

BANK LITIGATION, BANK PERFORMANCE AND OPERATIONAL RISK: EVIDENCE FROM THE FINANCIAL CRISIS*

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ABSTRACT

Deposit insurance is a put option that encourages excessive risk taking by banks. Excess litigation against a bank, a form of operational risk, is one indicator of risk because litigation often reflects a failure to maintain a strong system of internal control. We analyze five different measures of bank financial performance and a unique hand-collected data set on bank legal expense (excluding settlements). Our results are consistent with the hypothesis that high legal expense predicts weak future bank performance. If investors had legal expense information on a regular basis there would be greater market discipline. Bank regulators should consider requiring consistent and comprehensive reporting of legal expense on regulatory reports to help identify institutions with excessive operational risk. Existing reporting creates unnecessary information asymmetries since investors are not as informed as they could be about operational risk, no doubt leading to mispricing of bank securities.

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ABSTRACT

Deposit insurance is a put option that encourages excessive risk taking by banks. Excess litigation against a bank, a form of operational risk, is one indicator of risk because litigation often reflects a failure to maintain a strong system of internal control. We analyze five different measures of bank financial performance and a unique hand-collected data set on bank legal expense (excluding settlements). Our results are consistent with the hypothesis that high legal expense predicts weak future bank performance. If investors had legal expense information on a regular basis there would be greater market discipline. Bank regulators should consider requiring consistent and comprehensive reporting of legal expense on regulatory reports to help identify institutions with excessive operational risk. Existing reporting creates unnecessary information asymmetries since investors are not as informed as they could be about operational risk, no doubt leading to mispricing of bank securities.

1. INTRODUCTION

A fixed-rate deposit insurance system creates a put option on the value of a bank's assets with a strike price equal to the maturity value of bank liabilities (Merton, 1977, 1978). Bank managers can maximize the value of the option by behaving opportunistically. It is well established in contemporary banking theory that this moral hazard for increased risk taking provides a role for regulation (e.g., Keeley, 1990; Bhattacharya and Thakor, 1993).

Aggressive and opportunistic behavior is often revealed in litigation against a bank. Part of this litigation reflects managerial weaknesses. Consistently high legal expense reflects the classic causes of bank problems – an aggressive approach to the banking business focusing on short-term earnings, a lack of proper training for employees, and a failure to adhere to established policies and procedures, all of which reflect weaknesses in systems of internal control. The agency that regulates national banks in the United States, the Office of the Comptroller of the Currency (OCC, 1998) defines “good” internal control as a situation in which “no one person is in a position to make significant errors or perpetuate significant irregularities without timely detection” (p. 2). Having such a system in place is a responsibility of management, and its absence clearly reflects managerial weaknesses.¹

¹ The OCC notes that a broader definition of internal control includes “the accuracy and reliability of accounting data...operational efficiency...adherence to subscribed managerial policies...a training program designed to aid personnel in meeting their responsibilities, and an internal audit staff to provide additional assurances to management as to the adequacy of its outlined procedures and the extent to which they are being effectively carried out...That broad definition is a clear indication that development and maintenance of a satisfactory system of internal control is a *managerial responsibility* within a bank” (p. 1, emphasis added). Litigation against banks can be frequently traced to situations in which one person or a few people in the organization are able to perpetuate

Legal risk is a form of operational risk, a major concern of bank regulators (e.g., Basel Committee on Bank Supervision, 2006; Koch and MacDonald, 2010). A comprehensive pre-financial-crisis literature survey on operational risk (Moosa, 2007) emphasizes that banks are more likely to fail from operational risk than from credit or market risk, and that such risk has increased dramatically in recent years because of rapid technological change. In an OCC working paper, “*So That’s Operational Risk!*” Robertson (2011) shows that the risky lending, lax securitization and other due diligence failures that contributed to the 2007-09 US financial crisis reflect operational risk. These irregularities continue to be the subject of litigation. Nonetheless, the effect of legal expense on future bank performance has not been explored in the literature because of the lack of data.

In cases where operational risk is high, management has an incentive to hide the risk, prolong the litigation, and push the problems into the future. In these situations, aggressive banking strategies and aggressive litigation strategies often accompany one another, and the full extent of managerial weaknesses is often evident only when the litigation is resolved, which may be many years later. Banks engaging in these strategies would have legal expense significantly higher than peer banks.² When a case goes on for a significant period of time, legal expense

irregularities without detection for a significant period of time. Hence, a bank without a good system of internal control is more likely to be sued than other banks. These points support the principal assumption in this paper that excessive litigation is a reflection of *managerial weaknesses*.

² For example, one Wachovia case discussed in Appendix A (*Busy Bee v. Wachovia*) required ten years to litigate, and then there was an appeal. In several other larger Wachovia cases the weaknesses also went on for many years. An example is provided in footnote 5.

(which we define as payments to law firms) would be higher than if the issue were resolved in a more expedient fashion.

We use a unique hand-collected data set reflecting bank legal expense (our legal expense proxy, which includes payments to law firms in all cases) to examine the hypothesis that high legal expense *predicts* weak future bank performance. We posit that there is a lag between excessive legal expense and deteriorating bank performance. In the short run, aggressive and risky behavior may bolster bank earnings, but the litigation is often an indicator of managerial weakness. Thus, our hypothesis is that high legal expense will be reflected in weak future bank performance.

We test whether banks that had high legal expense before the crisis performed worse than other banks, both in terms of market returns and loan quality, during the crisis. Because of the complexity of the issues, we provide both econometric and case study evidence relevant to the hypothesis. The legal expense data comes from annual 10K reports for bank holding companies (BHCs) which provides us with a legal expense proxy for the pre-financial-crisis period, 2002 through 2006.³ This measure reflects differences among banks in total (unobservable) bank legal expense (excluding settlements). We examine the effect of legal expense on five measures of

³The data do not provide a precise measure of bank legal expense because it is combined with several other items. In addition, many BHCs, including Citigroup, do not report their 10Ks in a format that would allow us to construct the proxy.

The difficulties in collecting these data include the wide variety of reporting formats in the annual 10-K reports, and the lack of separate reporting of the required data by many BHCs. We examine reports for over 150 BHCs, of which 102 report information sufficient to construct the proxy. Lack of complete performance data for some institutions reduces the sample to 83 BHCs for each of the five years.

bank performance in 2007 and 2008 – buy-and-hold returns (BHRs), abnormal BHRs, non-performing loans, loan charge-offs, and loan loss provisions.

Large banks' legal bills from mortgage-backed securities misrepresentation and fraud, the foreclosure crisis, and the more recent LIBOR manipulation are estimated to total at least \$100 billion and could reach \$176 billion (Kapner, 2013).⁴ While these high profile settlements and judgments against banks weaken current bank financial performance, this is essentially an accounting relationship which is *not* the subject of this paper. Large settlements reflect weaknesses from earlier periods, so settlements are a *lagging indicator*. We are interested in a more important question, is excess legal expense (payments to law firms) a *leading* indicator of banking problems?

Our findings are that the legal expense proxy for 2002-06 predicts the five bank performance variables for both 2007 and 2008. Consistent with the hypothesis, high pre-crisis legal expense is associated with lower stock returns and lower loan quality during the crisis, and the relationships are economically and statistically significant. The standardized regression coefficients indicate that legal expense is one of the more important variables affecting bank performance.

The case studies consider three major BHCs that were merged into other banks during the crisis because of serious financial problems (Countrywide, National City and Wachovia). All three rank above the median in our sample in the ratio of the legal expense proxy to total assets in 2006; National City ranks fourth out of 83 BHCs in 2006, and among the top ten percent in

⁴ Kapner (2013) mentions four US BHCs and three European banking organizations, but does not state which large global banks are reflected in the estimates. We know of no comparable estimate for the recent expenses of litigation for smaller banks. Nocera (2012) provides an overview of the LIBOR manipulation cases.

three of the five years, 2002-2006. All three experienced a very unfavorable pattern of litigation against the bank in the pre-crisis period. In the first case, Countrywide engaged in high-risk mortgage lending before the crisis. It experienced a 36% increase in legal expense (measured by the proxy) between 2004 and 2005 and a 70% increase between 2005 and 2006, while total assets and total revenues rose only modestly. These are the largest increases of any major financial institution for which data are available. In the second case, National City, another very aggressive mortgage lender, ranks in the top tenth percentile among the sample BHCs in four of the five years 2002-06 in the ratio of the legal expense proxy to total assets. In the third case, Wachovia had weak internal controls that allowed Mexican cartels to launder drug money and telemarketers to steal hundreds of millions of dollars from customers' accounts, and many other operational risk weaknesses also revealed in litigation.⁵ These may appear to be extreme examples, but the activities at issue did boost earnings in the short run. Thus, legal expense and litigation patterns help predict three noteworthy and severe problem bank situations associated with the financial crisis.

The main policy implication of our research is that regulators can improve market discipline with respect to this form of operational risk by requiring complete and comprehensive disclosure of legal expense on publically-available bank call reports and BHC Y9 reports, and by incorporating legal expense into the Uniform Bank Performance Reports (UBPRs) for both banks and BHCs. The finance literature reveals major interest in market discipline in banking. Researchers envision an environment in which managers are strongly discouraged from taking

⁵According to complaints filed by the US Department of Justice in the cases, some of these activities began as early as 2001, and possibly earlier (see Appendix A). Wachovia settled the telemarketing case for \$178 million in 2008 (Duffy, 2008).

actions, or creating and perpetuating a corporate culture, which would be detrimental to the long-run interests of stakeholders because managerial actions would be apparent to investors. Investors should be less willing to accumulate securities, and more willing to sell securities, issued by banks with high legal risk (a form of operational risk). Market discipline should also operate through the firm's debt obligations as investors sell the firm's bonds for the same reasons and drive up the interest rate on the bonds. Importantly, banks with high legal risk may also be less able to fund themselves in the short-term money market, or do so only at higher cost. Market discipline requires that managers operate in a transparent environment. In 2002 through 2012, less than 15% of BHCs reported even one legal expense item on their Y9 reports, and in 2011 and 2012 there is *no reporting* on call reports. We show that there are *three other legal expense items that are discussed in the reporting instructions but not shown on either report*. *The three case study banks did not report any legal expense on either the call report or the Y9 report in any year from 2002 through 2007*, despite their very high legal exposure documented in this paper⁶. Hence, a comprehensive measure of total legal expense is not available to the investing public. The lack of a reporting requirement creates *unnecessary information asymmetries* since investors are not as informed as they could be about bank operational risk, no doubt leading to mispricing of bank securities. In addition, identification of operational risk at smaller, non-publicly-traded community banks would be facilitated by improved reporting.

Comprehensive and consistent publically available regulatory reporting would allow investors to make peer group comparisons, and better estimate normal levels of legal expense for banks and BHCs in different size groups. Hence, while the proxy is based on publically available data, regulatory reporting of legal expense as a separate item is strongly preferable to

⁶ See Appendix C.

use of the proxy. We provide a framework for investors to use in interpreting bank legal expense data, whether based on the proxy or on other sources.

The ethical component of corporate culture influences a banking firm's ability to create long-term value for shareholders. For example, in *Barron's* (2011) annual survey of professional money managers on the "Nation's Most Respected Companies" portfolio managers make extremely critical comments about the management of US commercial banks, especially Citigroup and Bank of America. The media has reported extensively about a large amount of litigation at both institutions. These institutions ranked 96th and 97th respectively out of 100 in the survey.

Our research contributes to the banking literature in four ways. First, we construct and analyze a new data set on bank legal expense. Second, we show that legal expense predicts future bank performance using both econometric and case study evidence. We believe that this is the first research to find a relation between legal expense and bank performance. Third, while bank operational risk is very difficult to measure, we find evidence that one measure of one form of operational risk that can be measured is bank legal expense. Fourth, we show that there are important policy implications from this relation between legal expense and performance. We suggest that bank regulators require legal expense to be reported, and we suggest that legal expense ratios be publically available to facilitate greater market discipline in banking with respect to operational risk.

This introduction is followed by Section 2 which summarizes the economics and finance literature on both corporate culture and operational risk. Section 3 develops our hypothesis concerning the relation between corporate culture, operational risk and legal expense. Section 4 presents empirical tests of the relation between bank performance and legal expense. Section 5

presents the policy implications of our research and Section 6 concludes. Appendix A presents the three case studies, Appendix B describes federal bank examiners' responsibilities with respect to bank litigation, and Appendix C analyzes regulatory reporting requirements for bank legal expense.

