis builds on the premise that greater outside discipline of risk taking will result in greater pressure on banks to increase capital in response to increases in risk. The concept that capital should increase with risk is a basic tenet of prudential bank regulation as reflected, for example, in the risk-weighted capital requirements in the Basel II Accord (Basel Committee on Banking Supervision 2006). Consistent with delayed expected loss recognition

¹⁵ Bushman and Williams (2012) focus on publicly traded banks and exploit the concept that a firm's equity can be represented as a call option on the firm's assets, where the strike price is the face value of debt. Using the face value of reported liabilities, the observed market value of equity, and the estimated standard deviation of stock returns, they derive an estimate of a bank's asset volatility.

and smoothing reducing transparency and dampening disciplinary pressure on bank risk taking, the analysis finds that changes in capital are significantly less sensitive to changes in bank risk in high DELR (smoothing) regimes than in low DELR (smoothing) regimes.

The second approach in Bushman and Williams (2012) investigates the relationship between delayed loan loss recognition (smoothing) and bank risk shifting. When a country provides deposit insurance, banks can shift risk onto the deposit insurer by increasing the risk of assets without simultaneously increasing capital enough to cushion the increased risk. Merton (1977) characterizes deposit guarantees as a put option issued by a deposit guarantor. Risk shifting occurs when banks increase the value of the option without internalizing the full cost of the increased insurance. Countering banks' incentives to shift risk, deposit insurers and uninsured creditors have incentives to monitor and discipline banks' risk-taking behavior. The analysis in Bushman and Williams (2012) examines the relative strength of these competing forces and provides evidence that banks in high DELR (smoothing) regimes exhibit more risk shifting than banks in low DELR (smoothing) countries.

Bushman and Williams (2012) further find that the relationship between accounting discretion and risk shifting is significantly more pronounced for banks with low capital. This is consistent with the finding that gains to banks' shareholders from risk shifting increase as banks move closer to violating capital requirements. In effect, accounting discretion can affect bank risk and stability through multiple channels simultaneously. First, accounting discretion can reduce transparency, which facilitates risk-shifting behavior. Second, lower transparency increases the financing frictions that restrict the ability of the bank to replenish depleted capital levels. Finally, loss overhangs created by delayed loan loss recognition can increase capital inadequacy concerns during economic downturns by compromising the ability of loan loss reserves to cover both unexpected recessionary loan losses and loss overhangs from previous periods.

Next, I consider the effects of accounting discretion on the downside tail risk of individual banks and the codependence of downside tail risk among banks.

5. ACCOUNTING DISCRETION, DOWNSIDE RISK OF INDIVIDUAL BANKS, AND SYSTEMIC RISK

Recent research has begun to examine the relationship between accounting decisions and risk for individual banks and for the banking system. Baumann and Nier (2004) examine relations between a bank's transparency and the volatility of its stock return using a constructed disclosure index similar to the one discussed in the previous section in the context of Nier and Baumann (2006). Baumann and Nier (2004) find that banks' disclosure intensity is inversely related to measures of stock volatility. According to the empirical evidence provided in Ng and Roychowdhury (2014), the amount of loan loss allowances included in Tier 2 regulatory capital is positively associated with the risk of bank failures during the 2007 financial crisis. Further, they find that the positive association of loss allowances included in Tier 2 capital with bank failure risk is concentrated among cases in which the allowance add-backs to capital are likely to increase total regulatory capital. However, as noted by Beatty and Liao (2014, sec. 6.2.1), Ng and Roychowdhury (2014) do not consider the possibility of reverse causality, in which failing banks that recognize additional provisions may undertake excessive risk, hoping to resurrect their financial health.

