EARLY ADOPTION OF ACCOUNTING STANDARDS IN THE BANKING INDUSTRY

BY

I-LING WANG

DISSERTATION

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Doctoral Committee:

Professor Theodore Sougiannis, Chair
Assistant Professor Jianxin Gong, Director of Research
Assistant Professor Ganapathi S Narayanamoorthy
Assistant Professor Raghunathan Venugopalan
Associate Professor George Deltas

ABSTRACT

I investigate whether U.S. bank holding companies choose early adoption of accounting standards to better access external financing. Both economic intuition and theories suggest that banks are motivated to take measures such as information disclosure to better access capital markets. Examining accounting standards from January 1995 to March 2008 that allowed for early adoption, I find that banks with lower profitability and higher risk profiles are more likely to choose early adoption. This evidence is consistent with a bank's incentive to better access external financing. In addition, the results suggest a counter-signaling effect of early-adoption decisions. I further find that banks are more likely to choose early adoption for the purpose of having better access to external financing when the income effects of accounting standards are *ex ante* undetermined or when only disclosures are required. I provide evidence that banks vary their early-adoption decisions according to several accounting standard characteristics, such as the income effects of accounting standards, standard type (financial versus non-financial), and standard complexity. Finally, early adopters generally experience higher fund growth than matched late adopters during economic expansions when banks are most motivated to attract more funds.

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CHAPTER 1
INTRODUCTION

Early adoption of accounting standards (hereafter, early adoption) is an area that has been investigated by several research studies. These studies have focused on different reasons behind early adoption that encompass both contracting and information disclosure paradigms. Under the contracting paradigm, the reasons found to be associated with early-adoption decisions include maximizing accounting-based compensation bonuses, avoiding violations of debt covenants, and minimizing political costs (e.g., Ayres 1986; Scott 1991; Sami and Welsh 1992; Ali and Kumar 1994). Under the information disclosure paradigm, Amir and Ziv (1997a, b) provide evidence that early adoption can be an information signal to capital markets. They theoretically and empirically show that managers use both early adoption and financial statement recognition to disclose favorable information about previously unreported post-retirement liabilities. In addition, they find that these firms experience a positive stock market reaction to their early-adoption announcements, a finding consistent with managers choosing to early adopt the standard to reveal low post-retirement liabilities relative to the market's expectation. None of the studies mentioned above include financial firms in their analysis, because these firms are regulated and have radically different operations from non-financial firms (Scott 1991). Thus, early adoption by banks is a largely un-researched area.

I attempt to fill the gap by examining early-adoption decisions of U.S. bank holding companies (hereafter, BHCs or banks) on accounting standards, issued in the period from January 1995 to March 2008 which allowed for early adoption.[1] Economic intuition and theories suggest that a crucial determinant of a bank's performance is its access to financing. Theoretically, information disclosure has been associated with better access to capital markets (see Healy and Palepu (2001) for a review). I extend the information disclosure paradigm further by investigating whether the incentive to better access external financing is a motivation for banks to early adopt accounting standards. To my knowledge, this motivation has not yet been investigated in the early adoption context. As such, it is appealing to study whether the external-

[1] A bank holding company is defined as "A company that owns and/or controls one or more U.S. banks or one that owns, or has controlling interest in, one or more banks. A bank holding company may also own another bank holding company, which in turn owns or controls a bank." (source: http://www.ffiec.gov/) The choice of the sample period is discussed in footnote 13.

financing motivation is important in explaining a bank's early-adoption decisions because early adoption is a form of information disclosure where new information is revealed through recognition and/or disclosure. In addition, the majority of the accounting standard pronouncements allowing for early adoption during 1995-2008 were related to financial instruments. Because financial instruments are extensively used in banking activities, the banking industry is an ideal sample to study the early adoption of these accounting pronouncements.

To date, Beatty (1995) is the only paper that examines BHCs' early-adoption decisions. She finds that a bank's motivation to increase regulatory capital is important in explaining its decision to early adopt SFAS No. 115, which deals with accounting for investment securities. My study adds to Beatty (1995) in the following ways. First, Beatty examines whether banks early adopt to increase their regulatory capital through unrealized gains in investment securities portfolios. In contrast, this study investigates whether banks early adopt accounting standards to disclose information and thus to better access external financing in the form of either debt or equity capital. Second, this study investigates several accounting standards that allow for early adoption, whereas Beatty (1995) and prior studies examine only one standard at a time. The multiple-standards setting enables me to examine whether the income effects of accounting standards and standard-specific characteristics influence banks' decisions to early adopt.[2]