2. LITERATURE REVIEW

We summarize the economics and finance literature on both corporate culture and operational risk. Brickley, Smith and Zimmerman (2002) emphasize that corporate culture has an ethical component. We suggest that for banks this ethical component can be measured in part by legal expense. Other things being equal, a bank which is sued much more frequently than peer banks (especially if it is repeatedly sued for the same reasons) can be considered to have a more aggressive corporate culture than other banks. It is reasonable to posit that banks with aggressive corporate cultures have weaker systems of internal control. This gives rise to excessive operational risk, which often leads to weaker than average bank financial performance after a period of time.

a. Corporate culture

Coase (1937) views the firm as a nexus of contracts. His contractual theory of the firm is extended in Alchian and Demsetz (1972), Jensen and Meckling (1976), and Fama and Jensen (1983). A brief summary of this literature is provided in Boatright (2002; 2008). Brickley, Smith and Zimmerman (2002) build on Coase by defining organizational architecture (their term for corporate culture) as the nexus of contracts that bind an individual to an organization. They argue that organizational architecture reflects the ethical climate within a firm, and that business

ethics and organizational architecture are “inextricably linked” (p. 1822) because both reflect the incentive structure for the individuals that comprise the firm. This ethical climate reflects the way the firm deals with customers, employees and suppliers. The firm assigns decision rights and authority, develops a performance appraisal system and a reward system derived from it, and produces and enforces (or fails to enforce) a code of conduct to encourage or discourage certain types of behavior.⁷ There is an important difference between nominal and effective codes of conduct.⁸ Donaldson and Dunfee (2002) consider specific ethical issues in the provision of financial services. Several additional papers build on this literature by dealing with such issues as the value of trust both between firms and individuals and between employees at a firm (Chami and Fullenkamp, 2002; Hausman, 2002). This ethics in finance literature does not discuss litigation against a firm.

The key feature of Lazear’s (1995, p. 589) model is the growth of a common set of values and beliefs by members of the group. He views corporate culture as an attempt by the firm to change the preferences and tastes of employees in the direction desired, instead of using the price system to achieve the same goals: “The establishment of a culture generally requires an initial investment that instills a particular set of values in its workers so that they behave in the desired fashion as a natural consequence of utility maximization.” Thus, rather than starting with a

⁷ Brickley, Smith and Zimmerman (2002) note that many institutions put codes of conduct on company websites. An example for FirstBank is at www.firstbankmi.com. This bank’s code deals with personal interests vs. corporate interests, use of confidential information, record keeping, fair dealing, proper use of company assets, compliance with laws, rules and regulations, and other ethical issues.

⁸For example, Arjoon (2005) suggests that rules designed primarily to protect senior managers will produce cynicism among employees and be counterproductive to the ethical climate.

given utility function, corporate culture theory postulates that firms attempt to alter the utility function of employees. Akerloff and Kranton (2000, 2005) approach the problem differently by directly introducing identity, which they define as a person's sense of self, directly into the utility function. They view organizational culture as a way to motivate employees that is different from ordinary monetary compensation.

Cronquist, Low and Nilsson (2007, 2009) study the effect of corporate culture on firm financial policies. They point out that Lemmon, Roberts and Zender (2008) attribute 90% of the explained variation in capital structure across firms to firm-specific effects; standard models, in contrast, account for only six percent. Thus, they argue the notion that *corporate culture matters in finance* is compelling. Cronquist, Low and Nilsson (2007) contrast conservative corporate cultures, such as Morgan Stanley, with aggressive ones, such as Citigroup. They also point out that corporate culture encompasses the extent to which individuals identify with the organization and adopt its goals as their own, thus internalizing the culture.

Cronqvist, Low and Nilsson (2007, p. 1) suggest that “firms preserve their cultures by selecting managers who fit into their cultures.” In a set of firm spinoffs over 1980-2005, they compare a broad range of financial policies and the performance of the parent and spinoff operating separately. Similarities between parent and spinoff across investment, financial and operating decisions, as well as profitability, are remarkable, and they are long term. These similarities are stronger in firms that have grown internally and in older firms, which is consistent with corporate culture theory. They attribute their results to a set of shared norms and beliefs that are inherited, possibly from the firm's founder. This study provides further important empirical support for the notion that corporate culture matters in finance. For example, in

Appendix A we note that the founder of Countrywide had a strong influence on that firm's aggressive approach to mortgage lending before the financial crisis.

In his Presidential Address to the American Economic Association, Akerloff (2007) discusses norms: "According to Pareto, people typically have opinions as to how they *should*, or how they *should not*, behave. They also have views regarding how others *should*, or *should not*, behave. Such views are called norms, and they may be individual as well as social. The role of norms can be easily represented in people's preferences by modifying the utility function to include losses in utility insofar as they, or others, fail to live up to their standards" (Akerloff, 2007, p. 8, emphasis in the original).

Individuals may lose utility if they do not conform to the prevailing norms of the organization (Akerloff and Kranton, 2000, 2005). Corporate culture is thus partially self-selecting; employees who don't fit will feel adrift and seek employment elsewhere. Lazear (1995) also suggests that employees are selected from a population on the basis of their fit with the firm's culture. Cronqvist, Low and Nilsson (2007) cite a *Wall Street Journal* article reporting that "fit" is one of the most important factors corporate recruiters consider. This is also consistent with Van den Steen (2005) who develops a theoretical model in which a strong belief by a corporate manager causes a sorting effect in the labor market that aligns the beliefs of employees with those of the manager.

Banking practitioners and bank management textbooks recognize the significance of corporate culture. For example, Hall (2012) estimates based on his bank consulting experience that only 10% of banks have a culture characterized by good internal communication and people from different departments working effectively together to meet organizational goals. He argues that a weak operating culture evidenced by disputes among departments and individuals is one of

the most serious risks at banks. His urgings that “the board of directors and senior management must come together to define the values and characteristics the bank intends to operate under” and “values need to be integrated with shared beliefs” echoes this academic literature. Koch and MacDonald (2010, pp. 556-558) discuss the differences between a “values-driven” credit culture and a “current-profit-driven” credit culture. The first is marked by concern for loan quality, bank soundness, stability and consistency. The second is characterized by a focus on short-term earnings, and a high tolerance for risk.

b. Operational Risk.

The definition of operational risk used by regulators and financial institutions is “the risk of loss from inadequate or failed internal processes, *people* and systems, or from external events” (Robertson, 2011, p. 1, emphasis added).⁹ Robertson shows that the due diligence failures that led to the financial crisis are a form of operational risk. Importantly, he sees the entire crisis as “born of operational risk” (p. 4) because people behaved badly and internal controls that should have prevented failures in both lending and securitization were not in place. Securitization transmitted operational risk from one institution to another. “An operational risk in the mortgage industry that is probably as old as mortgages themselves – mortgage fraud – exposed operational failures by mortgage originators, mortgage bundlers, credit-rating agencies, asset managers, investors, and ultimately regulatory agencies” (p. 2). These linkages created a domino effect throughout the international financial system when the quality of the subprime loans came into question. His analysis demonstrates that the financial crisis has highlighted the importance of effective operational risk management.

⁹ This definition is the one used by the Basel Committee on Bank Supervision (2006).

Mian and Sufi (2009, 2010) analyze individual zip code data on mortgage originations and household income for the pre-crisis period. They report:

Zip codes that see the largest increase in home purchase mortgage originations from 2002 to 2005 experienced relative declines in income... In fact, the evidence is even more extreme. From 2002 through 2005 the negative income growth zip codes witnesses a growth in mortgage originations that was almost twice as large as in the positive income growth zip codes! (Mian and Sufi, 2010, p. 2).

They find that “2002 through 2005 is the only period in the past eighteen years in which income growth and mortgage credit growth are negatively correlated” (Mian and Sufi, 2009, p. 1449). The explosion of mortgage credit in low and moderate income areas, and especially in areas where income is actually declining, relative to more affluent and positive income growth areas, highlights the lack of due diligence by some mortgage lenders in the pre-crisis period. (Moosa (2007) points out the close relation between operational risk and credit risk. Persistent failure to have in place or to follow good procedures for evaluating credit is a form of operational risk.)

The weakness in due diligence and internal control described in the Countrywide and National City cases in Appendix A reflect this type of operational risk. In a comprehensive pre-crisis literature summary on operational risk, Moosa (2007) points out that this issue has attracted much more attention because of “greater dependence on technology, more intensive competition, and globalization” as well as “the emergence of new products and business lines” (p. 167). He emphasizes that defining operational risk is controversial, but regardless of the definition, the major reason operational risk has increased substantially in recent years is rapid technological change. He shows that a major bank is as likely, or perhaps more likely, to fail from operational risk than from credit risk or market risk. Moosa’s analysis confirms that our emphasis on corporate culture is appropriate. He mentions “groupthink” as a cause of

operational risk; this is clearly a corporate culture argument. He cites Rao and Dev (2006) who argue that operational risk is much more under the control of management than credit or market risk and “depends strongly on the culture of the business units” (p. 173). For example, the classic operational risk case is the failure of Barings Bank in 1995. In Barings, a single trader created a \$1.3 billion loss that brought down a very large institution, partly because appropriate policies were not in place and supervision was inadequate. As noted, a failure to adhere to standard banking procedures and to maintain a strong system of internal control is a common cause of operational risk losses.¹⁰

The argument in the present paper that operational risk reflects the corporate culture and these causes are thus internal to the firm is also consistent with Chernobai, Jorion and Yu (2011). They analyze a large database of operational risk events involving US financial institutions from 1980 to 2005. They conclude “currently, a large number of banks treat operational losses as independent events.” However, “the evidence suggests that many factors internal to the firm contribute to the occurrence of operational risk events of all types. This implies that the common assumption of independence of events within the firm may be seriously flawed, and that internal

¹⁰Two recent examples involving large banks further illustrate the relation between operational risk and bank litigation. Federal regulators and the US Justice Department decided not to indict HSBC for money laundering and illegal transfers involving Iran and terrorist groups because criminal prosecution might cause the bank to lose its US charter and cut the bank off from investors. The loss of a major bank was also considered a potential threat to the global financial system and the fragile US economic recovery. The bank entered into a deferred prosecution agreement with the Justice Department for violations *dating back to 2001* (US Department of Justice, 2012; United States of America against HSBC Bank USA, N.A. and HSBC Holdings PLC, 2012; Silver-Greenberg, 2012). Six months later, court documents were released revealing that the 140-year-old Zions Bank of Utah had facilitated fraudulent internet money transfers, and benefited substantially from this activity (Silver-Greenberg, 2013).

measures of operational risk capital are understated” (p. 1,719). They also report, consistent with our argument in this paper, that “most operational losses can be traced to a breakdown in internal control” (p. 1683).

The sample used by Chernobai, Jorion and Yu (2011) involves 925 publically reported operational risk events involving 176 US financial institutions from 1980 to 2005. They report the largest operational risk events in an appendix table. They place these events into the following six categories: “Internal Fraud....External Fraud... Employment Practices and Workplace Safety...Clients, Products and Business Practices....Business Disruption and System Failures.... Execution, Delivery and Process Management” (pp. 1720-21). There are a total of 17 large events that (by our analysis) may be under the control of management. (We exclude a seventh category, events related to the terrorist attacks of September 11, 2001 (entitled “Damage to Physical Assets” in their paper) from the events analyzed here.) Seven of the 17 events involve insurance companies, which are outside the scope of the present study, and one involves a 1982 allegation of fraud during the savings and loan crisis. Hence, there are nine other operational risk events involving depository financial institutions or subsidiaries of BHCs. Two of these nine operational risk events involve Citigroup, two involve Bank of America, one involves Washington Mutual, and one involves JPMorgan Chase. Washington Mutual experienced serious financial problems and was merged into another institution during the financial crisis. JP Morgan Chase continues to experience significant operational risk problems (e.g., Langley and Fitzpatrick, 2013). Some examples of the nine large operational risk events are large settlements for allegedly aiding and abetting Enron financial fraud (Citigroup), the payment of fraudulent medical claims by Travelers, an insurance subsidiary of Citigroup, and questionable lending practices (Fleet Financial, now part of Bank of America). Most of the

major operational risk events identified by Chernobai, Jorion and Yu resulted in litigation. (They do not identify any other individual operational risk events in addition to those discussed here.)

3. HYPOTHESIS DEVELOPMENT AND THE REGRESSION MODEL

a. *Hypothesis Development*

The ethical climate in a bank (ECLIMATE) depends on the incentive system within the organization (INCENTIVES), the character of the managers (CHARACTER), the quality of corporate governance (GOVERNANCE), the nominal code of conduct (NOMCODE), the effective code of conduct (i.e., how managers actually behave, EFFCODE) and the difference between the two (CODEDIFF).¹¹

$$\text{ECLIMATE} = f(\text{INCENTIVES}, \text{CHARACTER}, \text{GOVERNANCE}, \text{NOMCODE}, \text{EFFCODE}, \text{CODEDIFF}) \quad (1)$$

Excessive legal expense (LEGAL EXPENSE) reflects the ethical climate. Banks that are sued more frequently than others often have weaknesses in systems of internal control which allow one person or a group of people to perpetuate irregularities.¹² In some cases the entire institution

¹¹CODEDIFF is discussed in Arjoon (2005). He suggests that rules designed primarily to protect senior managers will produce cynicism among employees and be counterproductive to the ethical climate.

