Do Financial Reporting Concerns Lead Banks to Make Lower Quality Loans?

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Abstract

In the aftermath of the financial crisis, lawmakers, regulators, bankers, and the press have claimed that pressure to grow earnings and meet short-run targets leads banks to originate lower quality loans that experience higher future default rates. We investigate whether these financial reporting concerns are linked to lower loan quality. Specifically, we examine whether future loan default rates are positively associated with: 1) facing more ex-ante pressure to grow earnings or meet growth targets, and 2) actually achieving short-term EPS growth or beating analysts' forecasts. Using non-performing loan data, we find the answer to these questions is no. In fact, among public banks, those facing more pressure to grow earnings or those with a more consistent focus on short-term target beating generally have *fewer* non-performing loans in the future. Further, public banks, which face more pressure meet short-run earnings targets, have loans with higher future credit quality relative to similar private banks. Finally, for off-balance sheet loans that have been securitized, we find no evidence linking growth pressure or target beating with worse future credit quality. Overall, our evidence suggests financial reporting concerns are associated with banks making relatively better long-term lending decisions.

1. Introduction

Lawmakers, regulators, and the press have alleged that in order to grow short-term earnings and meet short-run targets, banks originate lower quality loans that later default at higher rates (e.g., Rutberg 2001, Levin 2011, FCIC 2011). Even bank executives themselves have claimed that constant pressure from investors for earnings growth pushes banks to sacrifice loan quality (e.g., RBC Capital Markets Financial Institutions Conference 2010). In this study, we test the claim that these financial reporting concerns (i.e., concerns with reporting short-term earnings that please investors and analysts) lead banks to make riskier loans with higher future default rates. Specifically, we examine two related research questions. First, do banks that face more ex-ante pressure to meet earnings growth targets sacrifice credit quality by making loans with higher future default rates? Second, do banks that grow quarterly EPS or meet analyst forecasts ex-post do so by making lower quality loans with higher future default rates?

Answering these questions is important because a variety of commentators have claimed that a short-run focus by banks on earnings growth and target beating contributed to the origination of risky loans underlying the financial crisis. While investing in riskier loans can boost current revenue and is not necessarily sub-optimal in a general sense, recent experience indicates these risks were not properly appreciated or managed by banks and other parties. Consequently, future defaults on risky loans hurt bank shareholders, taxpayers, investors in securitized loans, and contributed to financial system instability. From both a public policy and a scholarly standpoint, it is therefore important to understand whether financial reporting concerns contribute to risky lending practices.

Although it seems plausible that financial reporting concerns could systematically lead banks to make lower quality loans, there is room for doubt. First, since the stock price benefits to

hitting short-run earnings targets dissipate quickly once targets are missed (e.g., Myers, Myers, and Skinner 2007), firms have incentives to deliver sustainable and predictable earnings growth. It could therefore be the case that pressure to grow earnings and meet analyst targets disciplines banks into making investments that will sustain performance in future periods. Consistent with this notion, prior research finds that beating short-run EPS targets is associated with higher earnings in future periods (e.g., Bartov, Givoly, and Hayn 2002).

Second, pressure to grow earnings and meet short-term targets is accompanied by attention and scrutiny from analysts and investors. A hypothesis from the bank regulatory literature posits that pressure from analysts and investors leads banks to make better investment choices (e.g., Bliss and Flannery 2001; Flannery 1998). Since most of their capital is raised via government-insured deposits, banks face lower levels of scrutiny from outside claimholders relative to other firms. As a result, more pressure on banks from outsiders to make wise investments may actually serve as a monitoring mechanism. For these reasons, it is possible that financial reporting concerns are associated with better future credit quality.

To test our first research question (whether ex-ante pressure to grow short-term earnings leads banks to make lower quality loans), we use two approaches. First, we associate future loan defaults with a bank's expected growth in short-term earnings forecasted by analysts and its market-to-book (MTB) ratio, which proxies for investors' growth expectations. These variables seek to capture the ex-ante pressure a bank faces to meet investor and analyst growth expectations. Second, given that growth expectations may not perfectly capture short-term reporting pressures, we examine future loan defaults for similar public versus private banks. Since public banks face pressures to report quarterly earnings that please outside investors and analysts while private banks do not, this public/private split is intended to capture ex-ante

financial reporting pressures. We use the model in Nichols, Wahlen, and Wieland (2009) to match similar public and private banks. Our proxy for future loan credit quality is non-performing loans (NPLs), which measure the portion of banks' loan portfolios that are in default or close to default.

After controlling for current NPLs, profitability, and size, we do not find a positive association between future NPLs (up to three years ahead) and proxies for ex-ante pressures to grow earnings among public banks over the 2000 to 2010 period. This finding also holds in the following sub-periods: 2000-2003 (early 2000s recession), 2004-2007 (run-up to the crisis), or 2008-2010 (the crisis). In fact, in most specifications, we actually find a *negative* association between these pressure variables and future NPLs. In addition, we do not find evidence that public banks, which face more pressure to report short-term earnings growth, have loans with worse future credit quality relative to matched private banks. Instead, after controlling for current NPLs, size, and profitability, we find that public banks tend to have lower future NPLs.

To test our second research question (whether banks actually grow earnings and meet earnings targets by sacrificing credit quality), we associate future NPLs with a bank's recent history of achieving quarterly EPS growth and meeting or beating quarterly analyst EPS forecasts. These variables seek to capture a bank's recent performance and success in hitting short-term earnings targets ex-post. This is an important link to test because many have claimed that banks trade-off loan quality to achieve short-term earnings growth or meet earnings targets (see Rutberg 2001, Levin 2011, FCIC 2011).

Among public banks, we generally find a *negative* relation between consistent quarterly EPS growth or meeting/beating analyst EPS forecasts and future NPL's, over the whole sample period and the sub-periods described above. Put differently, for two public banks that had similar

current loan quality, size, and profitability, the one that more consistently avoided earnings declines or beat analyst EPS targets experienced *lower* loan defaults in the future. Thus, banks do not appear to achieve short-term EPS growth or hit analyst earnings targets by sacrificing loan quality.

Lastly, to address concerns that banks may simply sell off and securitize low quality loans, we examine our two research questions using data on securitized loans. We investigate both the decision to securitize and the future credit quality (using past due data) of loans that are securitized. We find that securitizers have higher analyst growth expectations, but lower market growth expectations, relative to non-securitizers. We find no link between short-run earnings growth or target beating and the decision to securitize. Importantly, none of the growth pressure or short-run target beating variables is positively associated with future past due securitized loans. Consistent with our earlier findings, a few of the variables, with MTB being the strongest, actually have negative associations with future past due securitized loans.

Overall, the takeaway from our tests is that neither ex-ante measures of pressure to grow earnings nor ex-post realized measures of hitting short-term earnings targets are linked to worse loan quality. Instead, our evidence suggests that these variables tied to financial reporting concerns are generally associated with banks making better long-term lending decisions. Our findings help advance the burgeoning literature on factors that may have contributed to the financial crisis (e.g., Barth and Landsman 2010; Beltratti and Stulz 2012; Bhat, Frankel, and Martin 2011; Fahlenbrach and Stultz 2011; Laux and Leuz 2010; Ryan 2008). In addition, although we focus on banking and real investment, our results implying benefits from financial reporting pressures are consistent with the recent studies that find publicly traded firms tend to

have better financial reporting quality than private firms (e.g., Hope, Thomas, and Vyas 2013; Burgstahler, Hail, and Leuz 2006).

Finally, our results may have implications for bank regulators. A report recently released by the U.S. Senate Permanent Subcommittee on Investigations was critical of banks and regulators that let a focus on short-term profit and growth excuse risky lending practices (Levin 2011, 162). The report recommended that bank regulators ensure that the asset quality ratings they assign "reflect embedded risks rather than short-term profits" (Levin 2011, 13). To the extent regulators are concerned that a history of short-term target beating and short-term profit growth increases the likelihood banks are investing in riskier, low quality assets, our results suggest the opposite.

A potential limitation of this study is that our sample does not include non-depository mortgage loan originators due to a lack of data needed for our tests. However, the banks in our publicly-listed sample received nearly 93% of the Troubled Asset Relief Program (TARP) funding to loan originators (i.e., excluding funds given to investment banks, insurance firms, manufacturers, and quasi-government entities). Thus, our public sample is at the center of public policy debate regarding financial institution soundness.

The remainder of the paper proceeds as usual. Section 2 discusses the hypotheses we test in more detail. Section 3 contains the research design, and the results of our empirical tests, including robustness checks. Section 4 concludes.

2. Hypothesis Development and Prior Research

Similar to Carter, Lynch, and Tuna (2007), we refer to concerns that public companies have to report short-term accounting earnings that please investors and analysts as "financial reporting concerns." The notion that financial reporting concerns may affect the behavior of

banks is not confined to just a few years leading up the credit crisis. The Organization for Economic Co-operation and Development (OECD) claimed that banking changed in the 1990s toward "an equity culture with a focus on faster share price growth and earnings expansion" (Blundell-Wignall, Atkinson, and Lee 2008). The OECD also claimed that many banks began to pursue risky new investment strategies, such as securitizations and expansion of mortgage lending, in order to become "growth stocks."

A 2001 financial press article on the bankruptcy of the Finova Group, a non-bank commercial lender, claimed the company "collapsed under Wall Street's constant pressure for infinite growth" (Rutberg 2001).[1] In the same article an executive at a competitor said:

> Any public company is under pressure to grow earnings. Mutual funds, money managers, pension funds are all looking for earnings growth that push stock prices up. A public finance company has two basic pressures: growth and loan quality. In Finova's case, the emphasis was on growth and they sacrificed asset quality. This is a prescription for disaster in the finance business.