Raising funds in capital markets is essential to banks, yet not all banks choose to early adopt during the sample period of this study. This observation suggests that banks vary in their capability/needs to raise funds externally, *ceteris paribus*. Existing theoretical and empirical voluntary disclosure research suggests that firm profitability is associated with a firm's motivation for disclosure, such as conveying good news and having better access to external financing. For a firm's incentive to convey good news, a vast majority of voluntary disclosure theories suggest that firms are more likely to choose disclosure to reduce adverse selection costs due to information asymmetry as their private information becomes more favorable (e.g., Verrecchia 1983; Dye 1986; Darrough and Stoughton 1990). Empirical studies show mixed results. While some studies document a positive association between firm profitability and

[2] In this study, I focus on the association between bank characteristics and banks' external financing incentive, and the effect of that association on early-adoption decisions. Therefore, the multiple-standard-setting enables a powerful test and generalizability of the results. A drawback of this setting is that I am unable to "customize" an early-adoption decision model for each accounting standard and I leave this issue for future research.

management earnings forecasts (e.g., Lev and Penman 1990; Lang and Lundholm 1993, 2000), other studies argue and document that firms choose to disclose preemptive bad news in earnings-related disclosures when facing potential litigation costs or management reputation costs (e.g., Skinner 1994; Cao and Narayanamoorthy 2011). For a firm's incentive to better access external financing, recent disclosure studies have suggested a negative association between firm profitability and voluntary disclosure (e.g., Francis, Khurana, and Pereira 2005; Suijs 2007). These studies argue that high profit firms have few concerns about acquiring funds in capital markets because they are financially healthy. They can either generate funds through internal growth or raise funds externally with low cost of capital without additional disclosure. On the other hand, low profit firms have limited ability to generate funds internally and thus are relatively reliant on external financing. High profit firms, therefore, are not as motivated as low profit firms to choose disclosure to gain better access to external financing. Taken together, the above discussion suggests that bank profitability is an important determinant of the likelihood of early adoption. It is, however, an empirical issue whether a bank's incentive to better access external financing dominates other reasons in their early-adoption decisions.

Besides profitability, voluntary disclosure studies also investigate the association between firm risk and a firm's incentive to better access external financing. Empirical studies suggest that non-financial firms can better access external financing through voluntary disclosure by lowering the cost of capital (e.g., Botosan 1997; Sengupta 1998; Botosan and Plumlee 2002). Lang and Lundholm (1993) argue that if firm performance variability proxies for information asymmetry between investors and managers, riskier firms are more likely to choose disclosure to reduce adverse selection costs due to information asymmetry. Consequently, risky firms can better access external financing with lower cost of capital through voluntary disclosure than without such disclosure. Suijs (2007) theoretically suggests that the likelihood of disclosure increases with the uncertainty in firms' future performance (i.e. firm risk profiles). The above discussion suggests that the likelihood of early adoption is positively associated with bank risk profiles.

I use logit regressions to test the association of early-adoption decisions with bank profitability and bank risk profiles by examining the early-adoption decisions of 486 U.S. BHCs for 16 accounting standards. I find a negative relationship between the likelihood of early adoption and bank profitability. In addition, I find a positive relationship between the likelihood of early adoption and bank risk profiles. Standardizing the coefficients on explanatory variables,

I find that a one-standard-deviation decrease in bank profitability increases the odds ratio (early adoption to late adoption) by 47%. A one-standard-deviation increase in interest rate risk on the investment portfolios, credit risk on the loan portfolios, the notional amount of derivative exposures, and the operational risk increases the odds ratio by 19%, 23%, 13%, and 14%, respectively. Further analysis shows that the predictions are best supported in the contexts of early-adoption decisions on accounting standards with *ex ante* undetermined income effects and with only disclosure requirements. Moreover, banks are more likely to choose to adopt early accounting standards related to financial instruments or with low standard complexity for the purpose of better accessing capital markets.

In summary, the above findings indirectly support the assertion that early-adoption decisions are based on gaining better access to external financing. To provide *ex post* evidence on a bank's incentive to better raise funds in capital markets, I examine whether early bank adopters generally experience higher growth of funds than their matched late bank adopters between the standard issue date and its effective date (i.e., the testing period) after controlling for bank profitability. It is also worth noting that a bank's financing strategies may change with macroeconomic conditions. For instance, during economic expansions, the market demand for loans increases and therefore banks' demand for funds also increases. On the other hand, the market demand for loans decreases during economic contractions and therefore banks are less motivated to expand sources of funds. Consequently, I expect early adopters to experience higher growth of funds than matched late adopters during economic expansions. The results show that early adopters generally experience a higher growth of funds than matched late adopters in testing periods that take place during economic expansions. Further analysis shows that the major source of funds contributing to the growth is short-term liabilities other than deposits.