¹²For example, lender liability lawsuits arise in situations in which a loan officer is able to put an unsuitable loan on the bank's books (reflecting a lack of internal control), or fails to take the proper steps to document the loan and/or perfect the bank's security interest in the collateral. Other lender liability lawsuits arise when a loan officer calls a loan or thwarts a borrower's attempt to use a line of credit that the bank is contractually obligated to honor. Budnitz (2006) and McNulty (2008) contain numerous examples.

is focused on maximizing lending volume; the quality of the loans becomes a secondary consideration. Legal expense also reflects other bank characteristics. For example, banks involved in mergers may have higher legal expense than other banks. The regulatory environment is different for national banks than for state chartered banks, and it also differs among the states. The regulatory environment may affect LEGAL EXPENSE directly or through its influence on the code of conduct. Banks with strong systems of internal control and well-developed policies and procedures should have less legal expense. Banks that deal with issues ethically as they arise (possibly through timely settlements) rather than pushing problems into the future through unnecessary litigation will also have less legal expense. Thus,

$$\text{LEGAL EXPENSE} = g(\text{ECLIMATE}, \text{MERGER}, \text{OTHER}). \quad (2)$$

Litigation pushes problems into the future. *In the short run, it may be cheaper to prolong litigation on a large operational risk problem than to resolve it in a timely manner.* To consider a not-completely-hypothetical example, if a bank has a major deposit fraud or money laundering case with anticipated settlement costs of \$150 million to \$200 million, and the annual costs of litigation are, say \$1 million per year, it is much cheaper to litigate in the short run.¹³ In addition, new senior managers are often in place when the full costs of the litigation are realized as the case is resolved. *This approach – focusing only on the effect of litigation on current earnings rather than on the long term value of the firm – can become part of the corporate culture.*

We now integrate the above reasoning to summarize the logic behind our hypothesis. Our literature review suggests that institutions have a corporate culture (e.g., Lazear, 1995; Akerloff and Kranton, 2000, 2005), that corporate culture affects a firm's approach to finance

¹³ See footnote 5.

(Cronqvist, Low and Nilsson, 2007; Lemmon, Roberts and Zender, 2008), and that corporate culture has an ethical component (e.g., Brickley, Smith and Zimmerman, 2002). Chernobai, Jorion and Yu (2011) find that operational risk is internal to the firm. *While they do not introduce corporate culture into their analysis, it is very reasonable to assume that operational risk is internal because different firms have different corporate cultures.*¹⁴ In this context, we note that some banks have boards of directors, CEOs, and senior management teams that are more risk averse than other banks, and that in all organizations senior managers set the direction for other managers. Specifically, we suggest that banks with aggressive corporate cultures are more likely to have weak systems of internal control and other deficiencies that eventually result in above average operational risk and higher legal expense. Some examples are the due diligence failures that preceded the financial crisis (e.g., Robertson, 2011). Aggressive corporate cultures are a matter of concern in banking because the deposit insurance put option creates an incentive for increased risk taking (e.g., Merton, 1977, 1978). Most of the major operational risk events identified by Chernobai, Jorion and Yu (2011) resulted in litigation. Since excessive litigation is a reflection of managerial weakness, if legal expense is high, bank financial performance should deteriorate *after a period of time*.

Table 1 formally presents the reasoning behind our hypothesis. The table describes two hypothetical corporate cultures, and the relation between corporate culture, operational risk and legal expense. The conservative corporate culture is characterized by strong internal controls, an emphasis on credit quality, and low operational risk. This culture results in low legal expense

¹⁴Speaking of operational risk events, Chernobai, Jorion and Yu report that “most events can be characterized as consequences of a weak internal control environment” (p. 1685) and that “these sample statistics show that many firms with operational risk events are repeat offenders” (p. 1693).

and stronger financial performance over time. The aggressive corporate culture is characterized by weaker internal controls, higher levels of operational risk and weaker financial performance after a period of time. There are possibly as many corporate cultures in banking as there are banks; *the table describes tendencies, not absolute differences*. These distinctions are necessary for model development. We posit that there is a lag between excessive legal expense and bank performance. In the short run, aggressive and risky behavior may bolster bank earnings. Complex bank litigation often goes on for many years. The full extent of managerial weaknesses (such as deficiencies in the system of internal control) are often evident only when the litigation is resolved, which may be many years later, often when new managers are in place. Eventually, these managerial weaknesses are also reflected in deteriorating bank performance (PERFORM).

Hence, based on the above reasoning, we posit the following relation as the basis of our empirical analysis:

$$\text{PERFORM}_t = h(\text{LEGAL EXPENSE}_{t-1}, \text{CONTROLS}_{t-1}) \quad (3)$$

PERFORM_t is bank financial performance in period t, which we measure by both credit quality and stock returns. LEGALEXP_{t-1} is our legal expense proxy (lagged)¹⁵ and CONTROLS_{t-1} represents a vector of lagged control variables to be described below. We state equation (3) as a one-period lagged relation for convenience of exposition. It is the nature of the banking business that the lag is *long and variable*, and hence virtually impossible to identify *a priori*. In our empirical analysis we do not impose any lag structure on the data. In order to take maximum advantage of the limited available data on the legal expense proxy, we do not average the data;

¹⁵We state the hypothesis in terms of “excessive” legal expense. The regression procedure considers which banks have higher expense than other banks. Of course, all banks have some normal legal expense associated with drafting loan documents, pursuing collections, defending some lawsuits, and other factors.

instead we include the data for each BHC separately for each year. To be consistent, we follow this procedure for the other independent variables as well. *Hence, the hypothesis we test in our regression analysis is that a higher legal expense proxy in any year from 2002 to 2006 is associated with weaker financial performance in 2007 and 2008.* We measure financial performance (PERFORM) by both credit quality (loan losses) and stock returns. We expect a negative relation between LEGALEXP02-06 and stock returns for 2007-08, we expect a positive relation between LEGALEXP02-06 and the three loan loss measures for 2007-08.

b. Regression Equations

Based on the above reasoning, we estimate two regression equations:

$$\begin{aligned} \text{LOAN LOSSES08} = f(\text{LEGALEXP02-06}, \text{ASSETS02-06}, \text{FINHOLDCO02-06}, \\ \text{HHI02-06} * \text{LOCATION02-06}, \text{MARKET/BOOK02-06}, \text{MERGER02-06}, \text{ROE02-06}). \end{aligned} \quad (4)$$

$$\begin{aligned} \text{RETURNS07-08} = g(\text{LEGALEXP02-06}, \text{NON-PERFORMING LOANS/ASSET02-06}, \\ \text{ASSETS02-06}, \text{MARKET/BOOK02-06}, \text{ROE02-06}, \text{HHI02-06} * \text{LOCATION02-06}, \\ \text{FINHOLDCO02-06}, \text{MERGER02-06}). \end{aligned} \quad (5)$$

The dependent variables are:

- LOAN LOSSES08 = three measures of credit quality for 2008 relative to end-of period assets for the same year: LOAN CHARGE-OFFS/ASSETS08, LOAN LOSS PROVISIONS/ASSETS08, and NON-PERFORMING LOANS/ASSETS08. We also run the regressions using the same loan quality data for 2007.

- RETURNS07-08 = abnormal-buy-and-hold returns (ABHR07-08, the difference between bank buy-and-hold returns and market-buy-and-hold returns), and buy-and-hold returns (BHR07-08). Both are measured from January 1, 2007 to December 31, 2008.

The explanatory variables are:

- LEGALEXP02-06 = our legal expense proxy/assets;
- ASSETS02-06 = the natural logarithm of total assets for 2002 through 2006;
- FINHOLDCO02-06 = an indicator variable equal to one for a BHC that is a financial holding company, and zero otherwise;
- HHI02-06 = the sum of the squared market shares, a measure of local market concentration;
- LOCATION02-06 = an indicator variable equal to one for banks that are located in the Midwest and Northeast regions of the US, and zero otherwise;
- MARKET/BOOK02-06 = the market value of total BHC assets divided by their book value for 2002 through 2006;
- MERGER02-06 = an indicator variable equal to 1 for BHCs that were involved in mergers and acquisitions in the 2002 - 2006 period, and zero otherwise;
- NON-PERFORMING LOANS/ASSETS02-06 = non-performing loans/assets for 2002 through 2006;
- ROE02-06 = the ratio of net income to the book value of equity for 2002 through 2006.

ASSETS02-06 and MARKET/BOOK02-06 are the Fama-French (1993) factors commonly used to analyze stock returns. *The non-performing loan variables are not the same.* NON-PERFORMING LOANS/ASSETS02-06 is an explanatory variable in equation (5) while

NON PERFORMING LOANS/ASSETS07-08 is one of the three dependent variables in equation (4).

c. Rationale for control variables and other econometric issues

The reasons for including the control variables in equations (4) and (5) are as follows: ASSETS02-06 is included because banks of different sizes often have different lending strategies; these may produce a different loan loss experience and different stock returns. ASSETS02-06 is also a Fama-French factor. We include the Fama-French (1993) variables, ASSETS02-06 and MARKET/BOOK02-06 in equation (4) to be consistent with equation (5). BHCs that formed a financial holding company (FINHOLDCO02-06) after passage of the Gramm-Leach Bliley Act in 1999 may also have a more aggressive business strategy.

HHI02-06*LOCATION02-06, an interaction term, is included because, as discussed below, the HHI is one of the most important variables affecting bank financial performance in many studies. LOCATION02-06 is included because banks in the slower-growing Northeast and Midwest regions may have different lending strategies due to the nature of their market areas. The megabanks in the Northeast were also heavily involved in securitizing subprime mortgage loans; investors in many of these securities experienced large losses in 2007 and 2008. We use an interaction term for these two variables because they both measure the characteristics of the market that the bank competes in. MERGER02-06 is included because banks involved in a merger or acquisition may have a different loan loss experience than other banks. More importantly, they would have higher legal and accounting expenses as a result of the merger. Data on accounting expense is included in our legal expense proxy, so we need to control for the higher proxy that would be reported by a BHC involved in one or more mergers. (As described below, the proxy is the item generally entitled “professional expense” in the 10K reports.)

ROE02-06 is included because banks may be highly profitable in one period because of an aggressive lending strategy that may produce losses or lower profits in later periods. These control variables are similar to those used to analyze bank performance and risk in other studies (e.g., Berger and DeYoung (1997); Berger and Mester (1997); Akhigbe and Martin, 2008; Peni and Vahamaa, 2012).

We include ASSETS02-06, HHI02-06*LOCATION02-06, MARKET/BOOK02-06, and ROE02-06 in Equation (5) for the same reasons these variables were included in equation (4). We include NON-PERFORMING LOANS02-06 in equation (5) because loan losses should have a negative impact on stock returns.

Ordinary least squares (OLS) is the appropriate regression procedure for these data since we are predicting out of sample. As noted, the hypothesis we are testing is that high legal expense *in any year* from 2002 through 2006 is associated with weaker financial performance in 2007 and 2008.

There may appear to be simultaneous equation bias in these relations. For example, we posit that nonperforming loans depends on legal expense because legal expense is one measure of the corporate culture and system of internal control. However, legal expense depends on nonperforming loans because the expenses of collection often involve legal fees. However, the model is a lagged relationship, as described above, which substantially reduces this problem. The lags are long and variable and can be up to six years (2002 to 2008). As noted, the model is *not* based on an accounting relationship.

4. DATA AND RESULTS

We draw our data from four sources:

Legal expense. We examine annual 10K reports for over 150 BHCs for 2002-06, the period prior to the financial crisis. We are able to hand collect usable data on the legal expense proxy for 102 institutions. Only 83 of these institutions have stock return data available from CRSP¹⁶.

As shown in Table 2, we identify two accounting models used to report non-interest expense in BHC 10K reports. Accounting Model 1, described in Ryan (2007), has six categories under total non-interest expense: personnel; occupancy; technology and communications; deposit insurance; advertising; and other. “Other” expense includes an extremely large number of items in addition to legal expense. Ryan reports that this format meets all accounting and disclosure requirements. Citigroup is one example of a BHC producing a 10K report using Accounting

¹⁶We begin with a list of the top 150 BHCs for 2006 from the *American Banker*. We add as many smaller BHCs with annual 10K reports as we can find, and we also search for 10K reports for earlier years. There are many additional, generally small, BHCs in the industry, but these institutions do not have stock return data on CRSP, and/or they do not publish a 10K report showing the legal expense proxy. These two factors limit our sample to 83 institutions.