This pressure to grow earnings was not lost on banking regulators prior to the crisis. A 2004 report by the FDIC on banking trends noted that larger midsize banks were "under pressure from Wall Street analysts to grow like the top 25 banks" (Gratton 2004, 26).

Similar arguments have become more frequent in the wake of the financial crisis. In 2011, the U.S. Senate Permanent Subcommittee on Investigations, chaired by Senator Carl Levin, issued a report titled "Wall Street and the Financial Crisis: Anatomy of a Financial Collapse." Among other things, the Levin report examined in detail the origination of risky loans by Washington Mutual (WaMu), which failed and was seized by the FDIC in 2008. Although the report's case study focused only on WaMu, the goal was to provide insight into poor lending practices in the banking industry as a whole.

[1] The Finova Group was a non-depository commercial lender and is not in our sample. Nevertheless, the arguments above regarding financial reporting concerns, earnings growth, and loan quality apply in spirit to all lenders, both banks and non-banks.

Using internal documents and interviews, the Levin report found that WaMu embarked on a high risk lending strategy concentrated in consumer mortgages in 2004. In a memo to the board of directors about the strategy, WaMu's CEO indicated the lending strategy was part of the Company's ambitious five year plan for EPS growth (Levin Report, Exhibit 6a).[2] WaMu's executives determined that high risk loans could boost current profits through higher interest rates, origination fees, and gains from securitizations/sales.[3] While WaMu securitized many of these high risk loans, it also held many of these loans for investment. Executives acknowledged the plan exposed WaMu to high credit risk that may not manifest for several years, but they indicated this risk could be managed. However, by 2007 the securitization market had started to dry up, and by 2008 WaMu incurred billions in losses in its on-balance sheet loan portfolio (DeSilver 2009). Ultimately, the Levin report concludes that WaMu's search for profit growth led to its downfall (pg. 2). Further, the report was critical of lenders and regulators that allowed short-term profits to excuse risky lending practices (pg. 162).

The concern that banks trade off loan quality for short-term earnings growth has been voiced by banks executives as well in the wake of the crisis. At the 2010 RBC Capital Markets Financial Institutions Conference, a panel of public bank CEO's was asked about the factors that contributed to the financial crisis. One bank CEO responded:

> I think as the industry grew and there was continued pressure to grow earnings, we got sort of caught up in the growth and we began to drift a bit from our standards, and the quality of what we do day in and day out begins to drift some. We focused more on the trees than the forest.

[2] According to company insiders in a press account, WaMu's CEO was "more than most chief executives, . . . focused on WaMu's stock price as the company's - and his - primary gauge of success. [His] view of himself was tied to a constant increase in the stock price. He was fixated on it" (DeSilver 2009).

[3] Gains from securitized loans accounted for as sales are recorded in the period of sale, while up-front fees are recognized over the life of the loan as interest revenue. Nevertheless, increased fees through higher loan volume do boost current income.

Another CEO indicated that bank CEOs feel pressure from investors to grow earnings, and if they do not "it won't be too long till our boards ask us to step out" and these pressures "get to the point where you feel like you've got to ease up on your standards some, even if it's not a lot."[4]

In addition to lawmakers and bankers, the press and regulators have also raised concerns that banks originate riskier loans for short-term profits. A recent article in Forbes alleges that a "drive for short-term profit" fueled the financial crisis, as non-bank mortgage lenders made and sold low quality loans while commercial banks, along with Fannie Mae and Freddie Mac, "jumped in" to protect their profits and market share (Swift 2011). In an Op-Ed column in the Washington Post, outgoing FDIC chair Sheila Bair lamented the "short-termism that dominates our society" with business executives making poor investment decisions to "meet their quarterly earnings targets" (2011). She also asserted that "financial markets remain too focused on quick profits." Bair also told the Financial Crisis Inquiry Commission (FCIC) that compensation systems at financial institutions allow "high short-term profits to be translated into generous bonus payments, without regard to any longer-term risks" (FCIC 2011, 93).[5]

Although the above arguments are not completely identical, a common narrative does emerge: executives of publicly-traded banks face pressure to grow earnings and meet short-term earnings targets in order to please investors, analysts, and increase or maintain high share prices. This pressure can come from a desire by executives to keep their jobs, since below average stock performance leads to turnover. The pressure can also come from compensation packages that give option grants or bonuses for short-term earnings or stock price performance. Regardless, under this narrative, the pressure to continually grow profits and placate investors leads banks to

[4] Consistent with the above perspective, Cullen (2012) examines the banks that failed between 2008 and 2010 and argues one of the drivers of bank failures was that they sacrificed loan quality in order to achieve high growth.
[5] Mary Schapiro, head of the SEC, also told the FCIC: "Many major financial institutions created asymmetric compensation packages that paid employees enormous sums for short-term success, even if these same decisions result in significant long-term losses or failure for investors and taxpayers" (FCIC 2011, 93).

sacrifice the quality of loans to try to boost short-term performance, but in the long run these loans default at higher rates. These future defaults harm bank shareholders, investors in securitized loans, and taxpayers and contribute to financial system instability.

We test two hypotheses that follow from the narrative above. First, if pressure to grow earnings leads banks to lower their lending standards, one would expect banks facing more of this pressure to make loans with lower credit quality. Thus, the first hypothesis we test is:

> H1: Banks that face more pressure to grow short-term earnings are more likely to make loans with higher future loan defaults.

We refer to H1 as an ex-ante hypothesis because it focuses on *pressure* to grow earnings and please analysts or investors, regardless of whether banks actually achieve this financial reporting objective. We also test an ex-post hypothesis that applies specifically to firms that actually achieve financial reporting objectives:

> H2: Banks that more consistently grow short-term earnings and meet short-run targets are more likely to make loans with higher future loan defaults.

This hypothesis focuses explicitly and purposely on banks' realized performance in achieving financial reporting objectives ex-post because this performance is part of the common narrative discussed above. If there really is a tradeoff between loan quality and short-term earnings growth or target beating, as some claim, it is important to test H2.

Reasons why the above hypotheses may not hold

Although the common narrative above sounds plausible, there is room for skepticism. First, evidence in a recent study by Fahlenbrach and Stultz (2011) [FS] casts doubt on the compensation link to poor bank decision making, whereby bonus and equity incentives tied to financial reporting concerns lead banks to act myopically. FS examine the compensation of large bank CEOs prior to the crisis and their banks' stock price performance during the crisis. They

find no evidence that banks with CEOs that had higher option compensation or a larger fraction of compensation in the form of bonuses performed worse in the crisis. FS point out that bank CEOs actually had incentives to not be myopic in the run up to the crisis because most options and equity bonuses they received had lengthy vesting periods. Further, since most of their wealth was tied up in existing share holdings, CEOs stood to lose – and, due to virtually no anticipatory selling, actually did lose – large portions of their wealth once the financial crisis hit.

Second, there is a hypothesis in the bank regulatory literature that pressure from outside investors and analysts can lead to greater scrutiny and ultimately better real investment decision making. Since banks raise most of their capital through deposits, and since depositor losses are insured by the government, banks do not face as much scrutiny from outside claimholders (particularly fixed claimholders) to make sound investment decisions as comparably-sized firms in other industries (Macey and O'Hara 2003). This stream of literature argues that outside investors and analysts can exert pressure on banks to protect shareholder wealth, make sounder long-run investment decisions, and act as outside monitors (see discussion in Bliss and Flannery 2001 and Flannery 1998). Bliss and Flannery (2001) cite a report from the Basel Committee on Banking Supervision that claims capital market discipline from outside investors "imposes strong incentives on banks to conduct their business in a safe, sound, and efficient manner."[6] However, as Flannery (1998) and Bliss and Flannery (2001) note, the empirical evidence on this conjecture is limited and mixed.

Finally, prior studies find that the stock price benefits of achieving short-term earnings growth targets are fleeting and dissipate once the targets are missed (e.g., Barth, Elliot, and Finn 1999; Myers et al. 2007). Thus, the pressure to meet short-term targets may actually serve as

[6] Macey and O'Hara argue, however, that outside equity holders can make banks take on more risk, because risk-averse bondholders are not present to counter balance equity holders' risk-seeking tendencies (2003, 98).

disciplining mechanism to encourage managers to deliver not just higher current performance, but higher performance that can be sustained in the future. Consistent with this notion, but inconsistent with the myopia argument inherent in the common narrative discussed above, prior studies find firms that meet or beat analyst forecasts have higher earnings in future periods (Bartov et al. 2002, Kasznik and McNichols 2002). Thus, it is possible that such pressure actually encourages managers to invest in higher quality loans that can yield more sustainable performance in the future. Overall, while the common narrative is wide-spread and seems plausible, we view it as an open question whether it is true.[7]

3. Empirical Tests and Results

To test H1, we use two complementary approaches. First, among a sample of public banks with analyst forecasts, we examine whether pressures to grow earnings are associated with higher future loan defaults. Second, we provide corroborating evidence by comparing the future loan quality of public and private banks. Since public banks face pressure to report quarterly earnings that please outside investors and analysts while private banks do not, we compare a sample of public banks to a matched sample of private banks and test whether public banks have higher future loan defaults. To test H2, we focus on public banks with analyst forecasts and examine whether achieving earnings growth and meeting analyst targets is associated with higher

[7] Prior work suggests that a focus on short-term performance can lead managers to make sub-optimal investment choices (Bar-Gill and Bebchuck 2003; Stein 1989; Graham, Harvey, and Rajgopal 2005; Bhojraj and Libby 2005). Archival studies involving non-banks have found that pressures to grow earnings and meet short-run targets are associated with cuts in discretionary spending like R&D in certain settings (e.g., Baber, Fairfield, Haggard 1991; Bushee 1998; Roychowdhury 2006). However, we are not aware of prior studies that examine whether such financial reporting concerns lead banks to make riskier, low quality loans. Examination of this issue in our study is important for at least two reasons. First, banks do not have R&D, so prior findings involving R&D cuts may not generalize to banks' investment choices. Banks' primary investments are loans, which account for 70% to 80% of their total assets on average (Cantrell, McInnis, and Yust 2013). Second, prior research generally examines myopia in the form of *under-investment*, where firms pass up good projects (i.e., cut R&D) that could yield future benefits. The alleged myopia in banks' behavior, on the other hand, is different and involves *mal-investment*, where banks invest heavily in risky, low quality projects (i.e., loans) that later fail to pay off.

future loan defaults. We first discuss our tests of H1 and H2 involving public banks. Next, we discuss our tests of H1 using the public/private split.