This paper extends and complements prior early-adoption studies in several ways. First, this paper introduces incentives to better access external financing as a new reason to early adopt. To the best of my knowledge, this is the first paper to utilize a large set of early-adoption data of BHCs and systematically examine BHCs' early-adoption decisions. Early adoption of accounting standards is rare for banks, with the rate of early adoption ranging from zero to 19%. Despite this rarity, the *ex post* evidence in this study on early-adopters' immediate improvement in accessing capital markets reinforces the idea that banks' incentive to better access external financing is important in explaining their early-adoption decisions. Second, by analyzing adoption of

multiple standards, this study provides evidence of variations in early-adoption decisions given different income effects of accounting standards, standard types (financial versus non-financial), and standard complexity. Finally, the evidence of negatively associated bank profitability and positively associated bank risk profiles with early-adoption decisions suggests a counter-signaling effect (e.g., Feltovich, Harbaugh, and To 2002) of early-adoption decisions. The signaling theory suggests that high quality firms undertake costly actions to signal their superior quality and separate themselves from low quality firms (e.g., Spence 1973, 2002; Morris 1987). Therefore, qualified signals distinguish two types of firms: low or high quality firms. When additional noisy information on firms' quality is available, the counter-signaling theory suggests that high quality firms choose not to signal their quality or counter-signal to separate themselves from medium quality firms. Medium quality firms, on the other hand, choose to signal to separate themselves from low quality firms. Therefore, in a counter-signaling equilibrium, three types of firms are identified: low, medium, or high quality firms. Prior accounting research on accounting choice has applied the signaling theory to explain managers' decisions but the results do not always concur with the theory (e.g., Eakin and Gramlich 2000; Aboody, Barth, Kasznik 2004). This study is the first to identify counter-signaling effects of early-adoption decisions because it documents that early-adopting banks are not necessarily the less risky and the most profitable. As banks are closely scrutinized by bank regulators, maintaining growth in profitability and practicing sound risk management are of utmost importance to banks' operations. Hence, implications about a bank's future financial performance may be gathered by analyzing its early-adoption decisions over time.

The remainder of this paper is organized as follows. Chapter 2 reviews related early adoption literature and develops the hypotheses. Chapter 3 describes the empirical predictions and research design, and presents findings. Chapter 4 proceeds with additional analyses. Chapter 5 summarizes and concludes.

CHAPTER 2
RELATED PRIOR LITERATURE AND HYPOTHESIS DEVELOPMENT

2.1 Related Prior Literature

Extant work on the selection of time for which mandatory accounting standards are adopted (i.e., early adoption or adoption timing) focuses on issues such as motivations for early adoption (e.g., Ayres 1986; Scott 1991; Langer and Lev 1993; Ali and Kumar 1994; Amir and Livnat 1996; Gujarathi and Hoskin 2003), and economic consequences or stock market reactions to early adoption (e.g., Lee and Stiner 1993; Beatty 1995; Amir and Ziv 1997a, b). The first application of the positive theory of accounting (Watts and Zimmerman 1986) to management's choice of adoption date of an accounting standard appears in Ayres (1986). That study examines the existence of systematic differences between early and late adopters of the new foreign currency translation accounting standard, SFAS No. 52 (FASB 1981), and finds results consistent with the debt and compensation contracting, and political costs hypotheses.

Scott (1991), Langer and Lev (1993), and Ali and Kumar (1994) examine managerial motives for choosing the adoption timing of the new standard on pension accounting, SFAS No. 87 (FASB 1985). Scott (1991) examines and documents the influence of political costs, management compensation contracts, and the magnitude of the income effect of the adoption on the adoption-timing choice. In the context of examining FASB's justification for an extended adoption period, Langer and Lev (1993) show that a motive to increase reported earnings consistently distinguishes early versus late adopters. Ali and Kumar (1994) complement the literature by studying interactions between firm characteristics and the magnitude of the income effect of the adoption in explaining the adoption-timing choice. They find that including interactions enhances the explanatory power of the adoption-timing choice model.

Gujarathi and Hoskin (2003) investigate factors that affect economic incentives to early adopt the new accounting standard on income taxes, SFAS No. 96 (FASB 1987). Their results are consistent with the political cost hypothesis and the debt and compensation contract hypotheses in explaining early adoption decisions and the choice of the transition method. Similar to Ali and Kumar (1994), they also document higher explanatory power of the early adoption model with interactions between the income effect of the adoption and other testing variables.