One could speculate that the sample may have a reporting bias if BHCs that have high legal expense systematically choose Accounting Model 1 where legal expense is combined with a large number of other items. The best evidence we have on this point is that *the three BHCs with high legal expense* discussed in the case studies in the appendix *all use Accounting Model 2, with its more detailed reporting*. Hence reporting bias does not appear to be a serious problem. Because of the lack of more detailed reporting by some institutions, it is impossible to test this hypothesis; there are no data. Nonetheless, if this *were* an accurate description of actual BHC reporting patterns (i.e., if separate legal expense data were suppressed at some institutions, perhaps to hide operational risk from investors and regulators), it would support the argument made here for considering legal expense transparency.

Model 1. Peer analysis of “other expense” from this accounting model would be meaningless. For institutions following this model, legal expense cannot be analyzed, even approximately. We exclude all BHCs following Accounting Model 1 from our analysis. There are 102 institutions following Accounting Model 1. Of these institutions, 83 have stock returns data available from CRSP.

Accounting Model 2 has more detail; the banks we include in our sample all follow Accounting Model 2 in their 10K reports. The BHCs we include in the regressions and in the rankings are the 83 institutions that have data available from CRSP to compute stock returns and also report a separate item under non-interest expense generally entitled “professional fees.” This is the legal expense proxy. Table 3 provides more detail on how the 83 BHCs using Accounting Model 2 report legal expense. This table shows that there is a high degree of reporting consistency among the 83 BHCs; most use the same or very similar terminology. Considering the point that many BHCs also use the same accounting firms, these data can be used for both the regression analysis and the case study rankings with assurance that the same or very similar items are being reported across the sample. It is clear from the descriptions in Table 3 that the data include payments to law firms *in all cases*. This expense measures the first step in the litigation process, and these payments to attorneys would be an ongoing expense until the matter is resolved.

A Note on Legal Settlements. Settlements are reported separately in the 10K reports and hence are not included in the proxy. There is very little discussion of settlements in the 10K reports for 2002-2006. Of course, settlements are a key feature of the post-crisis environment. One example of how settlements are reported comes from Bank of America’s (BAC) 2014 10Q report, which contains some of the same information as the annual 10K. This is well outside the

sample period, but it illustrates reporting practices at one large BHC. The report states “noninterest expense increased ...\$5.3 billion to \$40.8 billion for the...six months ended June 30, 2014 compared to the same period in 2013, primarily driven by higher *other general operating expense*. These increases in other general operating expense reflected increases in litigation expense, primarily related to previously disclosed legacy mortgage-related matters, of ...\$7.3 billion to \$10.0 billion for the six months ended June 30, 2014 compared to the same period in 2013...” (emphasis added). Hence, for BAC, settlements are included in other general operating expense (see Table 2). This is the second largest item in total noninterest expense, and is almost as large as personnel expense (\$14.6 billion for other general noninterest expense vs. \$18.1 billion for personnel expense. As noted, the litigation expense item is stated as a broad range (\$7.3 billion to \$10 billion) rather than as a precise figure, even though a precise figure would have to be available for accountants to compile a total for other general operating expense.

Accounting rules state that settlements are not to be reported as an expense unless the amounts can be estimated. If there is a potentially large settlement, but the amount cannot be estimated, BHCs are not to report it as an expense in the current period.¹⁷ However, in the case of BAC the amounts are expensed and included in other general operating expense.

Financial Crisis Buy and Hold Returns. We use simple buy-and-hold returns (BHR07-08) and abnormal returns (ABHR07-08, as defined above) as additional measures of bank

¹⁷ For example, Bank of America’s 2013 10K report states: “In accordance with SFAS No. 5, “Accounting for Contingencies, the Corporation establishes reserves for litigation and regulatory matters when those matters present loss contingencies that are both predictable and estimable. When loss contingencies are not both probable and estimable, the Corporation does not establish reserves.” (p. 128). Establishing a reserve requires reporting a charge for anticipated losses as an expense.

performance during the 2007-09 financial crisis. We measure stock returns for the two-year period ending December 31, 2008.

BHC Balance Sheet and Income Statement Data. Data for non-performing loans, assets, book value, net income, location, and financial holding company come from the Federal Reserve Bank of Chicago's BHC database.

Mergers and Acquisitions. We use Lexis/Nexis to identify those BHCs that were involved in a merger or acquisition during the sample period 2002-06.

5. DESCRIPTIVE STATISTICS AND REGRESSION RESULTS

Table 4 shows the descriptive statistics for the sample. Abnormal buy-and-hold returns for 2007-08 (ABHR07-08) average -5.11% and range from -82.66% to +79.99%. Simple Unadjusted BHRs (BHR07-08) average -43.57% and range from -96.12% to +39.99%. The other data are for 2002 to 2006. Our legal expense proxy/total assets (LEGALEXP02-06) averages 0.13% and ranges from zero (rounded) to 0.77%¹⁸. Since the median (0.11%) is fairly close to the mean, the data have some of characteristics of a normal distribution.¹⁹ The ratio

¹⁸Legal and professional expense of 0.77% is clearly high relative to the mean of 0.13%. By way of comparison, return on assets (ROA) for all US banks during the period 2002 through 2006 ranged from 1.28% to 1.38% (Federal Deposit Insurance Corporation, 2007). To illustrate that the difference between 0.13% and 0.77% is an economically significant difference, assume that a bank had a legal expense proxy 0.50% (or even 0.25%) higher than necessary. This would clearly cause a significant reduction in that bank's ROA. However, in our analysis, the main link is *not an accounting relationship*. As illustrated in Table 1, *the hypothesized link is behavioral* (high litigation expense reflects managerial weaknesses) and the hypothesized relation is lagged.

¹⁹As shown in Table 4, the standard deviation of legal expense/assets is also 0.0011. The difference between the mean (0.0013) and the median (0.0011) is 0.0002. Thus, the median is 0.18 (.0002/.0011) standard deviations from

NON-PERFORMING LOANS/ASSETS02-06 averages 0.59% and ranges from zero to 5.71%. Total ASSETS of the BHCs average \$56.2 billion. The BHCs range in size from \$269 million to almost \$1.5 trillion. MARKET/BOOK02-06 averages 266% and ranges from 108% to 1,030%. Return on equity averages 18.62% and ranges from -43.78% to +47.66%. 55.88% of the BHCs are located in the Northeast and Midwest Census regions. 38.23% of the BHCs are part of a financial holding company and 83.09% were involved in a merger or acquisition during the sample period.

We show the results of estimating equation (4) in Table 5. These results show that the legal expense proxy for 2002-06 predicts *all three measures* of loan quality for 2008 with statistical significance at the one percent level in one equation (non-performing loans) and the five percent level in the other two. We also run the same regression equations using all three 2007 credit quality measures and obtain similar results. (These results are not shown here to conserve space.) There are *no contemporaneous variables* in these regression equations. Thus, the point that our legal expense proxy predicts all three measures of loan quality both one and two years ahead demonstrates empirically the important relation between bank legal expense and future bank performance.

the mean. The data are distributed as follows: 25th percentile: 0.0007; median: 0.0011; 75th percentile: 0.0016; 90th percentile: 0.0023. The maximum is 0.0077, indicating that there are a few outliers in the data. Table 6 indicates that one of the case study banks (National City) ranks fourth out of the 83 institutions in the sample for 2006 with a ratio of 0.0020. Thus, in 2006 NCC ranks between the 75th and 90th percentile for the entire distribution. (There are 408 individual bank-year observations. There would be 415 (83 times 5) individual bank-year observations if every BHC reported in every year.)

The control variable, ASSETS02-06, is positive and significant at the one percent level in all three equations, indicating that larger banks had higher loan losses in 2007 and 2008. ROE is positive and significant in the first two equations. This result reflects a risk-return tradeoff – on average banks that were more profitable in the pre-crisis period (reflecting greater risk in some cases) experienced higher loan losses during the crisis. These two results taken together almost certainly reflect more aggressive lending strategies by some banks (especially larger banks) in the pre-crisis period. The HHI02-06*LOCATION02-06 interaction term is positive and significant in the first two equations. Thus, banks headquartered in the Northeast and Midwest had higher loan losses than those in the South and West census regions. Some of these banks are the larger banks headquartered in the Northeast that were heavily involved in securitizing mortgage loans; some of these mortgage-backed securities later created very large losses for the institutions involved. MARKET/BOOK02-06 is positive and significant in the first two equations, but at a lower level of significance than the abovementioned variables.

We also computed standardized regression coefficients which are shown in the second column of Table 5. The standardized coefficients measure the effect on the dependent variable of a one standard deviation change in each explanatory variable. By ranking the variables in terms of the absolute value of the standardized regression coefficients, we can compare the economic significance of each of the explanatory variables. (We use the absolute value because the direction of the effect is not relevant in analyzing economic significance; positive and negative coefficients of the same size indicate the same level of economic significance.) ASSETS02-06 has the largest standardized coefficient in all three regressions. LEGALEXP02-06 ranks fifth out of eight variables in both the NON-PERFORMING LOANS/ASSETS08 equation and the LOAN CHARGE-OFFS/ASSETS08 equation, and third

out of eight variables in the LOAN-LOSS PROVISIONS/ASSETS08 equation. Several of the coefficients that are ranked higher than LEGALEXP02-06 in the first two equations, ASSETS02-06, MARKET/BOOK02-06, ROE02-06 and HHI02-06*LOCATION02-06) are not generally under the direct control of management. In contrast, legal expense ranks as a very important variable affecting credit quality that management can influence. (As noted throughout this paper, legal expense partly reflects the efforts management has made to establish a good system of internal control, ensure adherence to well-established policies and procedures, and to establish the proper culture within the organization.) Importantly, the effect of the legal expense variable is more than half the effect of ROE02-06 in all three regressions. In the third regression it has an effect that is 79% of the effect of ROE (0.1127 for LITEXP02-06 vs. 0.1431 for ROE02-06). Clearly, *legal expense has economic significance* in predicting bank credit quality. We return to the issue of economic significance below.

The results of estimating equation (5) are shown in Table 6. Legal expense predicts two additional measures of bank performance with high statistical significance. In the first regression, which uses buy-and-hold returns for 2007-08 as the dependent variable, LEGALEXP02-06 is significant at the one percent level. In the second regression, which uses abnormal buy-and-hold returns for 2007-08 as the dependent variable, LEGALEXP02-06 is significant at the five percent level. It has the expected negative sign in both equations – higher legal expense in the pre-crisis period is associated with lower stock returns. ASSETS02-06 is negative and significant at the one percent level in both equations. Thus, as in the previous set of results, smaller banks perform better — these banks have higher stock returns during the 2007-

08 financial crisis period²⁰. ROE02-06 is positive and significant at the one percent level. This indicates that BHCs with a higher ROE in 2002-06 also had higher returns during the crisis by both measures. BHCs that formed a financial holding company also had higher returns by both measures with significance at the one percent level. Banks with higher levels of non-performing loans in 2002-06 actually had higher stock returns in 2007-08. In interpreting this result, we note that non-performing loans in 2002-06 were modest, with a mean value of 0.59% of assets and a median of 0.42% (Table 4). Therefore, the sign of this coefficient should not be overemphasized.

In the rankings of the standardized coefficients in Table 6, LEGALEXP02-06 ranks fourth out of eight variables. It ranks higher than NON-PERFORMING LOANS02-06, MARKET/BOOK02-06, the HHI02-06*LOCATION02-06 interaction term, and MERGER02-06. Its effect in the first equation is over 40% of the effect of ROE (0.1328 for LITEXP02-06 vs. 0.2912 for ROE). Its effect in the second regression is also about 40% of the effect of ROE (0.1915 for LITEXP02-06 vs. 0.4968 for ROE.) Again, legal expense clearly has economic significance. These results are especially noteworthy because LEGALEXP02-06 contains variables other than legal expense.

A large number of both theoretical and empirical studies have found local market concentration (usually measured by the HHI) to be a very important determinant of bank performance (e.g., Berger and Hannan, 1989; Hannan, 1991; DeYoung and Hassan 1998; Akhigbe and McNulty, 2003; Hannan and Prager, 2004). The point that the standardized regression coefficient of our legal expense proxy is actually higher than that of

²⁰Throughout the text we refer to the 2007-09 financial crisis. The end of the recession that is associated with the crisis is considered to be March 2009. We measure stock returns through December 2008.

HHI06*LOCATION02-06 in a number of the regressions further demonstrates the importance of legal expense in the analysis of bank performance.