3.1 Public Banks with Analyst Forecasts

Design

Our proxy for low quality loans with high future default rates is future non-performing loans (NPLs). NPLs are loans that are on non-accrual status (i.e., not accruing interest) or have been restructured due to borrowers' financial trouble. Once loans are 90 days past due, they are automatically classified by regulators as non-accrual unless they are sufficiently well-collateralized and are in the process of collection. NPLs have been used in a variety of prior studies as a (relatively) non-discretionary credit loss measure (Liu and Ryan 1995; Liu, Ryan, and Wahlen 1997; Wahlen 1994). We regress future NPLs on proxies for the financial reporting concerns (FRC) in H1 and H2 and controls in the following model:

$$NPL_{it+x} = \alpha + \beta'[FRC]_{it} + \delta'[Controls_{it}] + \varepsilon_{it} \quad (1)$$

where x is a future horizon from one to three years. We select two proxies each to test H1 and H2. For H1, our first proxy is $AGROWTH_{it}$, which measures analysts' consensus EPS growth expectations for the upcoming year, rescaled to represent expected growth in ROA. Our second proxy is the market to book ratio (MTB_{it}), which captures investors' expectations of future earnings growth. Overall, banks with higher $AGROWTH_{it}$ and MTB_{it} face greater expectations and pressure from analysts and investors to grow short-term earnings and meet earnings growth targets. If H1 holds, we expect coefficients on these pressure proxies to be positive.

For H2, our first proxy is EPS_INC_{it}, which measures the proportion of times over the past eight quarters a bank has achieved growth in EPS relative to the same quarter in the prior year. Our second measure is $MEETBEAT_{it}$, which measures the proportion of times over the past

eight quarters a bank has met or exceeded the analyst consensus quarterly EPS forecast. Although pressure to meet analyst expectations is not specifically cited as extensively as a pressure to grow earnings by critics, the motivation of managers under the common narrative is to please investors and keep stock prices high, and meeting analyst forecasts helps achieve that goal. Both EPS_INC_{it} and $MEETBEAT_{it}$ aim to capture banks' focus on consistently avoiding short-term earnings declines and meeting analyst forecasts. If H2 holds, we expect coefficients on these variables to be positive.

For controls, we select variables that could affect future NPLs but are not necessarily related to the criticisms motivating H1 and H2. Our first control variable is current NPLs. Since NPLs are fairly persistent, current NPLs are a robust predictor of future NPLs. We want to guard against the possibility that any of our variables of interest are related to future NPLs solely because of their association with current NPLs. For example, we want to ensure that banks facing higher growth pressures do not have worse future loan quality simply because they have worse loan quality currently. In fact, the general premise under H1 and H2 is that banks originate risky loans that are currently performing to boost short-term earnings but these loans later default at higher rates in the future. Thus, we want to neutralize differences across banks in current NPLs when testing H1 and H2.

Our second control variable is logged market value of equity ($LNMVE_{it}$), which is a proxy for size or scale. Prior research in banking suggests that larger banks hold a more diversified loan portfolio, which could reduce risk and future NPLs (Demsetz and Strahan 1997). However, there is evidence that larger banks tend to take on more risk, which could actually increase future NPLs (Demsetz and Strahan 1997; Shrieves and Dahl 1992). Regardless, we want

to ensure any relation between our variables of interest and future NPLs is not driven simply by bank size.

Our final control is current profitability (ROA_{it}). Putting aside the myopia concerns embedded in H1 and H2, profitable banks currently have assets yielding higher returns and have made better prior investment decisions on average compared to unprofitable banks. To the extent this effect is persistent, current profitability is likely to be negatively related to future NPLs. Further, since banks with higher EPS_INC_{it} and $MEETBEAT_{it}$ are likely to be more profitable, we also include ROA_{it} to ensure that any association between these variables and future loan quality is not simply attributable to current profitability levels.[8]

Sample

To estimate equation (1), we select all U.S. publicly-listed bank holding companies (referred to as "banks" throughout the paper) with data available in I/B/E/S to calculate $AGROWTH_{it}$, EPS_INC_{it}, and $MEETBEAT_{it}$.[9] We focus on bank holding companies to be consistent with most prior banking literature and due to data availability.[10] We obtain regulatory accounting and loan data reported on the FR Y-9C and stock price data from the SNL Financial Institutions Database. Since we test H1 and H2 both before and during the financial crisis, we collect NPL data from 2000 to 2011. Overall, this procedure yields 2,696 observations, averaging about 225 banks per year. Equation (1) requires at least one year of future NPLs, so we can only estimate this regression using covariates from 2000 to 2010, which leaves us with a

[8] As an additional control for current profitability, we include the annual buy-and-hold return over the fiscal year as an additional control variable and results are similar (untabulated).
[9] We exclude institutions such as brokerage houses or other non-traditional banks that converted into bank holding companies during the financial crisis to obtain access to TARP such as Goldman Sachs Group or American Express.
[10] Non-bank holding companies such as non-depository lenders and thrifts do not file the FR Y-9C, which we need to perform our analyses.

sample of 2,227 observations. As stated in section 1, this sample received 93% of all TARP funding to lenders (untabulated).

Descriptives

Panel A of Table 1 contains descriptive statistics for variables in equation (1). Mean NPLs were about 1.66% of total loans over the sample period. While this figure may seem small, keep in mind that due to their inherent leverage, banks' loan portfolios are several orders of magnitude greater than shareholders' equity. Thus, a small amount of non-performance in the loan portfolio can have a dramatic adverse effect on investor wealth, as the financial crisis demonstrates. Panel A also indicates that the mean (median) growth in ROA forecasted by analysts for the upcoming year was about 0.22% (0.12%) over the sample period. Also, over the prior eight quarters, the average bank avoided declining EPS about 58% of the time. Most banks in the sample were profitable over the sample period.

Panel B of Table 1 contains Pearson and Spearman correlations between the variables in equation (1). The two growth pressure proxies from H1, AGROWTH and MTB have mixed correlations with one another (the Spearman correlation is weakly positive, while the Pearson correlation is negative). The primary reason is that many firms with high expected EPS growth by analysts have had poor recent performance (see the negative correlation between ROA and AGROWTH). In untabulated analysis, when we orthogonalize AGROWTH to ROA, we find that AGROWTH is consistently positively correlated with MTB_{it}, which gives us confidence that both measures proxy for growth expectations. The two ex-post measures of earnings growth and target beating (EPS_INC and MEETBEAT) from H2 are positively correlated ($p < 0.01$).

Full Sample Regression Results

We present estimates from equation (1) in Table 2. All standard errors throughout the paper are clustered by bank.[11] For NPL_{it+1} and NPL_{it+2}, we present results for each test variable in the regression by itself with controls, as well as the full model with all test variables included at once. To save space, we present results for the full model only for NPL_{it+3} (results from the individual models at this horizon are similar to those tabulated and are available upon request). Across all future horizons, neither the growth pressure proxies in H1 nor the target beating proxies in H2 are positively related to future NPLs. In fact, in most specifications these variables are associated with *lower* future NPLs (i.e., *better* future loan quality).

Thus, inconsistent with H1, banks facing the highest current expectations by analysts and investors to grow earnings did not make loans that were the most likely to experience future defaults. Likewise, inconsistent with H2, banks that achieved the most consistent growth in short term earnings and success in meeting short run targets did not do so at the expense of long-term credit quality. Instead, banks under the most pressure for earnings growth and those with a stronger focus on short-run target beating actually made loans with better future credit quality over the sample period. This evidence is consistent with the alternative theories discussed in Section 2, which predict that financial reporting concerns may be linked to better credit quality.

Regression Results by Time Periods

Although Table 2 pools observations together over the entire sample period, NPLs were not constant from 2000 – 2011. Figure 1 plots the evolution of NPLs for the banks in Table 2. NPLs rose slightly during the recession of 2001-2002, but then fell until 2005. Beginning in 2007, NPLs started increasing. By 2010, they were nearly eight times as big as their pre-financial

[11] We do not report results with clustering by bank and year because we only have 11 years in our main on-balance sheet sample, 10 years in our securitization and off-balance sheet samples, and even fewer in the sub-period analysis. Petersen (2009) reports that clustering by firm and year with fewer than 10 years produces nearly identical results as clustering only by firm. We confirm this finding in our sample (untabulated).

crisis level, which underscores the severity of the crisis. Given these time-series patterns, we estimate equation (1) across three distinct periods: 1) the early 2000s recession period (2000-2003); 2) the run-up to the financial crisis (2004-2007); and 3) the financial crisis (2008-2010).