Consider again the accounting policy choices that delay expected loss recognition. By affecting the accounting numbers used as quantitative inputs into regulatory calculations and degrading bank transparency, DELR can heighten capital adequacy concerns during crisis periods. The literature suggests a range of potential negative consequences of capital inadequacy or anticipation of capital adequacy concerns (for example, Van den Heuvel [2009]). These include increased incentives for risk-shifting activities (Bushman and Williams 2012); reduced bank lending (for example, Bernanke and Lown [1991]; Beatty and Liao [2011]); deleveraging through asset sales, potentially at fire-sale prices (for example, Hanson, Kashyap, and Stein [2011]); decreased probability of survival, competitive position, and market share (for example, Berger and Bouwman [2013]); and increased borrowing costs and decreased availability of credit (for example, Afonso, Kovner, and Schoar [2011]; Kashyap and Stein [1995, 2000]; Ratnovski [2013]). These negative consequences of capital inadequacy combined with increased financing frictions and risk-shifting incentives associated with higher DELR can expose banks to significant downside risk. The challenge is to devise research designs that reveal the connections between accounting policies and banks' vulnerability to severe downside risk.

To address this issue, Bushman and Williams (2015) capture downside risk following an approach developed

by Adrian and Brunnermeier (2008, revised 2011). They estimate conditional, time-varying distributions over *future* equity returns and examine whether banks that delay loan loss recognition exhibit an increased likelihood of extreme negative outcomes. Using quantile regression, they estimate downside risk for each future time period as the value at risk (VaR) computed at the 1 percent quantile of the distribution.¹⁶ They estimate VaR for both individual banks and the banking system as a whole.

Focusing first on the relationship between DELR and VaR estimated for each individual bank, Bushman and Williams (2015) find that higher delayed loss recognition is associated with significantly higher risk of severe drops in the market values of equity during crisis periods. It is useful to contrast these results with research showing that opacity is associated with the risk of an equity crash (Nier 2005; Hutton, Marcus, and Tehranian 2009; Cohen et al. 2014). Several of these papers build on the idea in Jin and Myers (2006) that if managers currently postpone the release of bad news, then later release of accumulated negative information causes stock price crashes. Bushman and Williams (2015) extend this literature in several ways. First, they isolate a specific accounting policy in which banks explicitly delay recognition of losses, which results in the buildup of loss overhangs that threaten capital during economic downturns. Second, they find that a bank's capital level conditions the association between DELR and downside risk, in which this association is significantly higher for banks with lower regulatory capital. This result suggests that delaying expected loss recognition involves more than just the recognition of accumulated losses, as in Jin and Myers (2006). What prevents banks from simply replenishing capital and mitigating downside risk? One possibility is that, as discussed earlier, higher DELR is associated with increased financing frictions that impede capital replenishment. Also, to the extent that DELR reflects reduced bank transparency, it can facilitate risk-shifting activities when capital levels are low and thus increase a bank's exposure to severe negative outcomes during crisis periods.

It is also useful to contrast the Bushman and Williams (2015) result that a bank's capital level conditions the association between delayed expected loss recognition and downside risk with Beatty and Liao (2011). They find that DELR increases the sensitivity of realized loan growth to bank capital during recessions, suggesting that DELR contributes to a "capital crunch" phenomenon in which capital concerns cause banks to contract

¹⁶ VaR represents a cutoff value in the lower tail of the distribution, indicating that a bank (the banking system) will experience a loss (for example, negative equity return) over the upcoming quarter of VaR or greater with 1 percent probability. More negative values of VaR indicate more severe downside tail risk in that there is more probability weight over extreme negative outcomes.

lending. This finding suggests that accounting policy can have a nontrivial impact on the pro-cyclicality of the supply of bank lending. While reduced bank lending can negatively affect bank-dependent borrowers' access to external financing, it is not clear what a decision to restrict new lending implies about a bank's vulnerability to negative tail risk. In contrast to the focus on bank lending in Beatty and Liao (2011), Bushman and Williams (2015) focus on the effects of DELR on a bank's vulnerability to severe tail risks, showing that the relationship between DELR and downside risk is magnified for firms with low capital. While increased vulnerability to risk can be related to lower lending volume, among other potential negative consequences of DELR, the Bushman and Williams (2015) result is robust to controlling for a bank's loan growth. The influence of delayed loss recognition on downside risk, therefore, likely reflects more than just short-term reductions in loan growth.