In summary, LEGALEXP02-06 is significant at the one percent level in three of the five equations, and it is significant at the five percent level in the other two equations. It has high economic significance, generally at least 40% of the effect of return on equity, and 79% of the effect of ROE in one regression. It also compares favorably to the HHI interaction term. It is important to note that even after controlling for factors reflecting more aggressive strategies (e.g., non-performing loans in the second equation), the legal expense proxy predicts stock returns with high statistical significance. The case study results described in Appendix A provide additional evidence supporting the hypothesis that legal expense (and litigation patterns) predicts future bank financial performance.

6. POLICY IMPLICATIONS: MARKET DISCIPLINE AND OPERATIONAL RISK

Bank regulators have long recognized the importance of operational risk; such risk was incorporated into proposed Basel II capital standards as early as 2004. It is the nature of operational risk that it almost never appears in precisely the same form twice. In a comprehensive literature survey, Moosa (2007) notes “it would be rather difficult to argue against the proposition that diversity is indeed a distinguishing characteristic of operational risk” (p. 172). As a result, operational risk is difficult to measure and even more difficult to predict. Hence, there is an ongoing need for new approaches to identifying banks with excessive operational risk of all types. Excessive litigation against a bank is one indicator of one type of operational risk. Excessive litigation reflects weaknesses in the system of internal control, which could manifest itself in inadequate policies and procedures, a lack of proper training for

employees, overlapping or unclear lines of authority, an aggressive lending strategy, opportunistic treatment of borrowers, or other weaknesses. One indicator of weaknesses in internal control is legal expense significantly above the norm for that asset size and hence significantly above peer institutions. Because many banks are currently not required to report legal expense separately on call reports and BHC Y9 reports, managers can mislead investors and regulators about the extent of their operational risk in the short run.

We suggest that excessive operational risk can be mitigated by market discipline. There is significant interest in market discipline in banking among both academics and bank regulators. With market discipline, managers are discouraged from taking actions, or creating and perpetuating a corporate culture, detrimental to the long-run interests of stakeholders because the results of managerial actions are transparent. Some investors who are made aware of such actions and/or cultures would be unwilling to accumulate additional shares of the company's stock and may sell some or all of the shares they own. Market discipline should also work through the firm's debt obligations as investors sell the firm's bonds for the same reasons and drive up the interest rate on the bonds. Importantly, banks with operational risk problems may also be less able to fund themselves in the short-term money market, or be able to do so only at higher cost. The resulting decline in securities prices and the possible higher cost of short-term funding would induce managers and directors to take action to correct the operational risk issues that gave rise to the high legal expense. Market discipline requires that managers operate in a transparent environment where they cannot hide their actions, and the results of their actions, from investors and securities analysts.

To facilitate such market discipline with respect to weak systems of internal control, regulators should consider requiring complete, consistent, and comprehensive reporting of bank

legal expense on both bank call reports and BHC Y9 reports. The ratios of total legal expense to assets and total legal expense to revenue could then be incorporated into the Uniform Bank Performance Reports (UBPRs) for both banks and BHCs. The UBPR shows what percentile the institution is in for several hundred financial ratios relative to peer institutions. Since these four reports (the two financial reports and the two corresponding UBPRs) are publically available to investors, such reporting and disclosure would facilitate greater market discipline in banking with respect to this type of operational risk. Institutions that are consistently in the top percentiles for both ratios would be easily identified; securities analysts and investors could begin to carefully research the causes of the excessive litigation, if necessary by examining individual cases to see if there is a pattern that reflects weaknesses in internal control. This operational-risk-related market discipline would improve the functioning of bank securities markets and enhance overall economic welfare. It would also improve the bank regulatory process by providing additional incentives for managers and directors to improve their internal operations and systems of internal control without direct pressure from regulators.

In Appendix C we show that in the 2002-2012 period less than 15% of BHCs reported even one legal expense item on their Y9 reports, and there is no reporting on call reports. We also show that there are *three additional legal expense items that are apparently not reported publically at all. The three case study banks did not report any of the four legal expense items on regulatory reports in any year from 2002 through 2007*, despite their very high legal exposure documented in this paper. Hence, a comprehensive measure of total legal expense for a BHC is not available to the investing public. The lack of a reporting requirement creates *unnecessary information asymmetries* since investors are not as informed as they could be about bank operational risk, no doubt leading to mispricing of bank securities.

The data should also prove useful for bank regulators for the same reasons. Regulators have confidential databases that contain many data items not available to the public; it is difficult to know if a comprehensive measure of legal expense is available in these databases and is used by regulators. The best evidence that such a measure is *not used* is that no recent early warning model of bank financial distress published by economists in the bank regulatory community in the past ten years that we could identify contains legal expense as a predictor (see, e.g., Guenther and Moore, 2003; Jagtiani, Kolari, Lemieuz and Shin, 2003; and Whalen (2010)). We have shown that the ratio of total legal expense to assets predicts bank financial problems. If the data were reported in a complete, comprehensive and consistent fashion, it could and should be incorporated into early warning models of bank financial distress.

In addition, bank regulators have important responsibilities with respect to legal risk. As discussed in Appendix B, federal bank examiners are required to evaluate litigation patterns and determine if excessive litigation puts the bank at risk (Office of the Comptroller of the Currency, 2000). However, it is not clear that examiners have a measure of how much legal expense is normal for a given peer group of banks because the data are not reported on the abovementioned reports. Such responsibilities may be easier to fulfill if the data were reported on a consistent basis for all institutions. Bank compliance officers and directors may also find legal expense data helpful in fulfilling their many responsibilities. In summary, the data could be an important tool for investors, regulators, bank compliance officers and bank directors, since they all have responsibilities for identifying and managing operational risk.

7. CONCLUSIONS

Legal risk is a form of operational risk, a major form of bank risk (e.g., Basel Committee on Bank Supervision, 2006; Koch and MacDonald, 2010; Robertson, 2011). A comprehensive literature survey emphasizes that banks are more likely to fail from operational risk than from credit or market risk, and that such risk has increased dramatically in recent years because of rapid technological change (Moosa, 2007). Consistently high litigation expense at a bank could reflect a weak system of internal control manifested in opportunistic bank behavior, the absence of certain values within the corporate culture, an aggressive approach to the banking business, and/or a lack of proper training for employees. Nonetheless, bank legal risk has not been explored empirically in the finance literature because of a lack of data.

We develop a unique hand-collected data set from annual 10K reports for bank holding companies (BHCs) for the pre-financial-crisis period, 2002 through 2006, to construct a legal expense proxy. This measure includes payments to attorneys for all BHCs and excludes settlements. It thus reflects differences among banks in total (unobservable) bank legal expense. We test the hypothesis that this legal expense proxy predicts future (2007-08) bank performance. We find that it predicts three different measures of credit quality and two different measures of bank stock returns with a high degree of both statistical and economic significance. Consistent with our hypothesis, credit quality is lower in both 2007 and 2008, and stock returns are also lower, for banks with high legal expense. Three of the coefficients are significant at the one percent level, and the remaining two coefficients are significant at the five percent level. The standardized regression coefficient for legal expense ranks as high as third out of eight independent variables, and no lower than fifth. These results indicate that the legal expense proxy has an effect that is equivalent to other variables that have a major effect on bank

performance, such as local market concentration. This finding is consistent with our argument that high legal expense is an indicator of managerial weaknesses. We believe that this is the first paper to find that legal expense predicts future bank performance.

Further evidence relevant to our hypothesis is provided in case studies of three noteworthy bank failures during the financial crisis (Countrywide, National City and Wachovia), as reported in Appendix A. All three BHCs show extensive litigation and very high legal expense relative to peer banks before the crisis. All three banks rank high relative to peer banks in the ratio of legal expense to total assets. In the first case, Countrywide experienced a rapid increase in legal expense between 2004 and 2006. In the second case, National City ranks fourth out of 83 banks in 2006 and is either in the top tenth percentile, or close to it, in the ratio of the legal expense proxy to total assets from 2002 through 2006. In the third case, Wachovia experienced a large amount of highly unusual banking litigation before it failed; it generally ranks in the top one third of large banks, and is generally in the top half, with respect to the same ratio.

Operational risk was originally considered exogenous to the banking firm, but more recent literature, including this paper, suggests that it is internal. Different banks have different corporate cultures, and bank litigation (both the legal expense data and litigation patterns) reflects both the corporate culture and the system of internal control. The notion that the causes of operational risk are internal to the firm is consistent with Chernobai, Jorion and Yu (2011) who analyze a large database of operational risk events involving US financial institutions from 1980 to 2005. They conclude “currently, a large number of banks treat operational losses as independent events.” However, “the evidence suggests that many factors internal to the firm contribute to the occurrence of operational risk events of all types. This implies that the common

assumption of independence of events within the firm may be seriously flawed, and that internal measures of operational risk capital are understated” (p. 1,719). They also report, consistent with the argument in this paper, that “most operational losses can be traced to a breakdown in internal control” (p. 1683).

Currently, a comprehensive measure of total legal expense is not available to the investing public. We find that less than 15% of BHCs report *one of the four* categories of legal expense on regulatory reports, and the three case study banks did not report in any year from 2002 through 2007, despite their very high legal exposure documented in this paper. Further, there are four categories of legal expense, but only one is reported. In recent years there is no reporting of legal expense on call reports. The lack of a comprehensive measure of *total* legal expense creates *unnecessary information asymmetries* since investors are not as informed as they could be about bank operational risk. This no doubt leads to mispricing of bank securities. To allow financial markets to discipline banks with weak systems of internal control, regulators should consider requiring complete, consistent, and comprehensive reporting of bank legal expense on both bank call reports and BHC Y9 reports. The ratios of total legal expense to assets and total legal expense to revenue could then be incorporated into the Uniform Bank Performance Reports (UBPRs) for both banks and BHCs. Since the financial reports and the UBPRs are publically available to investors, such reporting and disclosure would allow investors to identify banks with weaknesses in internal control. This operational-risk-related market discipline would improve the functioning of bank securities markets and the bank regulatory process, and enhance overall economic welfare.

APPENDIX A

CASE STUDIES OF COUNTRYWIDE/BANK OF AMERICA, NATIONAL CITY, AND WACHOVIA

a. *Countrywide (CFC) and Bank of America (BOA).* Countrywide is well known for its high-risk mortgage lending practices in the pre-crisis period. The firm allegedly used extremely deceptive sales practices to make hundreds of billions of dollars of mortgage loans that borrowers could not afford. An intense sales culture drove the company (Morgenson, 2007; Michaelson, 2009) as CFC employees allegedly encouraged borrowers to purchase homes that they could not afford, and its commission structure rewarded these salespeople (Morgenson, 2007). Commission rates were much higher for subprime loans than for prime loans. The firm attempted to place borrowers in higher risk categories than appropriate; FHA loans were discouraged, even when most suitable for the borrower, because of lower commissions. Company profit margins on some high-risk loans (e.g., loans with prepayment penalties to high-risk borrowers) reached 15% in some cases, compared to 3 to 5 % on other loans. Prepayment penalty loans were encouraged because investors paid more for loans with prepayment penalties, since returns were locked in (Morgenson, 2007).

The Countrywide loans were packaged into mortgage-backed securities (MBSs) and sold to investors through securities dealers. CFC's MBS have been associated with foreclosures, major losses for the investors, and a flood of litigation. Befitting its culture, CFC treated foreclosure as a profit center. Countrywide resisted efforts to arrange renegotiated loans for troubled borrowers (Schwartz, 2007), fought responsible lending legislation, and often significantly exaggerated amounts owed in foreclosure. Courts throughout the country have

considered evidence that Countrywide's attorneys routinely forged documents to justify higher recoveries and filed the false documents in court. Judges repeatedly sanctioned CFC in foreclosure cases.

By June 2008, CFC was the subject of investigations by the Securities and Exchange Commission, the FBI, and the Federal Trade Commission and was being sued by many state attorneys general and community groups for extremely loose underwriting practices, improper and hidden fees, inflating amounts owed and failing to keep accurate records of balances, attempting to obtain money and property from debtors under false pretenses, filing inaccurate pleadings in bankruptcy court and other abuses of the bankruptcy system. In one case Countrywide boarded up a home without a judgment or a court order when the homeowner was actually current on the loan (Efrati, 2007, Morgenson, 2008a, 2008c, 2008d). The company also allegedly lost or destroyed more than half a million dollars in checks paid by homeowners in bankruptcy over a two-year period. There were 300 bankruptcy cases in western Pennsylvania alone where such issues were raised (Morgenson, 2008c). There was clearly a weakness in internal control.

Angelo Mozilo, the firm's owner for many years and the alleged architect of its business strategy, was also the subject of investigations by both the Securities and Exchange Commission and the U.S. Justice Department. *The Wall Street Journal* announced in May 2009, "SEC Ready to Charge Mozilo with Fraud" (Scannell and Emshwiller, 2009, p. A1). In June 2008, the State of Illinois filed suit against Countrywide and Angelo Mozilo personally for fraud. The suit included many of the above allegations, including the point that people were locked into loans that they couldn't afford and couldn't get out of. The complaint argued that several loans took

only 30 minutes to underwrite. The Illinois case specifically alleges that the incentive structure of the company was structured to reward employees and brokers to make the riskiest loans.