Results across these time periods for various models two to three years ahead are presented in Table 3.[12] As in Table 2, none of the financial reporting concern variables is significantly positively associated with future NPLs. As before, in many specifications these variables are negatively associated with future NPLs. Most of the negative loadings appear attributable to the latter two periods when future NPLs were higher and the regressions likely have more power to detect differences across banks.

If H1 and H2 were true, one would expect the strongest effects to be seen in the 2004-2007 period for NPL_{t+2} (covering future NPLs measured from 2006 to 2009) and NPL_{t+3} (covering future NPLs measured from 2007 to 2010). These are the periods of the poorest alleged lending practices according to many proponents of the views underlying H1 and H2. However, the financial reporting concern variables, particularly the growth pressure variables, are associated with relatively *better* future loan quality as the crisis hit. Overall, the evidence in Tables 2 and 3 is inconsistent with both H1 and H2.

3.2 Public vs. Private Banks

Design

It is possible our proxies for ex-ante earnings growth pressure in Tables 2 and 3 may not perfectly capture this construct. Thus, we design another test that does not rely on growth expectations to proxy for the pressure to grow short-term earnings and please investors and investors. Instead, we compare public banks to private banks. Currently, banks with assets

[12] Solely to save space, we only tabulate results for periods two to three years ahead. Results for the one year ahead models are quite similar to those tabulated (none of the variables in H1 and H2 are positively associated with future NPLs) and are available upon request. We also suppress t-statistics in Table 3 for brevity.

greater than $500 million in consolidated assets must file financial statement and other information with the Federal Reserve, regardless of whether their stock is publicly traded.[13] Prior research has shown that private banks differ from public banks in both performance and financial reporting patterns (Beatty and Harris 1998; Beatty, Ke, and Petroni 2002; Nichols et al. 2009).[14] Since private banks' stocks are not traded in a public capital market, they face virtually no pressure from outside investors and analysts to grow EPS and maintain high share prices. Public banks, on the other hand, do. Thus, if H1 holds, we would expect public banks *on average* to be more likely to make poor current lending decisions that lead to higher default rates relative to private banks.

To test this proposition, we estimate a regression similar to equation (1):

$$NPL_{it+x} = \alpha + \beta PUBLIC_{it} + \delta'[Controls]_{it} + \varepsilon_{it} \quad (2)$$

where NPLs are defined as before and $PUBLIC_{it}$ is an indicator variable equal to 1 if a bank is public and 0 if it is private. We discuss our sampling procedure to match public banks with similar private banks below. For control variables, we again include current NPLs, ROA_{it}, and a proxy for size (logged assets ($LNAT_{it}$) instead of $LNMVE_{it}$). The coefficient on $PUBLIC_{it}$ should be positive under H1.

Sample

[13] Bank holding companies with less than $500 million in consolidated assets may also be required by the Federal Reserve to report regulatory data on the FR Y-9C based on certain other criteria such as conducting significant off-balance sheet activities or engaging in significant nonbanking activities. In 2006, the Federal Reserve raised the asset-size filing threshold from $150 to $500 million. To ensure that changes in the population of banks required to file the FR Y-9C is not driving our results and to have a more comparable set of banks over time, we eliminate all bank years from 2000 – 2005 with total assets less than $500 million unless that bank is still currently required to report data on the FR Y-9C despite having less than $500 million in assets.

[14] Beatty and Harris (1998) and Beatty et al. (2002) find that public banks engage in *more* earnings management due to greater information asymmetry for public banks and a greater pressure to meet earnings benchmarks. Nichols et al. (2009) find that public banks report more conservative earnings due to a greater market demand for it due to their ownership structure. Differences in financial reporting for public and private firms have also been examined for non-banks. For example, Burgstahler et al. (2006) examine international non-banks and find that public firms engage in *less* earnings management due to greater pressures by the capital markets to provide higher quality and informative earnings.

One challenge in estimating equation (2) is identifying a comparable set of public and private banks because public banks differ from private banks in many ways (Nichols et al. 2009). At the extreme, there are simply not any privately held banks that are comparable to, say, Bank of America. We therefore use the approach in Nichols et al. (2009), who study how public and private banks differ in their financial reporting choices, as a starting point. We begin with a sample of all U.S. publicly-held banks in SNL with available data to estimate equation (2).[15] This is a larger set of public banks than we use to estimate equation (1) because we do not require analyst coverage. We then add in all private banks in SNL with data available to estimate equation (2) and take great care to ensure that we exclude private bank subsidiaries of public banks that separately report regulatory data. Following Nichols et al. (2009), we eliminate any public bank with total assets greater than the largest private bank and any private bank with total assets less than the smallest public bank in a given year. This procedure removes extreme size mismatches.

Next, we estimate a public/private logit determinants model developed by Nichols et al. (2009), where a bank's listing status (public or private) is regressed on a series of determinants.[16] These determinants include differences in banks' investment opportunities (e.g., loan types, security types, loan vs. securities mix) and capital structure strategies (e.g., debt vs. deposits, amount of contributed capital). For each public bank each year, we select a unique matching private bank with the closest predicted listing propensity from the determinants model. This procedure results in a sample of public and private banks matched as closely as possible on the

[15] We classify as bank as public if SNL Financial has stock price data in year t.
[16] Results are similar if we use our full truncated sample of public and private banks and (a) include the Nichols et al. (2009) model determinants as control variables or (b) simply use a public bank dummy variable without requiring a one-to-one public private match, consistent with earlier banking literature (e.g., Beatty and Harris 1998; Beatty et al. 2002).

determinants of listing status modeled in Nichols et al. (2009). We use this sample, which has 8,962 observations, to estimate equation (2).

Results

Similar to Figure 1, Figure 2 plots the evolution of NPLs over the sample period for matched public and private banks used to estimate equation (2). The two lines are virtually identical. Thus, inconsistent with H1, it does not appear that public banks made worse loans that experienced higher future default rates before or during the credit crisis, at least on a univariate basis. We also include a third line in Figure 2: NPLs for the public banks with analyst coverage that are excluded from our matched sample (because they are bigger than the biggest private bank in a year) but are included in our public sample in Figure 1 and Tables 2 and 3. This group of larger banks arguably faces more pressure to report growing quarterly EPS to please analysts and investors than the other two groups of banks. Inconsistent with H1 though, these banks actually had the lowest NPLs over the sample period, particularly during the financial crisis.

Panel A of Table 4 presents descriptive statistics for the covariates in equation (2). There is no significant difference in current mean NPLs between matched public and private banks. However, given their access to public equity markets, public banks are not surprisingly larger than private banks. They are also less profitable on average, which is consistent with Nichols, Wahlen, and Wieland (2005).

We present estimates from equation (2) in panel B of Table 4. Controlling for current NPLs, profitability, and size, public banks actually have lower future NPLs over one to three year horizons into the future relative to private banks. Thus, a public bank with similar current NPLs, ROA, and LNAT relative to a matched private bank is predicted to have lower NPLs in the future by about 12 to 23 basis points. This evidence in inconsistent with H1 but is generally

consistent with the tenor of the results in Tables 2 and 3. Overall, the evidence in Tables 2 through 4 suggests that financial reporting concerns are associated with better, not worse, future loan quality.

3.3 Securitizations and Off-Balance Sheet Loans

One explanation for our failure to find support for H1 and H2 could be that public banks, particularly large public banks, originate and securitize (or sell off) low quality loans. Our tests thus far, which have focused on loans held and kept on the balance sheet, would not pick up such effects. Landsman, Peasnell and Shakespeare (2008) report that the market views asset securitizations as incomplete risk transfers. In other words, the market views the securitized assets and liabilities as belonging to the sponsor-originator, not to the special purpose entity (SPE). In addition, Barth, Ormazabal, and Taylor (2011) document that credit risk is positively associated with both retained interest and the portion of securitized assets not retained by the securitizer.[17] These findings reinforce the importance of examining the quality of securitized loans. We therefore test whether our variables of interest are related to: a) the decision to securitize and b) the future credit quality of the securitized assets.

In 2001, bank holding companies that file a FR Y-9C began reporting on schedule HC-S the outstanding principal balance of all assets that have been sold and securitized and no longer presented on balance sheet (i.e., the securitizations are accounted for as sales rather than secured borrowings) where the originator either: a) retains servicing rights (e.g., collecting and processing collections), or b) provides for recourse or some other form of credit enhancement to purchasers of the asset-backed securities. In most securitizations, securitizers typically provide credit enhancement by retaining a subordinated interest that absorbs credit losses if the quality of

[17] In related research, Dechow and Shakespeare (2009) and Dechow, Myers, and Shakespeare (2010) document evidence of banks using securitizations opportunistically for various accounting purposes such as obtaining financial statement window-dressing or recognizing a gain on sale.

the asset pool deteriorates. This retention helps mitigate adverse selection problems arising from the securitizers having superior information about the securitized assets' credit quality (Chen, Liu, and Ryan 2008; Ryan 2008). Banks must also report the amount of these securitized loans that are past due and the amount of any net-chargeoffs (i.e., loan write-offs) for these assets. Compared to financial statement disclosures about securitizations, schedule HC-S disclosures are more standardized and detailed and have been used by recent studies to examine securitizations (e.g., Chen et al. 2008; Cheng, Dhaliwal, and Neamtiu 2011).