Amir and Livnat (1996) study a manager's motives to early adopt the new accounting standard on postretirement benefits other than pensions, SFAS No. 106 (FASB 1990). By comparing early and late adopters, they show that firms early adopt the standard to correct the market's perception of the magnitude of the postretirement benefit obligation (PRB) as lower. In addition, they show that firms early adopt the standard in the quarter with the lowest earnings and delay adoption to negotiate a plan amendment. Amir and Ziv (1997b) develop a theoretical model that shows how firms use adoption timing and recognition/disclosure choices to convey their private information to the market (assuming managers have private information about the valuation effects of a standard). In their companion paper, Amir and Ziv (1997a) empirically document the predictions from Amir and Ziv (1997b) in the context of early adopting SFAS No. 106. Specifically, they find that, on average, early adopters experience more extreme changes in earnings during the adoption year (compensation contract hypothesis), carry smaller PRB at the mandatory adoption date, and are less likely to renegotiate their contracts. In addition, they find that early adopters generally experience positive market reactions to their adoption announcements and perform better than late adopters during the five years prior to the mandatory adoption date.

Beatty (1995) is the only study that examines the determinants of the early-adoption decisions by the banking industry. She finds that BHCs choose early adoption of SFAS No. 115 (FASB 1993) to increase regulatory equity. The standard requires available-for-sale securities to be fair-valued, with the changes in fair values to be charged to an equity account as unrealized gains or losses. Most banks have net unrealized gains in their investment portfolios when the standard is issued. Therefore, early adopting the standard provides an opportunity for banks to increase their regulatory capital because net unrealized gains could be included in the calculation of regulatory capital.[3] She finds that early-adopting BHCs are characterized as having low leverage ratio and high ROE, and managing their securities portfolios in the past to increase reported equity. In addition, she examines the changes in investment behavior between early and late adopters of SFAS No. 115. According to her findings, early adopters reduce the proportion of investment securities to assets and the maturity of the investment securities held due to the

[3] The effect of the standard on Tier 1 capital, however, was excluded by the Federal Reserve Board three quarters after the standard became mandatorily effective in November 1994 (Beatty 1995).

attempts to reduce regulatory capital costs as potential volatility in recognized fair values and in the regulatory capital ratios increases.

As shown above, most studies on why managers choose to early adopt accounting standards are based on a contractual framework. Generally, the studies find that a manager's motives for early adoption are consistent with the debt and compensation contract hypotheses and the political cost hypothesis. However, there are few empirical investigations into the informational effect on early-adoption decisions. In addition, the literature is short of evidence on the banking industry.

This paper complements the current early-adoption literature by examining BHCs' incentive to early adopt accounting standards to disclose information and thus better access external financing. I consider banks' incentives to early adopt accounting standards from an information disclosure perspective for the following reason. In some sense, banks are no different from other firms in terms of their goals to maximize firm values. Banks enjoy the economies of scale in the acquisition/production of information about borrowers and have expertise in taking deposits and making loans to individuals and businesses (Berger, Herring, and Szego 1995). Banks are subject, however, to bank regulatory supervisions. They need to maintain adequate capital and show the bank regulators their capability of effectively managing bank balance sheets and related risks.[4] Under regulations, banks have every incentive to stay well-capitalized for economic benefits such as less regulatory scrutiny and more operational flexibility. In addition, it is often costly to raise equity capital quickly if the banks are not well capitalized (Beatty et al. 1996; Furlong and Kwan 2007). The above discussion clarifies that maintaining capital and managing risk are essential to banks. To this end, banks have the incentives to disclose information for the purpose of better accessing capital markets.

[4] The supervisory rating system for bank holding companies is known as BOPEC (*B*ank subsidiaries, *O*ther nonbank subsidiaries, *P*arent company, *E*arnings, and *C*apital adequacy) (Hirtle and Lopez 1999). Although the Federal Reserve emphasized risk management in its supervisory processes, this component was not directly reflected in the name of BOPEC. Therefore, in December 2004, the Federal Reserve revised the rating system as RFI/C(D) (Risk Management (R); Financial Condition (F); potential Impact (I) of the parent company and nondepository subsidiaries (collectively nondepository entities) on the subsidiary depository institution(s); Composite rating (C) based on an evaluation and rating of its managerial and financial condition and an assessment of future potential risk to its subsidiary depository institution(s); Depository Institution (D)). The revised rating system became effective on January 1, 2005 (Federal Reserve Board 2004).