The raw data for the legal expense proxy (not shown in the tables) reveals that CFC's legal expense was on a sharp upward trend as early as 2004. It increased by 36% between 2004 and 2005 and then increased by 70% between 2005 and 2006, while total assets and total revenues rose only modestly. These are the largest increases of any major financial institution for which data are available. Table 7 shows Countrywide's ranks for 2002 through 2006 in the ratio of the legal expense proxy/total assets relative to all institutions in the sample. Countrywide increased from a rank of 54 in 2005 to 32 in 2006 as a result of the 70% increase in the legal expense proxy.

Countrywide was taken over by Bank of America (BOA) in January 2008 after experiencing large losses and a sharply falling stock price; BOA inherited a flood of litigation from this acquisition. Soon afterward, BOA paid \$8.4 billion to settle numerous lawsuits filed by several state attorneys general, and many other lawsuits remain. Since 2008, BOA has spent billions of additional dollars to resolve further legal issues created by the Countrywide acquisition (e.g., Morgenson, 2011). One portfolio manager at the time commented in relation to BOA's then CEO Lewis: "This is a horrible deal. Ken Lewis wants to be number one in this business and Countrywide gives him the opportunity to be the dominant player. But Bank of America has all the pieces in place already. They don't need this." Another investment manager was equally critical: "It's a lot to ask Bank of America shareholders to stomach" (Morgenson, 2008b, p. C6). *The Wall Street Journal* (Efrati and Simon, 2008, p. A8) also called attention to "a flood of legal troubles" faced by Bank of America as a result of the acquisition from "a barrage of borrower suits and investigations by federal and state agencies for alleged lending and

loan servicing abuses as well as shareholder suits stemming from its financial decline.” The *Journal* mentions at least a dozen class action lawsuits filed by borrowers for deceptive lending practices. Three years later the *Journal* suggested that this may have been the worst merger in American history (Ovide, 2011) because BOA’s enormous legal problems from the CFC acquisition have continued and seriously eroded BOA’s performance. As of January 2014 BOA had spent “nearly \$50 billion” in legal costs associated with the Countrywide acquisition (Raice, 2014).

b. National City Corporation. Like CFC, National City Corporation (NCC) of Cleveland, Ohio, once one of the ten largest banks in the country, engaged in high risk mortgage lending. NCC experienced record losses from bad mortgage loans; the resulting publicity created heavy withdrawals of uninsured deposits as early as September 2008, a month before the bank was sold. Senior bank officers worried about an “immediate liquidity crisis” (Murray, 2009). NCC, a 163-year-old institution at the time, was acquired by PNC Bank in October 2008.

NCC had made a major commitment to expanding its mortgage lending. Aspiring to be a “mortgage superpower” (Mezger, 2008b), NCC purchased of a major subprime lender, First Franklin, from Bank of America eight years earlier. First Franklin specialized in mortgages for borrowers with poor credit who could borrow only at high rates of interest. NCC aggressively bought loans from mortgage brokers nationwide; many such brokers would have little interest in loan quality. NCC decided it was more profitable not to re-sell mortgage loans. In his 2001 annual report letter to shareholders, the NCC CEO stated that subprime loans “have greater lifetime value when held on the balance sheet” (Calvey, 2008).

Between 1999 and 2003, NCC’s mortgage lending volume rose from \$4 billion to \$30 billion, and profits from mortgage lending increased from \$50 million to \$1 billion per year. In

May 2006, the CEO claimed in an interview, reported in Mezger (2008b), that his strategic plan was “wildly successful” because the bank was writing \$130 billion in loans a year, and had become the sixth-largest mortgage lender in the country, just behind Washington Mutual and Countrywide. (Of course, all three of these institutions disappeared during the crisis.)

During the decade of the 2000’s, the Cleveland area was experiencing a major foreclosure crisis that was the subject of public hearings as early as 2002. The percentage of borrowers behind on their mortgage payments in Ohio was in 2000 and 5% in 2001, equal to the national average. By 2004 Ohio’s delinquency rate was 35% above the national average. Ohio’s foreclosure rate was slightly above the national average in 2000, then double the US average in 2002, and triple the average in 2004 (Mezger, 2008a).

Cuyahoga County’s Treasurer James Rokakis testified before Congress in March 2007 that mortgage defaults on loans made to financially strapped homeowners at high interest rates had pushed neighborhoods in Cleveland past the “tipping point” of urban blight. The number of mortgage foreclosures in the county had risen from 3,500 in 1995 to 7,500 in 2000 to 13,000 in 2006 (Turner, 2007). That the largest bank in the metropolitan area engaged in high risk subprime lending most likely contributed in a major way. Unregulated mortgage brokers no doubt contributed to the situation (Turner, 2007); these are the brokers NCC solicited for loans.

The City of Cleveland passed the first responsible lending bill in the country in 2002. The bill requires borrowers to get federally approved counseling before signing mortgage documents for certain high-interest loans. NCC fought the bill immediately by refusing to make loans in the city, and other lenders followed. An internal First Franklin memo states: “The predatory lending law in Cleveland has caused us to temporarily suspend lending in the city of Cleveland only” (Ryan, 2002). When Toledo and other Ohio cities considered similar

legislation, National City threatened to stop making loans in these areas as well (McLaughlin, 2003).

When serious problems in the subprime market developed in 2007, National City was one of the first banks to report major losses. It had held many of these loans rather than selling them, and many were loans in which the borrower had no equity.²¹ In August 2007, when the crisis intensified sharply, National City suddenly had \$11 billion of mortgage loans it could not sell (Mezger, 2008b). It suddenly stopped lending. The *Wall Street Journal* reported in early September 2007 that both Lehman Brothers and NCC were scaling back their mortgage lending business, cutting jobs and taking third-quarter losses (*Wall Street Journal* 2007; Kingsbury, 2007).

National City's First Franklin was a factor in the demise of Merrill Lynch. After paying \$1.3 billion for First Franklin in 2006, Merrill declared the subsidiary worthless one year later and closed it completely. Merrill brought the issue to the attention of the Securities and Exchange Commission, charging that National City had misled it on "alleged losses" associated with certain loans (Mezger, 2008c). The SEC opened an informal investigation.

NCC consistently ranks in the top tenth percentile, or close to it, in the ratio of the legal expense proxy/total assets for each year from 2002 to 2006 (Table 7). In addition, its legal expense is consistently increasing relative to its peers. By 2006 it ranks fourth out of 83

²¹Mezger (2008b) reports that piggy-back loans, which include a loan for the down payment, were a major product for NCC. For example, if the first mortgage is for 80%, a second mortgage is made for 20%. With FNMA and FHLMC conforming loans, borrowers are prohibited from borrowing their down payment, but there were no such restrictions for subprime loans at that time.

institutions. If these data had been collected and analyzed, NCCs potential problems in the pre-crisis period would have been much more apparent to investors.

c. *Wachovia*. One overview of Wachovia litigation is provided in the 126 page complaint in the class action lawsuit (*Horace-Manesse v. Wells Fargo, 2010; Perlman v. Wells Fargo, 2010*). Here Wachovia was accused of facilitating a money-laundering scheme and a Ponzi scheme that allegedly bilked thousands of Haitian-Americans out of millions of dollars. The issues include failure to failure to maintain a required Anti-Money Laundering Program, and failure to file required Suspicious Activity Reports and Large Cash Transactions Reports. The complaint calls attention to a US Department of Justice criminal case against the same bank on the same issues (*USA v. Wachovia, 2010*) and numerous other examples of weak internal controls that were revealed in other court cases going back to at least 2001.

The bank was also accused of allowing two telemarketing firms to obtain the account information of elderly victims and then draw from the accounts using “remote access checks” (*Faloney v. Wachovia (2007); USA v. Payments Processing Center (2006); Duhigg, 2008; Duffy, 2008*). The bank’s involvement with the telemarketers allegedly lasted for several years *beginning in 2003, shortly after the merger with First Union*. Emails indicate that even after bank officers learned of the crimes, they continued to solicit the business. The bank’s association with the telemarketing firms continued even after both regulators and other banks alerted the executives to the problem. One company paid Wachovia over \$1.5 million in fees in 11 months. One Wachovia executive who knew of the fraud commented about the telemarketers, “we are making a ton of money from them” (Duhigg, 2008). Despite repeated denials, Wachovia paid \$178 million to 900,000 customers to settle the allegations after the US Department of Justice investigation (Duffy, 2008). In another breakdown of internal controls,

Wachovia allegedly allowed Mexican drug cartels to launder large amounts of drug money (Mollenkamp and Perez, 2010). This case was also settled, again after a Justice Department investigation.

Wachovia (now part of Wells Fargo) also spent \$148 million to settle a case with the US Department of Justice and the Securities and Exchange Commission involving bid rigging in the municipal securities market during the six-year period ending in 2004 (Wyatt, 2011). Five small businesses were severely damaged or destroyed by Wachovia or its predecessors during bank mergers (McNulty, 2008). These firms include a 118-year old Scranton, Pennsylvania shoe business (*Busy Bee v. Wachovia, 2006*) and a broker of electronic equipment (*Wachovia v. Gulf Components, Counterclaim, 2003*). The jury in *Busy Bee*, a case that took ten years to litigate, awarded a \$17.3 million verdict against Wachovia for constructive fraud, breach of contract, breach of fiduciary duty, and negligent misrepresentation. Other important examples of weak internal control that were revealed in litigation include allowing an unauthorized individual to deposit a \$680,000 check and subsequently obtain access to the funds (*Rancy v. Wachovia, 2008*).²² There are many other Wachovia cases involving allegations of allowing unauthorized individuals to cash fraudulent checks (e.g., *Palm Beach Business Services v. Wachovia, 2006*).

Wachovia's 2008 demise, and its subsequent merger with Wells Fargo, are associated with Wachovia's acquisition of Golden West in 2006. A few years earlier, Golden West had pioneered the "pick a payment" mortgage, giving a borrower the option to skip a payment or make a payment that did not cover interest. These loans, many of them subprime, were highly

²²In this case, the plaintiff's attorney was able to clearly demonstrate perjury in the deposition of the bank customer services representative who facilitated the \$680,000 transaction. The case was ultimately settled in favor of the plaintiff after approximately three years of litigation.

vulnerable when house prices declined sharply. Wachovia's CEO commented "I have to go to California to close this deal. This will either cement my reputation or get me fired" (Lowenstein, 2010, p. 70). Many firms approach mergers and other major corporate decisions with thorough and careful due diligence. This comment suggests that this may not have been the corporate culture at this institution. For 2006 Wachovia ranks in the top third of the sample banks in the ratio of the legal expense proxy to total assets, a substantial increase over previous years. If reporting had been quarterly, the increase would have been apparent sometime in 2005. This point, considered together with an analysis of the type of litigation that Wachovia was consistently engaged in might have prompted a closer look at Wachovia's operational risk in the pre-crisis period.

APPENDIX B

EXAMINERS' RESPONSIBILITIES WITH RESPECT TO BANK LITIGATION

The Comptroller's Handbook: Litigation and Other Legal Matters (Comptroller of the Currency (OCC), 2000) provides guidance to national bank examiners concerning the evaluation of a bank's litigation experience and expense:

Real and threatened litigation can pose significant costs to banking organizations. Whether legal issues give rise to unenforceable contracts, lawsuits, adverse judgments, forgone business opportunities, loss of corporate focus, or diminished reputation in the community, they can disrupt the operations of a bank, possibly reducing the institution's earnings and capital. Therefore, both management and examiners must properly assess, and bank management must properly manage, the risks associated with litigation and other legal matters....

During bank examinations, examiners will attempt to identify any pending or threatened litigation involving the bank, assess the liabilities and any impact from those legal matters, and determine whether the bank is effectively identifying, measuring, monitoring, and controlling those risks. (p. 1)

The OCC takes note of lender liability lawsuits as a “significant source of potential loss for banks” (p. 3), emphasizes that behavior toward a borrower must be “rational” and “consistent with past practices and written policies and procedures” (p. 3) and calls for a “comprehensive risk management process” (p. 4). Rapid and aggressive expansion is considered a cause of problems. Guidance to examiners includes the following:

Examiners should consider whether individual suits concerning the same or similar issues evidence a *pattern or practice* at the bank that needs management's attention. If examiners find unanticipated risks or what appears to be a *recurring pattern* of litigation, they should discuss the matter with management and the board of directors. If necessary, examiners should request action plans to eliminate or mitigate the potential impact and exposure to the bank (p. 6; emphasis added).