Design and Sample

To examine whether the financial reporting concern variables in H1 and H2 influence the securitization decision, we estimate the following logistic regression:

$$SECURITIZE_{it}: \alpha + \beta'[FRC]_{it} + \delta'[Controls]_{it} + \varepsilon_{it} \quad (3)$$

where $SECURITIZE_{it}$ is an indicator variable equal to 1 if a bank has non-zero balances for securitized items in schedule HC-S in a given year and zero otherwise.[18] Since virtually all securitization activity is confined to public banks with analyst coverage (untabulated), we use our sample of public banks from Figure 1 and Tables 2 and 3 to estimate equation (3).[19] We therefore use the same variables of interest and control variables as we did in estimating equation (1).

To examine whether financial reporting concerns are associated with worse future credit quality among securitized assets, we estimate the following regression:

$$PASTDUE\_OBS_{it+x} = \alpha + \beta'[FRC]_{it} + \delta'[Controls]_{it} + \varepsilon_{it} \quad (4)$$

[18] Results are similar if we estimate the model at the firm level, rather than the firm-year level, where we model the decision by a firm to engage in securitizations or not (untabulated).

[19] Since this sample of public bank holding companies does not include non-depository lenders because of a lack of data availability, the securitizations by our sample firms do not represent the entire securitization market. However, in untabulated analysis we found that the mortgage securitizations reported by our sample firms comprised approximately 50% of the private mortgage-backed securities market reported by the Federal Reserve as of 2007. Thus, the securitizations covered by our sample are economically significant.

where $PASTDUE\_OBS_{it+x}$ are the proportion of off-balance sheet, or securitized, loans that are past due as of the report date. Unfortunately for our purposes, banks are not required to disclose NPLs on securitized assets. Thus, we use past due loans on securitized assets to proxy for loan quality. Past due loans are closely related to NPLs and are also a relatively non-discretionary measure of poor credit quality. Loans that are past due more than 90 days become NPLs unless they are sufficiently well-collateralized and in the process of collection.

All of the other variables in (4) are the same as those we use to estimate (1), except we use $PASTDUE\_OBS_{it}$ as a control instead of NPL_{it} for consistency. We estimate (4) on securitized loans of securitizers. Overall, if H1 and H2 are true, we expect proxies earnings growth pressures and earnings target beating to be positively related to the decision to securitize in (3) and positively related to future past due loans in (4).

Results

Panel A of Table 5 provides descriptives on securitization variables. Among public banks with analyst coverage, only about 17% engaged in securitization (82 unique banks) as reported on schedule HC-S. The next two rows are variables that we do not use in our tests but we list them for descriptive purposes. The mean percent of total assets securitized ($SECPERCENT_{it}$) across all banks in our public sample is about 1.5%. If we examine just securitizers ($SECPERCENT_{it}>0$), this average goes up to about 8.5%. In untabulated descriptives, we found that the total outstanding assets securitized in our sample each year divided by the total bank assets in our sample ranged from 11% to 16% from 2001 to 2006.

Panel B of Table 5 contains estimates from equation (3). Consistent with H1, banks facing greater expectations by analysts to grow earnings are more likely to securitize, but inconsistent with H1, banks with the highest market expectations for growth are less likely to

securitize. Inconsistent with H2, neither a past history of quarterly EPS growth nor meeting or beating analyst forecasts is related to the securitization decision. Not surprisingly, bank size (LNMVE) is strongly positively related to the securitization decision. This positive relation is likely most attributable to scale and sophistication effects. Securitizations are complex and require large pools of loans, and larger banks are therefore better positioned to securitize their assets.

In Table 6, we present estimates from equation (4). Consistent with the tenor of the results from all prior tables, but inconsistent with H1 and H2, there is some evidence that the financial reporting concern variables are associated with lower past due loans, depending on the specification, with the strongest effect for MTB. None of the proxies for earnings growth pressure or target beating are positively related to future past due loans, including AGROWTH, which was positively linked to the decision to securitize in Table 5.

For the control variables, bank size is positively linked to future past due loans. It is possible that size could be capturing financial reporting concerns in this regression. However, the fact that none of the earnings growth pressure or target beating variables, which are more closely tied to the arguments in H1 and H2, load positively suggests other factors may be at work. One explanation is that given their name recognition, sales volume, and ability to offer implicit and explicit credit enhancement, bigger and more well-known banks may simply be better positioned to securitize lower quality loans into pools and still locate willing buyers. Smaller, less well-known banks may not have this luxury. Since size can stand for many things, it is difficult to tell. Overall, though, across both Tables 5 and 6 there is no consistent evidence to support the notion that arguments underlying H1 and H2 extend to securitized loans. In fact, there is some evidence that financial reporting concerns are linked to securitized loans with better future credit quality.

3.4 Robustness Tests

Analyst Coverage

Some studies, such as Yu (2008), argue that analyst coverage could serve as a proxy for pressure to manage earnings, although Yu (2008) actually finds the opposite. Since the number of analysts covering a firm is not closely related to the arguments underlying H1 and H2, we do not include it in our main tests. When we include residual analyst coverage (orthoganalized to size, as in Hong, Lim, and Stein 2000), in equation (1), its coefficient is not statistically significant at any horizon.

Annual Regressions and Fixed Effects

We ran year-by-year regressions of equation (1) at all three horizons and averaged the coefficients using the approach in Fama and MacBeth (1973). Results are similar to those reported in Table 2. None of the variables of interest are positive, and many are significantly negative, depending on the horizon. For example, for NPLs two years ahead, the t-stats on AGROWTH, MTB, EPS_INC, and MEETBEAT are -2.34, -1.59, -2.11, and -0.72 respectively. We also ran our main analysis in Table 2 with firm fixed effects to ensure the results were not attributable to our variables of interest being correlated with long-run performance (i.e., some banks are just high achievers). Inferences are similar to Table 2.

Real Estate Loans

Ryan (2008) discusses losses on subprime mortgages specifically as one of the biggest drivers of the financial crisis. Other real estate loans, such as commercial real estate loans, are also considered key drivers of the financial crisis and are frequently cited as the very types of loans for which banks were pressured to sacrifice credit quality standards (Cullen 2012). To ensure that financial reporting concerns didn't affect these types of loans differently, we estimate

equation (1) using (a) only consumer real estate non-performing loans or (b) total real estate non-performing loans. We find results similar to those presented in Table 2.

Endogeneity: Public vs. Private

Our inferences from equation (2) could suffer from an endogeneity problem, since banks choose to go public. Although we match public banks with private banks using the determinants model from Nichols et al. (2009), if there is some variable not in the matching model that influences listing status and is correlated with future loan quality, then equation (2) suffers from a correlated omitted variable problem (Heckman 1979). As a consequence, we calculate the inverse Mills ratio from the Nichols et al. (2009) determinants model (using probit regression) for each public and private bank and include this ratio as an additional covariate in (2). This variable is not significant (t = 1.11), and which indicates there is not a significant selection problem. Further, the coefficient on PUBLIC remains significantly negative.

Failure Analysis

One alternative explanation for our results could be that financial reporting concerns affected banks differently: for some banks, financial reporting concerns resulted in sub-optimal loan decisions that ultimately resulted in the bank's failure while for others financial reporting concerns resulted in better loan decisions. Our sample may then underestimate the negative impact of financial reporting concerns because the banks that are most adversely affected will drop out of our sample upon failure. To address these concerns, we identify the failed banks in our sample and estimate whether our four variables of interest in H1 and H2 increased the risk of bank failure (using logit regression). These variables were either negative but insignificantly related to failure or actually negative and significantly related to failure (that is, higher financial reporting concerns made banks *less* likely to fail).

Other Credit Quality Measures

For the off-balance sheet tests in equation (4), we also used net charge-offs (cumulative or non-cumulative) on securitized loans instead of past due loans as a measure of future credit quality. Results are similar, with no growth pressure or target beating variables coming through positively, and some (particularly MTB) coming through negatively. While chargeoffs are a more finalized measure of credit losses compared to past due loans, they are also more discretionary. Further, the distribution of chargeoffs for our securitized loans sample is highly skewed compared to past due loans. For these reasons, we present results with past due loans in Table 6. For consistency, we also estimated equations (1) and (2) for the on-balance sheet tests using past due loans or net charge-offs (cumulative or non-cumulative) instead of NPLs. Results are similar to those presented in Tables 2 and 3.

4. Conclusion

We examine whether financial reporting concerns are linked to poorer loan quality. Specifically, we test whether: 1) ex-ante pressures to grow earnings, or 2) ex-post success in growing EPS and beating analyst forecasts are associated future loan default rates. These future loan defaults harm investors, holders of securitized loans, and the financial system. Arguments underlying the above two hypotheses have been repeated in some form by lawmakers, regulators, the press, and bankers, particularly in the aftermath of the financial crisis.

However, we find no empirical evidence to support the above hypotheses. Banks that face high expected growth or that have a history of short-term EPS growth and meeting analyst forecasts do not hold loans that default at higher rates in the future. On the contrary, in most of our tests, such banks actually have loans with lower future defaults. Thus, there is no evidence that banks systematically sacrifice loan quality in the face of earnings growth pressures nor is

there evidence banks actually achieve short-term earnings growth or beat earnings targets by myopically sacrificing long-term loan quality for current performance. Further, we find that publicly-traded banks tend to hold loans with lower future default rates relative to comparable private banks. Since private banks face virtually no financial reporting pressures to report growing short-term earnings to please investors and analysts while public banks do, this evidence is hard to reconcile with the assertion that ex-ante pressures to grow earnings and please financial markets lead banks to sacrifice loan quality.

While the above evidence addresses the quality of on-balance sheet loans, we also investigate whether financial reporting concerns are linked to the decision to securitize loans and future credit quality of loans that are securitized and taken off the balance sheet. Although we find that banks facing high expected earnings growth from analysts are more likely to securitize, this expected earnings growth is not linked to higher future default rates on loans that are securitized. Further, none of our other proxies for financial reporting concerns are linked to higher future default rates on securitized loans, and some are linked to lower future default rates. Overall, it appears that financial reporting concerns are associated with better long-term loan quality.