Bushman and Williams (2015) also examine the association between delayed expected loss recognition and systemic risk. Following the recent financial crisis, there has been considerable interest in modeling and measuring systemic risk. There is no agreed-upon approach to this measurement (for example, Bisias et al. [2012]; Hansen [2014]). One important stream of literature exploits the high-frequency observability of banks' equity prices to extract measures of systemic risk. Some papers in this stream use contingent claims analysis (for example, Gray, Merton, and Bodie [2008]; Gray and Jobst [2009]), while others focus on codependence in the tails of equity returns using reduced-form approaches (Acharya et al. 2015; Adrian and Brunnermeier 2008, revised 2011).¹⁷ Given that equity prices reflect the market's expectations about banks' future prospects, equity-based measures of bank tail risk reflect risk assessments deriving from a wide range of underlying sources of vulnerability. The focus on equity value is also beneficial because it reveals the market's expectations about a bank's (the banking system's) capital level. For example, Acharya et al. (2015) use equity values to estimate a financial institution's contribution to systemic risk by measuring its propensity to be undercapitalized when the system as a whole is undercapitalized, empirically showing that their measure possesses substantial power to predict emerging risks during the financial crisis of 2007-09.

Bushman and Williams (2015) estimate the level of risk codependence among banks following the approach developed by Adrian and Brunnermeier (2008, revised 2011). In this approach, codependence is captured by using quantile

¹⁷ Correlation is a measure of linear codependence, in which the term *codependence* encompasses a wider range of relations that can exist between random variables. For example, the tail dependence of a pair of random variables describes their co-movements in the tails of the distributions.

regression to estimate the VaR of the distribution over aggregate banking system equity returns conditional on the VaR of an individual bank's equity returns to derive the marginal contribution of each individual bank to system-wide risk. Bushman and Williams (2015) find that banks that delay expected loan loss recognition contribute more to the risk of severe drops in the equity value of the aggregate banking sector than banks that delay less. Bushman and Williams theorize that if a group of banks that for idiosyncratic reasons all significantly delay loss recognition in good times, then during crisis periods all group members will simultaneously face the consequences of increased capital inadequacy, financing frictions, and incentives to engage in risk-shifting activities. As a result, the downside risk of such banks will be highly correlated, creating systemic effects from banks acting as part of a herd.¹⁸ That is, DELR acts like a systematic risk factor that delivers a negative shock to the entire group of DELR banks, thereby inflicting measurable pain on the entire banking system.

To the extent that DELR reflects reduced bank transparency, it can facilitate risk-shifting activities when capital levels are low and thus increase a bank's exposure to severe negative outcomes during crisis periods.

As just described, delayed expected loan loss recognition is significantly associated with the downside risk of individual banks and systemic risk. This factor raises the interesting question of what causes banks to differ in the extent of their DELR choices. DELR is not a time-invariant bank characteristic; it can vary over time for a given bank as pressure on bank managers to manage accounting numbers change. For example, Bushman and Williams (2015) demonstrate that there is significant within-bank variability in DELR by showing that their DELR-bank risk results are robust to including bank fixed effects. Thus, while banks' accounting choices themselves are shown to have an effect on bank risk, the pressures on bank managers that underpin these choices can come from a variety of time-varying

¹⁸ As noted by Adrian and Brunnermeier (2008, revised 2011), systemic risk can be created by banks that are so interconnected and large that they can cause negative risk spillover effects on others, as well as by institutions that are systemic as part of a herd where, for example, a group of one hundred institutions that act like clones can be as threatening to the system as a single large entity that has rolled up the one hundred individuals.

sources. Isolating underlying sources of pressure and understanding how distinct sources of pressure differentially affect banks' accounting and operational choices are important avenues for future research.

Along these lines, recent research has begun exploring sources of time-varying pressures on bank managers. Bushman, Hendricks, and Williams (2015) and Dou, Ryan, and Zou (2014) find that the extent to which banks delay loan loss recognition increases as the competition a bank faces intensifies. These papers exploit the process of bank deregulation to identify exogenous changes in bank competition.¹⁹ Bhat, Lee, and Ryan (2014) isolate two credit-risk modeling activities from disclosures in banks' financial reports: 1) statistical analysis of

While banks' accounting choices themselves are shown to have an effect on bank risk, the pressures on bank managers that underpin these choices can come from a variety of time-varying sources.

historical data on underwriting criteria, loan performance, and relevant economic variables; and 2) stress testing of credit losses to possible adverse future events. Bhat, Lee, and Ryan (2014) find that banks that rely more on statistical analysis of loan performance are timelier in recognizing losses in the pre-crisis boom period and late in the financial crisis, but less timely early in the financial crisis compared with those that use stress tests. Much more work can be done along these lines.