Boards of directors also bear significant responsibility. For example, examiners should “determine whether the board has established appropriate guidelines for managing the risks of litigation and other legal matters” (p. 14). Examiners should also determine whether the board has discussed litigation that is pending and significant.

APPENDIX C

AN ANALYSIS OF EXISTING REPORTING REQUIREMENTS FOR BANK LEGAL EXPENSE

The BHC Y9 financial report requires BHCs to report their major income and expense items to federal regulators each quarter, and the call report imposes similar requirements for individual banks. The Y9 report contains a space for legal expense as item BHCK4141; the call report contains a similar space at RIAD4141. The reports use the same space number, and the definition of both items is the same, “legal fees and expenses”. Table 8 reports the number and percentage of US BHCs and banks that reported in space BHCK4141 and RIAD4141 for each year from 2001 through 2012. The reporting percentages are less than 15% for the BHC Y9 report. For the call report, the percentages were under 37% until 2008. The highest reporting percentage for the call report was 56.11% in 2010. In 2011 and 2012 there was *no reporting of legal expense on the call report*.

To analyze the data in Table 8, we consider 2006, the last year of our study. The instructions for preparing these reports, issued in September 2006 and effective in December 2006, state as follows:

7.d Other noninterest expense.

Report all operating expense of the bank for the calendar year to date not required to be reported elsewhere in Schedule RI... Include as other noninterest expense: ... (5) Retainer fees, legal fees, and other fees and expenses paid to attorneys who are not bank officers or employees and to outside law firms. [Report the amount of legal fees and expenses in Schedule RI-E, item 2f if this amount exceeds 1 percent of the sum of the bank’s total interest income from Schedule RI, item h and its total noninterest income from Schedule RI, item 5.m.] (Federal Financial Institutions Examination Council, 2006, p. RI-20a).

Thus, in 2006 legal expense was required to be reported *separately* on the call report if it *exceeded one percent of total interest and non-interest income*. Similar requirements applied to

BHCs. *If legal expense is less than this threshold it is not reported separately; it is included in other noninterest expense.*

Consider a hypothetical bank or BHC that has exactly \$100 million in assets and has expense ratios exactly equal to the industry average in 2006. Total interest income averaged 5.68% of bank assets in 2006 and total non-interest income averaged 2.25% (FDIC, 2014). Hence total interest and non-interest income averaged 7.93% of assets in 2006. For this hypothetical bank or BHC with \$100 million in assets and industry-average ratios, legal expense should have been reported for 2006 if it exceeded one percent of 7.93%, or 0.0793% of assets. For a \$100 million BHC this would be \$79,300. For a larger BHC it would be \$79,300 per hundred million dollars of assets. (The exact threshold for the bank and BHC would depend on that institution's income to assets ratios which, of course, could be higher or lower than the industry average.) As shown in Table 8, only 4.05% of BHCs reported legal expense on their Y9 reports in 2006. While the data are not available (because of the lack of reporting that is under consideration here) it would be hard to defend the proposition that over 95% of BHCs had total legal expense below this threshold. Clearly, in a given year, many BHCs would be expected to spend more than \$79,300 per \$100 million in assets in legal expense. The percentage reporting was still only 14.62% in 2012. The most logical conclusion is that *investors are not seeing data that are required to be reported.*

The requirement in effect in 2006 was based in part on total interest income as a percent of assets. This percentage can vary from year to year depending on interest rates. There is no economic rationale for having a greater percentage of institutions reporting legal expense when interest rates are high than when interest rates are low.

The 2014 instructions for the Y9 report require BHCs to report legal expense *separately* if it exceeds 3% of “other noninterest expense.”²³ The exact wording is as follows:

Line item 7(d) Other noninterest expense.

Report all operating expenses of the holding company for the calendar year not required to be reported elsewhere in Section HI. Disclose in Schedule HI, Memorandum items 7(a) through 7(n), each component of other noninterest expense, and the dollar amount of such component, that is greater than \$25,000 and exceeds 3 percent of the other noninterest expense reported in this item. (Board of Governors of the Federal Reserve System, 2014, p. HI-17).

This set of requirements was also effective in 2013 and 2012, the last year for which we report data in Table 8. Total “other non-interest expense” was 1.27% of total assets in 2012 (FDIC, 2014)²⁴. Again, consider a hypothetical BHC that has exactly \$100 million in assets with expense ratios exactly equal to the industry average. This BHC should report legal expense separately if such expense exceeds 3% of 1.27% of assets or .0381% of assets ($.03 \times .0127 = .000381$). *This is an extremely low threshold* – \$38,100 per \$100 million in assets. To be below it, our hypothetical \$100 million BHC would have to have total legal expense less than \$38,100 ($.000381 \times \100 million). A typical (i.e. about average) BHC with a larger asset size would have a dollar threshold that is proportionately higher but remains at approximately \$38,100 per \$100 million in assets. (Again, the actual requirement is based on the individual institution’s ratios.) Nonetheless, as noted, only 14.62% of BHCs reported legal expense on the Y9 report in 2012. Again, investors are not seeing data that should be reported. If legal expense data reflect

²³ The point that the 3 percent threshold applies to each of approximately 25 items indicates that it is clearly not a materiality threshold applied to bank litigation expense.

²⁴ There is a difference in the FDIC interactive website between “additional noninterest expense” (1.33% in 2012) which includes amortization and related items, and “other noninterest expense” (1.27%) which excludes these items. Consistent with the reporting instructions we use the lower figure here.

operational risk, investors should have the opportunity to be informed about such risk by having the data publically reported.

There is another more serious issue. There are *four separate components of legal and related expenses* detailed in the Y9 Instructions:

(4) Legal fees and other direct costs incurred in connection with foreclosures and subsequent noninterest expenses related to holdings of real estate owned....

(12) Charges resulting from litigation or other claims.

(14) Retainer fees, legal fees, and other fees and expenses paid to attorneys who are not officers or employees of the holding company or its consolidated subsidiaries.

(22) Civil money penalties and fines. (Board of Governors of the Federal Reserve System, 2014).

Separating legal expense and the costs of legal settlements into four categories means that each component must be greater than the three percent threshold for the data to be reported, *just for that component*. The distinction between category (4) and category (12) would be especially difficult to establish and apply on a consistent basis. From the standpoint of operational risk there is no meaningful economic distinction between *any* of the four items. For example, the legal and other costs of handling foreclosures will be higher for banks with poor lending practices. In our literature review we have identified this as a form of operational risk.

Second, regardless of the thresholds, and even assuming that 100% of banks and BHCs observe the reporting requirement, because of the separation into components, there is *no comprehensive measure of legal and operational risk exposure* for any institution that can be compared to other institutions using peer group analysis. Item 14 is the item required to be reported in spaces BHCK4141 and RIAD4141. There are no instructions to consolidate these four items and show total legal expense on the report.

We hypothesize in the body of the paper that high legal expense is an indicator of managerial weakness, and our empirical results are consistent with this hypothesis. We find that high legal expense predicts bank financial problems several years in advance. Peer group comparisons using several years of data are necessary for a securities analyst or investor to determine if operational risk for the institution substantially exceeds industry norms. In an industry in which the percent of institutions that report is very small, reliable peer group comparisons are impossible to perform. The Uniform Bank Performance Report (UBPR) which compares several hundred financial ratios for each bank with its peer group does not include legal expense²⁵. Similarly, economists developing early warning models of bank financial distress (even those working inside the regulatory agencies) are apparently unable to include legal expense in their models, despite its clear predictive ability, because of a lack of consistent data for most institutions²⁶.

Strong evidence of lack of consistency comes from the three case study BHCs. These BHCs did report an item on their 10K reports sufficient for us to compile a legal expense proxy. These BHCs had very high legal exposure in 2002 through 2006, as documented in Appendix A. The high values for the proxy reflect the almost certain very high legal expense resulting from this exposure. Nonetheless, *these three BHCs did not report legal expense on the call report or Y9 in any year from 2002 through 2007*. Clearly, a complete, comprehensive and consistent measure of legal expense is not available to the investing public. The lack of publically available data creates unnecessary information asymmetries since investors are not as informed as they

²⁵ These reports are available to the public at FDIC.gov. See Koch and MacDonald (2011), Chapter 3 for a discussion of the report.

²⁶ See Section 6 in the body of this paper for a discussion of this issue.

could be about bank operational risk. This no doubt leads to mispricing of bank securities. These points further support our suggestion that regulators should consider requiring that *all institutions* report total legal expense on both bank call reports and on the Y9 report in a complete, consistent and comprehensive manner, without thresholds²⁷. The reporting requirement should produce *one number* for each institution for each reporting period, the sum of the four items discussed above, which would be a comprehensive indicator of legal exposure. This total, expressed as a percent of total assets, and total revenue, would be a very useful measure of this form of operational risk²⁸. Alternatively, at a minimum, Item 4141 described above should be reported and publically disclosed for all banks²⁹ and BHCs.

Nonetheless, such reporting needs to be consistent with accounting rules and practices. As noted in Section 4, accounting rules state that settlements are not to be reported as an expense unless the amounts can be estimated.

²⁷ In theory, institutions should compute their total legal expense to determine if they are above the threshold. In practice, thresholds may be a way for some banks to avoid reporting. In effect, *thresholds make legal expense reporting voluntary*. In addition, the thresholds currently in place are meaningless and have no economic rationale whatsoever.

²⁸ We have stressed in our literature review that operational risk is complex. Changing the reporting requirements is only one small step toward more effective detection and monitoring of this form of risk.

²⁹ Much bank regulation is at the bank level. As indicated in Appendix B, legal expense data could be very helpful to bank examiners, as well as to regulatory economists developing early warning models of bank financial problems. Accomplishing this objective would require call report disclosure. Facilitating market discipline would require disclosure at the BHC level as well.

Table 1

Hypothesized effect of corporate culture on firm performance³⁰

Type of corporate culture ³¹	Indicators of the corporate culture	Legal expense (a measure of the ethical component of corporate culture ³²)	Loan quality (lagged)	Market returns (lagged)
Conservative	<ul style="list-style-type: none"> • Strong internal controls • Comprehensive policies and procedures³³ • Lower operational risk³⁴ • Values driven credit culture³⁵ • Lower risk tolerance 	Lower	Higher	Higher
Aggressive	<ul style="list-style-type: none"> • Weaker internal controls • Less comprehensive policies and procedures • Higher operational risk • Current profit driven credit culture • Higher risk tolerance • Other managerial weaknesses 	Higher	Lower	Lower

³⁰These relations are the basis for the hypothesis which is tested using regression analysis; as such they represent *tendencies*, rather than absolute categories.

³¹Cronqvist, Low and Nilsson (2007) distinguish between conservative and aggressive corporate cultures in banking.

³²This term reflects adherence to a set of values and customs that place the stability and longevity of the organization above monetary benefits to individuals. (As noted, many BHCs post codes of conduct on company websites and expect employees to adhere to them.) Litigation expense is *one measure* of the ethical climate in a banking organization, not necessarily the only measure.

³³This category includes both the *existence* of policies and procedures in all areas of operations as well as *adherence* to these policies and procedures.

³⁴Chernobai, Jorion and Yu (2011) find that most operational risk cases involve repeat offenders. We suggest that this finding is consistent with our hypothesis and must reflect differences in the corporate culture among the banks in their sample.

³⁵We adopt the terminology used by Koch and MacDonald (2010) and discussed in Section 2.

Table 2

The two accounting models used to report non-interest expense in BHC 10K reports

Accounting Model 1	Accounting Model 2
Personnel	Personnel
Occupancy	Occupancy
Technology and Communications	Equipment
Deposit Insurance	Marketing
Advertising	Professional Fees*
Other	Amortization of Intangibles
Total Non-interest Expense	Data Processing
	Telecommunications
	Other General Operating**
	Merger and Restructuring Charges
	Total Non-interest Expense

Sources: Model 1 from Ryan (2007); model 2 from Bank of America, 2006 Annual 10K Report.

*Payments to law firms are included here, along with accounting, auditing and consulting expense (see Table 1).