Our findings are subject to some important caveats, however. First, although we attempted to select proxies for financial reporting concerns closely aligned with the arguments underlying the common narrative, it is possible our proxies are poor. Second, some critics have made similar claims regarding the short-term incentives of non-bank actors like mortgage brokers and non-bank mortgage lenders. Since our study and available data is confined to banks, we cannot test these claims. Finally, financial reporting concerns are but one of many potential contributing factors to the financial crisis. Our study focuses only on financial reporting concerns

and bank loan quality and cannot speak to whether financial reporting concerns contributed to the financial crisis in other ways.

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Appendix – Variable Definitions

$AGROWTH_{it}$	=	Implied analyst short-term ROA growth rate percentage calculated as 100 multiplied by the difference in the median analyst consensus EPS forecast for year t+1 (as of year t) from the final median analyst consensus forecast for year t, scaled by total assets per share.
EPS_INCR_{it}	=	Proportion of firm-quarters over the prior two years (eight quarters) ending in year t where the quarterly EPS was greater than or equal to the EPS from the same quarter in the prior year.
$LNAT_{it}$	=	Natural log of total assets in year t.
$LNMVE_{it}$	=	Natural log of total market value of equity in year t.
$MEETBEAT_{it}$	=	Proportion of firm-quarters over the prior two years (eight quarters) ending in year t where the actual EPS was greater than or equal to the latest median analyst consensus forecast.
MTB_{it}	=	Total market value of equity divided by book equity in year t.
NPL_{it}	=	Nonperforming loan percentage calculated as 100 multiplied by nonperforming loans divided by total gross loans in year t. Non-performing loans are loans that are in nonaccrual status (e.g., 90 or more days past due and not sufficiently collateralized, payment in full is not expected, or maintained on a cash basis because of deterioration in financial condition of borrower) or have been restructured.
$PASTDUE_{it}$	=	Past due loan percentage calculated as 100 multiplied by total loans where interest or principal are 90 or more days past due but the loan is still accruing interest, divided by total gross loans in year t.
$PASTDUE\_OBS_{it}$	=	Net past due loan percentage that is related to loans that have been securitized.
$PUBLIC_{it}$	=	Dummy variable equal to 1 if the bank is a public bank in year t and 0 otherwise. We classify a bank as public if it has a stock price in year t.
ROA_{it}	=	Return on average assets percentage calculated as 100 multiplied by net income divided by average total assets in year t.
$SECPERCENT_{it}$	=	Securitized asset percentage calculated as 100 multiplied by total outstanding principal balance of securitized assets divided by the sum of the total securitized assets and total on balance sheet assets in year t.
$SECURITIZE_{it}$	=	Dummy variable equal to 1 if a bank has non-zero balances for securitized items in schedule HC-S in a given year and zero otherwise.

Table 1: Descriptive Statistics and Correlations

Panel A: Descriptive Statistics

Variable	N	Mean	Std	P25	P50	P75
NPL_{it}	2,696	1.656	2.210	0.350	0.745	1.970
$AGROWTH_{it}$	2,696	0.216	0.421	0.051	0.120	0.224
MTB_{it}	2,696	1.691	0.860	1.069	1.601	2.177
EPS_INCR_{it}	2,696	0.580	0.303	0.375	0.625	0.875
$MEETBEAT_{it}$	2,696	0.630	0.236	0.500	0.625	0.857
$LNMVE_{it}$	2,696	13.105	1.783	11.879	12.848	14.089
ROA_{it}	2,696	0.795	1.425	0.570	1.020	1.320

Panel B: Correlations

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)
NPL_{it} (1)		*0.321*	*-0.515*	*-0.358*	*-0.367*	*-0.245*	*-0.542*
$AGROWTH_{it}$ (2)	0.038		*-0.117*	*-0.185*	*-0.229*	*-0.100*	*-0.383*
MTB_{it} (3)	*-0.611*	*0.039*		*0.312*	*0.402*	*0.430*	*0.502*
EPS_INCR_{it} (4)	*-0.361*	*-0.042*	*0.347*		*0.551*	*0.177*	*0.378*
$MEETBEAT_{it}$ (5)	*-0.351*	*-0.106*	*0.410*	*0.555*		*0.269*	*0.417*
$LNMVE_{it}$ (6)	*-0.165*	-0.037	*0.469*	*0.166*	*0.268*		*0.356*
ROA_{it} (7)	*-0.540*	*-0.126*	*0.730*	*0.451*	*0.501*	*0.413*	

The full sample for our analysis includes 2,696 firm-year observations, averaging 225 banks per year, for the years 2000 – 2011. Panel A reports descriptive statistics for the main variables of interest over the entire sample period. Panel B reports correlations between the main variables of interest. Pearson (Spearman) correlations are reported above (below) the diagonal; correlations reported in italics indicate significance at the 0.05 level or better, two-tailed. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. Variables are as defined in the Appendix.

Table 2: Impact of Financial Reporting Concerns on Loan Quality

$$NPL_{it+x} = \alpha + \delta_1 NPL_{it} + \beta FRC_{it} + \delta_2 LNMVE_{it} + \delta_3 ROA_{it} + \varepsilon_{it} \quad (1)$$

	NPL_{it+1}					NPL_{it+2}					NPL_{it+3}
Variables	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Intercept	2.02 ***	2.00 ***	1.51 ***	1.54 ***	2.15 ***	3.13 ***	2.96 ***	2.23 ***	2.35 ***	3.27 ***	3.83 ***
t-stat	*8.78*	*8.51*	*6.88*	*6.89*	*9.41*	*7.83*	*7.55*	*5.88*	*6.20*	*8.27*	*6.97*
NPL_{it}	0.88 ***	0.87 ***	0.85 ***	0.93 ***	0.83 ***	0.73 ***	0.72 ***	0.70 ***	0.84 ***	0.66 ***	0.54 ***
t-stat	*27.48*	*26.29*	*26.30*	*24.36*	*25.33*	*14.37*	*13.72*	*13.28*	*13.93*	*11.06*	*4.79*
$AGROWTH_{it}$	-0.32				-0.27	-0.84 ***				-0.74 ***	-1.43 ***
t-stat	*-1.39*				*-1.43*	*-3.10*				*-3.61*	*-4.20*
MTB_{it}		-0.45 ***			-0.35 ***		-0.68 ***			-0.51 ***	-0.39 ***
t-stat		*-9.05*			*-6.99*		*-8.35*			*-6.11*	*-3.85*
EPS_INCR_{it}			-0.97 ***		-0.64 ***			-1.36 ***		-0.80 ***	-0.69 **
t-stat			*-8.17*		*-5.45*			*-6.86*		*-3.79*	*-2.26*
$MEETBEAT_{it}$				-1.20 ***	-0.66 ***				-1.92 ***	-1.19 ***	-1.45 ***
t-stat				*-7.87*	*-4.22*				*-7.29*	*-4.17*	*-3.67*
$LNMVE_{it}$	-0.04 ***	-0.06 ***	0.00	-0.06 ***	0.00	-0.05 *	-0.07 ***	0.01	-0.08 ***	0.02	0.01
t-stat	*-2.70*	*-3.54*	*-0.16*	*-3.62*	*0.05*	*-1.96*	*-2.65*	*0.47*	*-2.84*	*0.57*	*0.18*
ROA_{it}	-0.11	-0.11	-0.08	-0.17	-0.05	-0.03	-0.05	0.02	-0.13	0.05	0.10
t-stat	*-1.58*	*-1.54*	*-1.12*	*-1.51*	*-0.64*	*-0.69*	*-0.90*	*0.43*	*-1.06*	*0.78*	*1.41*
Adj. R^2	0.65	0.65	0.66	0.64	0.67	0.33	0.33	0.34	0.32	0.37	0.16
N	2,227	2,227	2,227	2,227	2,227	1,840	1,840	1,840	1,840	1,840	1,499

This table reports pooled OLS estimates for our full sample of NPL_{it+x} (where x = 1, 2, or 3) regressed on current levels of NPL_{it}, FRC_{it} (financial reporting concerns from H1 and H2: $AGROWTH_{it}$, MTB_{it}, $MEETBEAT_{it}$, EPS_INCR_{it}, separately or combined), and controls. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. t-statistics are based on standard errors that have been adjusted for clustering by firm (Petersen 2009). *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Variables are as defined in the Appendix.