Also, opportunistic accounting choices in response to increased pressure on bank managers may be part of an overall pattern of behavior that includes real decisions as part of the configuration. That is, accounting choices may represent an integral element in multifaceted strategic responses to ever-shifting economic pressures on banks. This is potentially an interesting line of inquiry. For example, Bushman, Hendricks, and Williams (2015) show that increased competitive pressure is associated with lowered bank lending standards and shifting of revenue mixes toward noninterest sources, in addition to making opportunistic accounting choices. Bushman, Wang, and Williams (2014) also show that the frequency with which bank managers make opportunistic loan-provisioning decisions increases as the wedge between a

dominant shareholder's control and cash flow rights increases. But these are also the same situations when controlling shareholders are more likely to extract private benefits of control (for example, Caprio, Laeven, and Levine [2007]). That is, Bushman, Wang, and Williams (2014) provide evidence consistent with poor governance allowing controlling owners to manipulate loan loss provisions in order to conceal their expropriation activities.

6. BANK TRANSPARENCY AND REGULATORY FORBEARANCE

The notion that bank regulation should impose prompt corrective actions on troubled banks has long been part of bank regulatory discussions and is embedded both in the Basel I Accord and in the U.S. Federal Deposit Insurance Corporation Improvement Act of 1991. However, regulators may practice forbearance by choosing not to intervene and close banks that they know to be unsound. The literature suggests a number of reasons why regulators may practice forbearance. These include political pressure (Mishkin 2000; Brown and Dinç 2005), loss of reputation (Boot and Thakor 1993; Mishkin 2000), or concerns that intervening in one bank can negatively affect the overall financial sector (Brown and Dinç 2011; Morrison and White 2013). The literature is mixed on the consequences of forbearance. On the one hand, failure to close a troubled bank may provide opportunities for bank managers to gamble for resurrection or continue existing risky behaviors, which can increase the ultimate cost of resolving the bank (Santomero and Hoffman 1998). However, forbearance can also be a prudent regulatory choice if the bank recovers without costly intervention (Santomero and Hoffman 1998) or if closing a bank would spread problems to healthy institutions (Allen and Gale 2000; Morrison and White 2013).

While academics have examined incentives to engage in forbearance, little attention has been paid to a regulator's *ability* to practice forbearance. One potential factor that can influence the regulators' ability to practice forbearance is the opacity of banks' information environments. Rochet (2004) and Decamps, Rochet, and Roger (2004) analytically show that market discipline can limit forbearance. If a bank's investors believe that the bank is troubled (for example, if creditors refuse to roll over short-term debt), regulators may have no choice but to intervene. This suggests that a regulator's ability to engage in forbearance is a function of monitoring by market participants (Rochet 2005). Opacity can enable forbearance by disguising the bank's actual condition, making it difficult for market participants to assess the bank's

¹⁹ Burks et al. (2013) show that banks increase the issuance of firm-initiated press releases following a reduction in barriers to out-of-state branching.

solvency and pressure regulators for timely intervention (Bushman and Landsman 2010).