**Settlements are included here, along with other items.

Table 3

How legal expense is reported in the sample BHC 10K reports

Exact description of expense item in annual BHC 10K report	Number of BHCs using this description
Professional fees	23
Professional services	21
Legal and professional fees or legal and other professional fees	7
Legal fees	2
Professional and examination fees	3
Professional and regulatory fees	1
Professional and consulting fees	2
Professional fees and services or Professional fees and outside services	2
Outside services or outside professional services	4
Attorney commissions and court costs	1
Legal, consulting, accounting, and auditing expenses	1
Legal and consulting fees	1
Legal, accounting and consulting	1
Legal and accounting	1
Legal costs and other professional fees	1
Legal, audit, accounting, and supervisory examination fees	1
Legal, audit, and professional fees	1
Legal and professional services	2
Legal and other professional services	1
Legal expenses	1
Litigation and operational losses	1
Professional and examination fees	1
Professional services: legal and accounting	1
Professional services and litigation settlement	1
Professional service Fees	1
Services and fees	1
Total	83

Table 4

Summary statistics for variables used in the regressions

Our sample consists of 408 bank-year data points for 83 bank holding companies (BHCs) for the period 2002-06 for the independent variables (data is missing for some BHCs for some years) and comparable observations on the dependent variables for the same BHCs for 2007-08. This table presents summary statistics for both sets of variables. The dependent variables are:

- ABHR07-08 = abnormal buy-and-hold returns (the difference between the bank buy-and-hold return and the market buy-and-hold return) for 2007-08;
- BHR07-08 = bank buy-and-hold returns for 2007-2008;
- LOAN CHARGEOFFS/ASSETS07 = loan charge-offs as a percent of total assets for 2007;
- LOAN CHARGEOFFS/ASSETS08 = loan charge-offs as a percent of total assets for 2008;
- LOAN LOSS PROVISIONS/ASSETS07 = loan loss provisions as a percent of total assets for 2007;
- LOAN LOSS PROVISIONS/ASSETS08 = loan loss provisions as a percent of total assets for 2008.
- NON-PERFORMING LOANS/ASSETS07 = non-performing loans as a percent of total assets for 2007;
- NON-PERFORMING LOANS/ASSETS08 = non-performing loans as a percent of total assets for 2008.

The independent variables are:

- ASSETS02-06 = the book value of total assets for 2002-06 (\$billions);
- FINHOLDCO02-06 = an indicator variable equal to one for a BHC that is a financial holding company in 2002-06, and zero otherwise;
- HHI02-06 = the Hirschman-Herfindahl index for 2002-06;
- LEGALEXP02-06 = our legal expense proxy as a percent of total assets for 2002-06;
- LOCATION02-06 = an indicator variable equal to one for banks that are located in the Midwest and Northeast regions of the US, and zero otherwise;
- LOAN LOSS PROVISIONS/ASSETS02-06 = loan loss provisions as a percent of total assets for 2002-06;
- MARKET/BOOK02-06 = the ratio of the market value of equity to its book value for 2002-06;
- MERGER02-06 = an indicator variable equal to one for BHCs that were involved in mergers and acquisitions in the sample period, and zero otherwise;
- NON-PERFORMING LOANS/ASSETS02-06 = non-performing loans as a percent of total assets for 2002-06;
- ROE02-06 = return on equity, the ratio of net-income to equity, for 2002-06.

Variables	Mean	Median	Standard Deviation	Minimum	Maximum
DEPENDENT VARIABLES:					
ABHR07-08	-0.0511	-0.0744	0.3188	-0.8266	0.7999
BHR07-08	-0.4367	-0.4744	0.3240	-0.9612	0.3999
LOAN CHARGE- OFFS/ASSETS 07	0.0039	0.0023	0.0080	0.0000	0.1883
LOAN CHARGE- OFFS/ASSETS 08	0.0097	0.0052	0.0143	0.0000	0.2054
LOAN LOSS PROVISIONS/ ASSETS07	0.0046	0.0025	0.0089	0.0000	0.1530
LOAN LOSS PROVISIONS/ ASSETS08	0.0136	0.0079	0.0175	0.0000	0.2389
NON- PERFORMING LOANS/ASSETS07	0.0047	0.0028	0.0092	0.0000	0.2313
NON- PERFORMING LOANS/ASSETS08	0.0105	0.0061	0.0152	0.0000	0.2444
INDEPENDENT VARIABLES:					
ASSETS02-06	56.24	4.81	181.75	0.269	1,463.68
FINHOLDCO02-06	0.3823	0.0000	0.4866	0.0000	1.0000
HHI02-06	0.2072	0.1791	0.1207	0.0641	0.7147
LEGALEXP02-06	0.0013	0.0011	0.0011	0.0000	0.0077
LOAN CHARGE- OFFS/ASSETS 02-06	0.0047	0.0031	0.0059	0.0000	0.0549
LOAN LOSS PROVISIONS/ ASSETS02-06	0.0037	0.0026	0.0053	0.0000	0.0659
LOCATION02-06	0.5588	1.0000	0.4971	0.0000	1.0000
MARKET/BOOK 02-06	2.6580	2.4154	1.0967	1.0760	10.2963
MERGER02-06	0.8309	1.0000	0.3753	0.0000	1.0000
NON- PERFORMING LOANS/ASSETS 02-06	0.0059	0.0042	0.0069	0.0000	0.0571
ROE02-06	0.1860	0.1907	0.0839	-0.4378	0.4766

Table 5.

Regression results relating legal expense to non-performing loans, loan charge-offs, and loan-loss provisions

This table shows the effect of legal expense and other explanatory variables for 2002-06 on non-performing loans, loan charge-offs, and loan loss provisions in 2008. Non-performing loans is the dependent variable in model 1, charge-offs is the dependent variable in model 2, and loan loss provisions is the dependent variable in model 3. The independent variables are computed for 2002-06. They are: LEGALEXP02-06 = our legal expense proxy as a percent of total assets; ASSETS02-06 = the natural log of total assets; MARKET/BOOK02-06 = the ratio of the market value of equity to the book value of equity; ROE02-06 = the ratio of net-income to equity; HHI02-06*LOCATION02-06 = an interaction variable between the HHI (Hirschman-Herfindahl index) and an indicator variable equal to one for banks headquartered in the Midwest and Northeast regions of the US, and zero elsewhere; FINHOLDCO02-06 = an indicator variable equal to one for a BHC that is a financial holding company, and zero otherwise; MERGER020-06 = an indicator variable equal to one for BHCs involved in mergers and acquisitions during any year from 2002 through 2006, and zero otherwise.

The standardized coefficients measure the impact of a one standard deviation change in the explanatory variable on the dependent variable. The symbols *, **, and *** indicate statistical significance for the regression coefficients at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Model 1		Model 2		Model 3	
	NON-PERFORMING LOANS/ ASSETS08		LOAN CHARGE-OFFS/ ASSETS08		LOAN LOSS PROVISIONS/ ASSETS08	
	Parameter Estimate	Standardized Coefficient (Rank)	Parameter Estimate	Standardized Coefficient (Rank)	Parameter Estimate	Standardized Coefficient (Rank)
LEGALEXP02-06	1.3568***	0.1329 (5)	1.1233**	0.1161 (5)	1.4372**	0.1127 (3)
ASSETS02-06	0.0008***	0.4429 (1)	0.0008***	0.4350 (1)	0.0015***	0.6429 (1)
MARKET/BOOK 02-06	-0.0012**	-0.2029 (4)	-0.0011*	-0.1896 (4)	-0.0006	-0.0788 (6)
ROE02-06	0.0185**	0.2213 (3)	0.0174**	0.2191 (3)	0.0150	0.1431 (2)
HHI02-06*	0.0208***	0.2247 (2)	0.0211***	0.2401 (2)	0.0117***	0.1009 (5)
LOCATION02-06						
FINHOLDCO02-06	0.0002	0.0073 (7)	0.0002	0.0064 (6)	0.0009	0.0248 (7)
MERGER02-06	0.0003	0.0146 (6)	-0.0001	-0.0014 (7)	-0.0025	-0.1099 (4)
N	408		408		408	
Adjusted R ²	0.5560		0.5335		0.5930	
F-Value	64.87***		59.31***		75.31***	

Table 6

Regression results relating legal expense to buy-and-hold returns and abnormal buy-and-hold returns

This table shows the effect of legal expense and other explanatory variables for 2002-06 on buy-and-hold returns, and abnormal buy-and-hold returns, for January 1, 2007 to December 31, 2008. The buy-and-hold return is the dependent variable in model 1, and the abnormal buy-and-hold return is the dependent variable in model 2. The independent variables are computed for 2002-2006. They are: LITEXP02-06 = our legal expense proxy as a percent of total assets; ASSETS02-06 = the natural log of total assets; MARKET/BOOK02-06 = the ratio of the market value of equity to the book value of equity; ROE02-06 = the ratio of net-income to equity; HHI*LOCATION02-06 = an interaction variable between the HHI (Hirschman-Herfindahl index) and an indicator variable for banks located in the Midwest and Northeast regions of the US and zero elsewhere; FINHOLDCO02-06 = an indicator variable equal to 1 for a BHC that is a financial holding company, and zero otherwise; MERGER02-06 = an indicator variable equal to one for BHCs involved in mergers and acquisitions during any year from 2002 through 2006, and zero otherwise.

The standardized coefficients measure the impact of a one standard deviation change in the explanatory variable on the dependent variable. The symbols *, **, and *** indicate significance at the 10 percent, 5 percent, and 1 percent levels, respectively.

	Model 1		Model 2	
	Buy-and-hold returns (BHR07-08)		Abnormal buy-and hold returns (ABHR07-08)	
	Parameter Estimate	Standardized Coefficient (Rank)	Parameter Estimate	Standardized Coefficient (Rank)
LEGALEXP02-06	-41.5535***	-0.1328 (4)	-35.3083**	-0.1915 (4)
NON-PERFORMING LOANS/ASSETS02-06	5.5773**	0.0967 (5)	5.2537**	0.1548 (6)
ASSETS02-06	-0.0650***	-1.1082 (1)	-0.0318***	-0.9203 (1)
MARKET/BOOK02-06	-0.0067	-0.0362 (8)	0.0176	0.1615 (5)
ROE02-06	0.7483***	0.2912 (2)	0.7519***	0.4968 (2)
HHI*LOCATION02-06	-0.168	-0.0591 (6)	0.0545	0.0325 (8)
FINHOLDCO0-06	0.1509***	0.1719 (3)	0.1121***	0.2168 (3)
MERGER02-06	0.0332	0.0584 (7)	0.0447	0.1339 (7)
N	408		408	
Adjusted R ²	0.6327		0.0654	
F-Value	77.85***		4.12***	

Table 7

Rankings of the three BHCs covered in the case studies relative to all 83 sample BHCs

This table is compiled from annual 10K reports for the three BHCs analyzed in the case studies, and comparable data for the entire sample of 83 BHCs. The rankings are based on the ratio of the legal expense proxy to total assets in decimal form. BHCs are ranked from highest to lowest for each year based on this ratio. Reporting formats differ among BHCs; the proxy most often consists of an item labeled professional fees or professional services on the BHC's income statement.

BANK HOLDING COMPANY	LEGAL EXPENSE PROXY 2006	RANK 2006	RANK 2005	RANK 2004	RANK 2003	RANK 2002
National City	.002023	4	6	9	7	12
Countrywide Financial	.000995	32	54	58	45	42
Wachovia	.001232	35	33	43	43	27

Table 8

Actual Legal Expense Reporting by BHCs and Banks, 2001 - 2012

Panel A. Reporting on the BHC Y9 Report

Year	Number of BHCs reporting	Number of BHCs not reporting	Total	Percent reporting
2001 ³⁶	---	---	---	---
2002	524	5,233	5,757	9.10
2003	645	5,145	5,790	11.14
2004	696	5,058	5,754	12.10
2005	655	5,090	5,745	11.40
2006	231	5,478	5,709	4.05
2007	253	5,417	5,670	4.46
2008	601	4,936	5,537	10.85
2009	685	4,749	5,434	12.61
2010	707	4,559	5,266	13.43
2011	715	4,432	5,147	13.89
2012	801	4,677	5,478	14.62

Panel B. Reporting on the bank call report

Year	Number of banks reporting	Number of banks not reporting	Total	Percent reporting
2001	3,217	5,781	8,998	35.75
2002	3,184	5,567	8,751	36.38
2003	3,137	5,472	8,609	36.44
2004	3,091	5,341	8,432	36.66
2005	3,008	5,294	8,302	36.23
2006	2,857	5,381	8,238	34.68
2007	2,802	5,295	8,097	34.61
2008	3,967	3,906	7,873	50.39
2009	4,072	3,541	7,613	53.49
2010	4,087	3,197	7,284	56.11
2011 ³⁷	0	0	---	---
2012	0	0	---	---

³⁶Legal expense reporting on the Y9 Report began in 2002.

³⁷All legal expense reporting on the call report ceased after 2010.

Panel C. Reporting by three case study banks, 2001 – 2007

Year	Countrywide Y9	National City Y9	Wachovia Y9	Countrywide call report	National City call report	Wachovia call report
2001	No	No	No	No	No	No
2002	No	No	No	No	No	No
2003	No	No	No	No	No	No
2004	No	No	No	No	No	No
2005	No	No	No	No	No	No
2006	No	No	No	No	No	No
2007	No	No	No	No	No	No

NOTE: All three institutions experienced serious financial problems and were merged into other financial institutions in 2008, as described in Appendix A.

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