Table 3: Impact of Financial Reporting Concerns on Loan Quality – Time Subsamples

$$NPL_{it+x} = \alpha + \delta_1 NPL_{it} + \beta FRC_{it} + \delta_2 LNMVE_{it} + \delta_3 ROA_{it} + \varepsilon_{it} \quad (1)$$

Panel A: 2000 – 2003

	NPL_{it+2}					NPL_{it+3}				
Variables	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Intercept	0.31 *	0.36 *	0.27	0.34 *	0.30 *	0.39 *	0.47 **	0.43 **	0.45 **	0.51 ***
NPL_{it}	0.53 ***	0.53 ***	0.52 ***	0.53 ***	0.52 ***	0.41 ***	0.40 ***	0.41 ***	0.40 ***	0.41 ***
$AGROWTH_{it}$	-0.20 **				-0.16	-0.31 *				-0.32
MTB_{it}		-0.05			-0.04		0.01			0.02
EPS_INCR_{it}			-0.05		-0.07			-0.07		-0.08
$MEETBEAT_{it}$				0.03	0.06			-	0.06	0.06
$LNMVE_{it}$	-0.01	-0.01	0.00	-0.01	0.00	-0.03 *	-0.03 *	-0.03	-0.03 *	-0.03 *
ROA_{it}	0.07	0.08	0.10	0.08	0.10 *	0.21	0.22	0.21	0.22	0.21
Adj. R^2	0.33	0.33	0.33	0.33	0.33	0.16	0.17	0.16	0.17	0.17
N	677	677	677	677	677	621	621	621	621	621

Panel B: 2004 – 2007

	NPL_{it+2}					NPL_{it+3}				
Variables	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Intercept	3.11 ***	2.98 ***	3.72 ***	2.93 ***	4.31 ***	4.74 ***	4.53 ***	5.40 ***	4.54 ***	5.73 ***
NPL_{it}	1.47 ***	1.53 ***	1.32 ***	1.69 ***	1.29 ***	0.91 ***	0.97 ***	0.76 ***	1.08 ***	0.78 ***
$AGROWTH_{it}$	-2.71 ***				-2.34 ***	-2.71 ***				-2.33 ***
MTB_{it}		-0.95 ***			-0.80 ***		-0.81 ***			-0.66 ***
EPS_INCR_{it}			-0.95 ***		-0.58 *			-0.47		-0.17
$MEETBEAT_{it}$				-1.68 ***	-1.13 **				-1.31 **	-1.01
$LNMVE_{it}$	-0.05	-0.08 *	-0.04	-0.12 ***	-0.03	-0.09	-0.12 *	-0.09	-0.14 **	-0.08
ROA_{it}	-0.08	-0.09	0.08	0.14	0.32 ***	-0.10 **	-0.12 **	0.02	0.14	0.26 ***
Adj. R^2	0.20	0.19			0.27	0.07	0.07			0.11
N	786	786	0.24	0.21	786	705	705	0.10	0.09	705

Panel C: 2008 – 2010

	NPL_{it+2}					NPL_{it+3}				
Variables	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.	Coeff.
Intercept	4.72 ***	4.45 ***	4.22 ***	4.31 ***	4.95 ***	4.14 ***	3.91 ***	3.81 ***	3.73 **	4.16 ***
NPL_{it}	0.58 ***	0.57 ***	0.58 ***	0.61 ***	0.56 ***	0.76 ***	0.76 ***	0.76 ***	0.79 ***	0.72 ***
$AGROWTH_{it}$	-0.45 *				-0.54 **	-0.01				-0.03
MTB_{it}		-0.44 *			-0.27		-0.37			-0.30
EPS_INCR_{it}			-0.92		-0.38			-0.72		-0.35
$MEETBEAT_{it}$				-1.24 *	-1.17				-0.91	-0.57
$LNMVE_{it}$	-0.14 *	-0.14 *	-0.11	-0.15 **	-0.11	-0.11	-0.11	-0.09	-0.12	-0.09
ROA_{it}	0.02	0.01	0.03	-0.07	-0.01	0.13	0.13	0.16	0.11	0.17
Adj. R^2	0.29	0.29	0.29	0.30	0.30	0.20	0.20	0.20	0.19	0.19
N	377	377	377	377	377	173	173	173	173	173

This table reports pooled OLS estimates for our sample of NPL_{it+x} (where x = 2 or 3) regressed on current levels of NPL_{it}, FRC_{it} (financial reporting concerns from H1 and H2: $AGROWTH_{it}$, MTB_{it}, $MEETBEAT_{it}$, EPS_INCR_{it}, separately or combined), and controls. Results are presented separately from 2000 – 2003, 2004 – 2007, and 2008 – 2010 in Panels A, B, and C, respectively, to show how the results vary over time. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. t-statistics are omitted for brevity. p-values are based on standard errors that have been adjusted for clustering by firm (Petersen 2009). *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Results for NPL_{it+1} have not been tabulated to save space. Variables are as defined in the Appendix.

Table 4: Impact of Financial Reporting Concerns on Loan Quality – Public versus Private

$$NPL_{it+x} = \alpha + \delta_1 NPL_{it} + \beta PUBLIC_{it} + \delta_2 LNAT_{it} + \delta_3 ROA_{it} + \varepsilon_{it} \quad (2)$$

Panel A: Descriptive Statistics

Variable	Private Mean	Public Mean	Difference	
NPL_{it}	1.53	1.51	0.02	
ROA_{it}	0.88	0.75	0.13	***
$LNAT_{it}$	13.50	13.98	-0.48	***

Panel B: Regression Results

Variables	$NPL_{i,t+1}$ Coeff.		$NPL_{i,t+2}$ Coeff.		$NPL_{i,t+3}$ Coeff.	
Intercept	-0.68	**	-2.38	***	-3.91	***
t-stat	*-2.45*		*-4.65*		*-5.11*	
NPL_{it}	0.92	***	0.85	***	0.75	***
t-stat	*45.66*		*21.84*		*11.38*	
$PUBLIC_{it}$	-0.12	***	-0.18	***	-0.23	***
t-stat	*-3.35*		*-2.91*		*-2.71*	
$LNAT_{it}$	0.12	***	0.28	***	0.43	***
t-stat	*5.83*		*7.43*		*7.57*	
ROA_{it}	-0.41	***	-0.38	***	-0.29	***
t-stat	*-8.87*		*-5.29*		*-3.34*	
Adj. R^2	0.67		0.35		0.13	
N	8,962		7,695		6,547	

This table reports pooled OLS estimates for a sample of public *and* private bank holding companies of NPL_{it+x} (where x = 1, 2, or 3) regressed on current levels of NPL_{it}, $PUBLIC_{it}$, and controls. Following Nichols et al. (2009), to minimize the impact of extremely large public (small private) that are inherently less comparable to other private (public) banks, we truncate the sample by omitting all public (private) banks each year that are larger (smaller) than the largest private (smallest public). We additionally use the control variables from the public bank selection model in Nichols et al. (2009) and use propensity score matching to match each public bank to a unique private bank. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. t-statistics are based on standard errors that have been adjusted for clustering by firm (Petersen 2009). *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Variables are as defined in the Appendix.

Table 5: Securitizations

Panel A: Securitization Descriptives

Variable	Mean	Std	P25	P50	P75
$SECURITIZE_{it}$	0.172	0.378	0.000	0.000	0.000
$SECPERCENT_{it}$	1.472	5.487	0.000	0.000	0.000
$SECPERCENT_{it}>0$	8.548	10.707	0.608	3.608	12.701
$PASTDUE\_OBS_{it}$	3.882	5.044	0.000	2.436	5.230

Panel B: Decision to Securitize

$$SECURITIZE_{it} = \alpha + \beta FRC_{it} + \delta_1 LNMVE_{it} + \delta_2 ROA_{it} + \varepsilon_{it} \qquad (3)$$

Variable	Coeff.		Coeff.		Coeff.		Coeff.		Coeff.	
Intercept	-14.45	***	-14.64	***	-14.51	***	-14.70	***	-14.72	***
chi-sq	*90.96*		*92.98*		*96.41*		*97.97*		*92.69*	
$AGROWTH_{it}$	0.37	*							0.40	**
chi-sq	*3.54*								*4.43*	
MTB_{it}			-0.43	**					-0.47	**
chi-sq			*6.02*						*6.29*	
EPS_INCR_{it}					0.04				0.49	
chi-sq					*0.01*				*1.29*	
$MEETBEAT_{it}$							-0.46		-0.13	
chi-sq							*0.92*		*0.07*	
$LNMVE_{it}$	0.95	***	0.95	***	0.99	***	0.95	***	0.99	***
chi-sq	*80.71*		*77.98*		*81.38*		*78.50*		*82.53*	
ROA_{it}	-0.08		-0.10		0.00		-0.10		0.00	
chi-sq	*0.62*		*0.80*		*0.00*		*1.19*		*0.00*	
Pseudo R^2	0.42		0.42		0.43		0.42		0.43	
N	2,062		2,062		2,062		2,062		2,062	

Panel A reports descriptives on securitizations variables, which are defined in the appendix. Panel B reports pooled logistic estimates to model the decision to securitize in a given year as a function of current levels of FRC_{it} (financial reporting concerns from H1 and H2: $AGROWTH_{it}$, MTB_{it}, $MEETBEAT_{it}$, EPS_INCR_{it}, separately or combined), and controls. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. t-statistics are based on standard errors that have been adjusted for clustering by firm (Petersen 2009). *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Variables are as defined in the Appendix.