Skinner (2008) provides evidence that Japanese regulators altered financial accounting standards in a way that allowed troubled banks to appear well capitalized during Japan's banking crisis in the late 1990s. Recent research suggests that opacity could enable regulators to engage in forbearance. Huizinga and Laeven (2012) find that banks with higher levels of private-label mortgage-backed securities were more likely to avoid timely write-downs of assets, delay loan loss provisions, and reclassify available-for-sale MBS as held-to-maturity when the fair values of these MBS were less than their amortized cost (see also Vyas [2011]). In a related paper, Bischof, Brüggemann, and Daske (2014) examine

Accounting discretion and, more generally, bank opacity can be used as a direct tool for achieving forbearance and can increase the ability of regulators to practice forbearance.

whether banks exploited their discretion to reclassify financial assets to avoid hits to regulatory capital and achieve de facto regulatory forbearance. Specifically, in October 2008, the IASB introduced a reclassification option that enabled firms to reclassify financial assets that were previously recognized at fair value into alternative measurement categories. By reclassifying financial assets, a firm could avoid the recognition of unrealized fair-value losses in income and equity if the losses did not trigger an impairment write-down under amortized cost-accounting rules. Consistent with forbearance, Bischof, Brüggemann, and Daske (2014) find, among other things, that the risk of costly regulatory intervention and the lack of prudential filters for unrealized fair-value changes are positively associated with banks' reclassification choices.

Gallemore (2013) measures opacity using delayed expected loss recognition and examines relations between opacity and various proxies for regulatory forbearance. Using a sample of U.S. commercial banks during the recent crisis, Gallemore (2013) finds that more opaque banks (that is, banks that delay loss recognition more extensively) experienced greater forbearance and were less likely to fail during the crisis. The positive association between opacity and forbearance is stronger when regulators' incentives are stronger (as measured by bank connectedness) and outsiders' incentives to monitor are stronger (as measured by the proportion of deposits that are uninsured). These results suggest that opacity enables regulators to forbear

on connected banks to prevent financial sector contagion and to disguise forbearance from uninsured creditors.

Concerns about regulatory forbearance and government financial support for large banks have received heightened attention from policymakers and regulators around the world. The emerging literature discussed in this section indicates that accounting discretion and, more generally, bank opacity can be used as a direct tool for achieving forbearance and can increase the ability of regulators to practice forbearance. Accounting discretion and opacity can affect regulatory forbearance through at least two channels. First, they can operate through the channel of capital adequacy requirements. With or without the acquiescence of bank regulators, accounting can enable essentially insolvent banks to continue operating by propping up reported regulatory capital. Second, opacity can also increase the ability of regulators to practice forbearance by making it more difficult for market participants to exert pressure on bank supervisors to promptly intervene in troubled banks (Gallemore 2013).

7. SUMMARY

An important concept in the theory of banking is transparency. An important unresolved issue is the extent to which bank transparency promotes or undermines bank stability. A large theoretical literature explores bank transparency and how it affects the risk profile of individual banks and the financial system as a whole. Conflicting views on transparency revealed in this literature create a demand for empirical research that can provide insights into the nature of transparency and when, where, and how it positively or negatively affects banks and the banking system. Financial accounting information is an integral component of transparency and, as such, is a powerful point of entry for empirical investigation into the nature of bank transparency and its economic consequences.

This article discusses key insights from recent research examining the relationship between bank transparency, viewed through the lens of financial accounting, and bank stability. The article focuses on the real consequences of accounting policy choices on individual banks' downside tail risk, codependence of tail risk among banks, and regulatory forbearance. The article emphasizes the role played by managerial discretion over accounting decisions in influencing bank stability through two distinct accounting channels: bank transparency and the accounting numbers as numerical quantities.

The article synthesizes recent research showing that accounting policy choices can have a substantive influence on bank stability. Accounting policy choices can 1) exacerbate capital inadequacy concerns during economic downturns by compromising the ability of loan loss reserves to cover both unexpected recessionary loan losses and the buildup of unrecognized expected loss overhangs from previous periods; and 2) degrade transparency, which can increase financing frictions, inhibit market discipline of bank risk taking, and allow regulatory forbearance. Capital adequacy concerns combined with high financing frictions can increase bank

fragility, while capital inadequacy combined with weak market discipline can increase motives and opportunities for banks to engage in risk-shifting behavior. Furthermore, bank opacity, by supporting regulatory forbearance, can provide opportunities for bank managers to gamble for resurrection or continue existing risky behaviors, which can increase the ultimate cost of resolving the bank. The article discusses recent evidence showing that accounting policy choices are significantly associated with a greater downside tail risk of individual banks and with greater systemic risk.

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