Table 6: Impact of Financial Reporting Concerns on Loan Quality – Off-Balance Sheet

$$PASTDUE\_OBS_{it+x} = \alpha + \delta_1 PASTDUE\_OBS_{it} + \beta FRC_{it} + \delta_2 LNMVE_{it} + \delta_3 ROA_{it} + \varepsilon_{it} \quad (4)$$

	PASTDUE_OBS$_{it+1}$										PASTDUE_OBS$_{it+2}$										PASTDUE_OBS$_{it+3}$	
Variables	Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.		Coeff.	
Intercept	-1.50	*	-1.39	*	-1.51	*	-1.67	*	-1.14		-4.87	**	-4.81	**	-4.80	***	-5.12	**	-4.39	**	-9.06	***
t-stat	*-1.73*		*-1.69*		*-1.87*		*-1.90*		*-1.43*		*-2.43*		*-2.47*		*-2.74*		*-2.59*		*-2.49*		*-3.15*	
PASTDUE_OBS$_{it}$	0.99	***	0.98	***	0.97	***	0.99	***	0.96	***	0.92	***	0.91	***	0.87	***	0.94	***	0.86	***	0.82	***
t-stat	*10.48*		*10.61*		*10.02*		*10.83*		*9.95*		*4.79*		*4.83*		*4.45*		*5.01*		*4.35*		*3.84*	
AGROWTH$_{it}$	-0.13								-0.27								-0.39		-0.45		-0.60	
t-stat	*-0.75*								*-1.56*		*-1.38*								*-1.61*		*-0.63*	
MTB$_{it}$			-0.36	**					-0.29	**			-0.77	**					-0.68	**	-1.23	***
t-stat			*-2.50*						*-2.36*				*-2.61*						*-2.48*		*-2.95*	
EPS_INCR$_{it}$					-1.04	**			-0.96	*					-1.17	*			-0.81		-1.40	
t-stat					*-2.34*				*-1.79*						*-1.74*				*-1.03*		*-1.14*	
MEETBEAT$_{it}$							-0.84	*	-0.02								-1.27		-0.23		0.48	
t-stat							*-1.93*		*-0.04*								*-1.65*		*-0.28*		*0.35*	
LNMVE$_{it}$	0.15	**	0.15	**	0.16	**	0.13	**	0.17	**	0.42	***	0.41	***	0.45	***	0.38	***	0.46	***	0.85	***
t-stat	*2.32*		*2.51*		*2.46*		*2.17*		*2.63*		*2.86*		*3.02*		*3.13*		*2.83*		*3.22*		*3.87*	
ROA$_{it}$	-0.04	*	-0.03		0.00		-0.06		0.03		-0.08	**	-0.07	*	0.01		-0.10		0.05		0.11	
t-stat	*-1.76*		*-1.21*		*-0.20*		*-1.29*		*1.23*		*-2.21*		*-1.92*		*0.51*		*-1.57*		*1.45*		*1.08*	
Adj. R^2	0.73		0.69		0.73		0.72		0.73		0.46		0.46		0.48		0.46		0.48		0.35	
N	319		319		319		319		319		245		245		245		245		245		185	

This table reports pooled OLS estimates for our full sample of PASTDUE_OBS$_{it+x}$ (where x = 1, 2, or 3) regressed on current levels of PASTDUE_OBS$_{it}$, FRC$_{it}$ (financial reporting concerns from H1 and H2: AGROWTH$_{it}$, MTB$_{it}$, MEETBEAT$_{it}$, EPS_INCR$_{it}$, separately or combined), and controls. To minimize the influence of outliers, all variables are winsorized at the 1% and 99% levels. t-statistics are based on standard errors that have been adjusted for clustering by firm (Petersen 2009). *, **, *** indicates significance at the 10%, 5%, and 1% levels, respectively. Variables are as defined in the Appendix.

Figure 1
NPLs Graphically Over Time – Public Banks

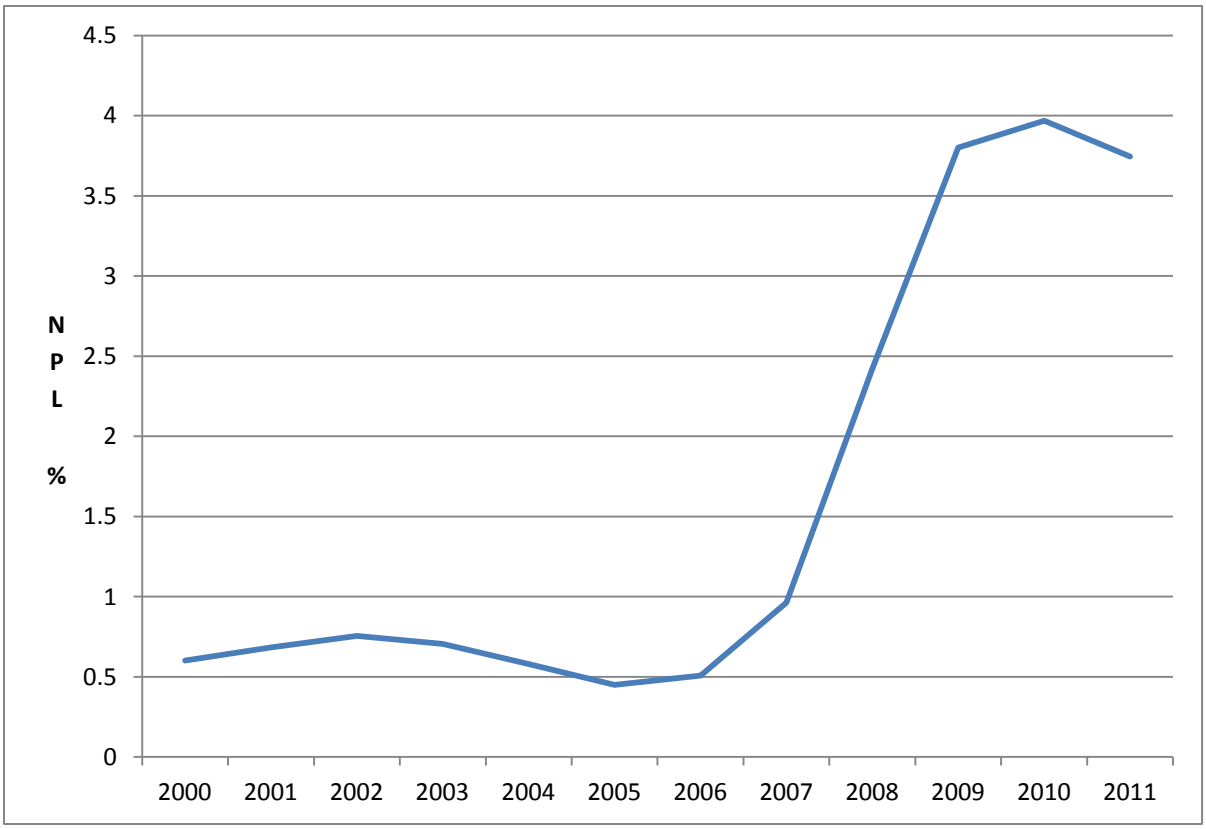

Figure 1 graphically reports the mean $NPL_{i,t}$ by year separately for the public banks with analyst coverage analysis (see Table 2).

Figure 2
NPLs Graphically Over Time – Public vs. Private Banks

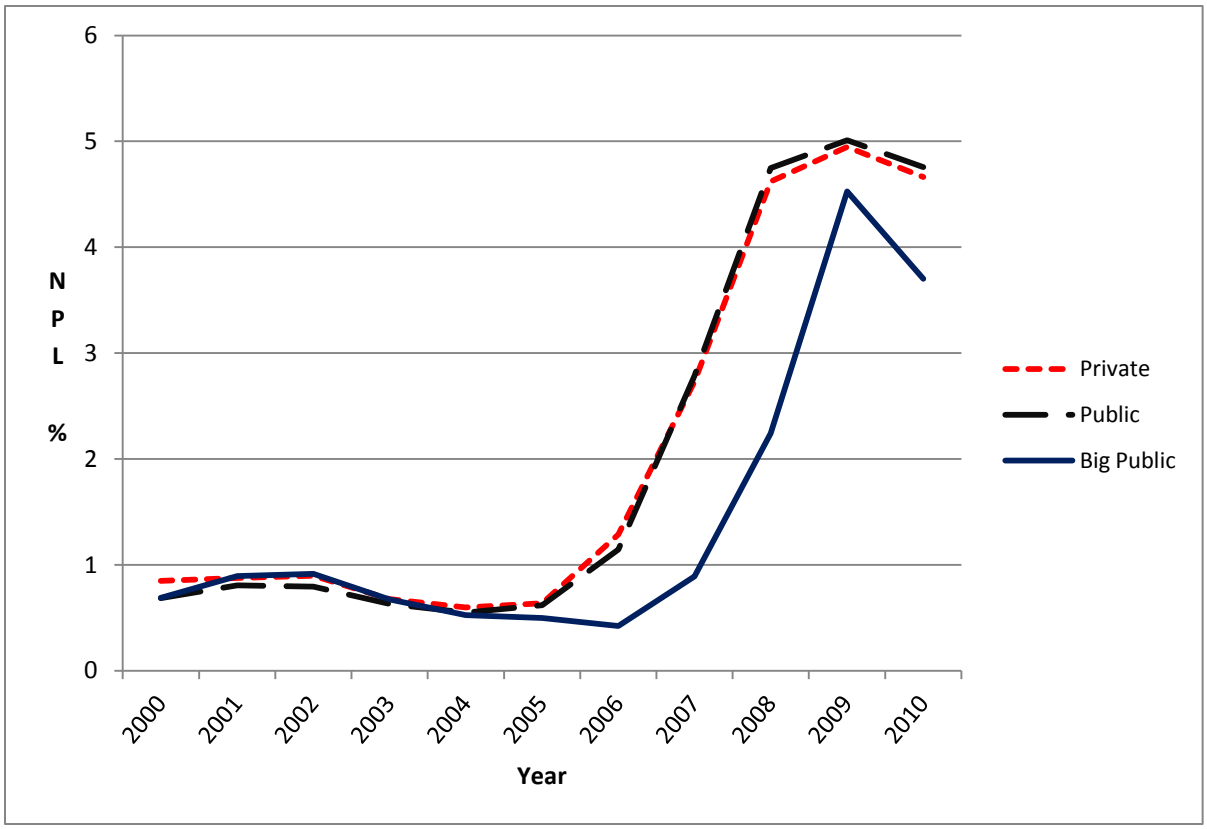

Figure 2 graphically reports the mean NPL_{it} by year separately for the public and private banks in our public and private bank sample (see Table 4) and the largest public banks that are excluded from our public and private bank sample due to being larger than the largest private bank in a year but are included in our main within public analysis (see Table 2).