2.2 Incentive to Better Access External Financing

Extant disclosure theories and empirical research suggest that firms are motivated to disclose information voluntarily to better access external financing (e.g., Leland and Pyle 1977; Myers and Majluf 1984; Ruland, Tung, and George 1990; Frankel, McNichols, and Wilson 1995; Lang and Lundholm 2000; Francis, Khurana, and Pereira 2005; Suijs 2007). Empirical studies also show that firms experience lower costs of debt and equity capital with more disclosure (e.g., Botosan 1997; Sengupta 1998; Botosan and Plumlee 2002; Francis, Khurana, and Pereira 2005). Because banks need to raise funds in capital markets, they are motivated to have better access to external financing with voluntary disclosure.

Banks may vary in their capability or needs of raising funds externally. Therefore, the net expected benefits/costs of voluntary disclosure for the purpose of having better access to external financing differ according to bank characteristics. Prior voluntary disclosure research suggests that firm profitability is associated with a firm's disclosure decisions. Specifically, firm profitability may proxy for a firm's incentive to convey favorable information and to better access external financing. For firms' incentive to convey favorable information, prevalent disclosure theories and empirical studies suggest that firms are more likely to choose disclosure to reduce information asymmetry as their private information becomes more favorable (e.g., Verrecchia 1983; Dye 1986; Darrough and Stoughton 1990; Lev and Penman 1990; Lang and Lundholm 1993, 2000). A general explanation for the theoretical prediction and empirical findings is non-zero disclosure costs. On the other hand, some empirical studies argue and document that firms choose to disclose preemptive bad news to minimize potential litigation liability or management reputation costs (e.g., Skinner 1994; Cao and Narayanamoorthy 2011).

For a firm's incentive to better access external financing, prior studies suggest that firm profitability is negatively associated with a firm's incentive to better access external financing and thus negatively with voluntary disclosure. Francis, Khurana, and Pereira (2005) argue that the cost of external financing is particularly important for firms with limited internal cash flows; those firms are motivated to make voluntary disclosures to lower the cost of capital. Intuitively, firms can either generate cash flows internally or acquire capital externally to fund their operations or investments. Low profit firms, however, have limited ability to generate cash flows internally, and thus making the cost of external financing particularly important to them. Therefore, low profit firms are relatively motivated to choose disclosure compared to high profit

firms to lower the cost of external financing. Suijs (2007) models how a firm varies its voluntary disclosure policy to acquire more capital from an investor when the firm is uncertain how the investor will respond to the disclosure. The model suggests a partial disclosure equilibrium where a firm hides high profit and discloses low profit. The intuition is that a high profit firm can easily raise funds in capital markets without disclosure compared to a low profit firm. As a result, low profit firms are more motivated than high profit firms to choose voluntary disclosure.

In summary, the preceding discussion suggests an association between voluntary disclosure and firm profitability. Albeit the results conflict from extant empirical studies on the association between firm disclosure and firm profitability, they still support the idea that voluntary disclosures arise when the expected benefits exceed costs. Consequently, whether banks' incentive to better access external financing dominates in their early-adoption decisions remains an empirical issue. I hypothesize bank profitability in an alternative form as follows:

H1: The likelihood of early adoption is negatively related to bank profitability.

Voluntary disclosure research also motivates the association between firm risk and a firm's incentive to better access external financing. In an empirical study, Lang and Lundholm (1993) argue if firm performance variability (i.e., firm risk) proxies for information asymmetry between investors and managers, firms with high performance variability are more likely to choose disclosure to relieve information asymmetry. Moreover, studies find that firms can improve external financing with voluntary disclosure by lowering costs of debt and equity capital (e.g., Botosan 1997; Sengupta 1998; Botosan and Plumlee 2002). The discussion therefore implies a positive association between firm risk profiles and voluntary disclosure. In addition, Suijs (2007) theoretically suggests that the likelihood of disclosure increases with the uncertainty in firms' future performance (i.e. firm risk profiles). The intuition is that when uncertainty in firms' future performance increases, less risky investment targets such as a risk-free asset become more and more attractive to investors in the absence of disclosure. Consequently, riskier firms, which experience relatively high profits compared to the return of the risk-free asset, are more likely to choose disclosure to attract investors' capital away from the risk-free asset.[5] Because early adoption is a form of voluntary disclosure, banks with higher risk profiles are

[5] In a similar note, Jung and Kwon (1988, p. 151) suggest that the disclosure threshold is lower (i.e., more likely to disclose) when uncertainty in firm value is higher under the assumption that the market is unsure whether managers indeed possess information.

more likely to choose early adoption to better access external financing. I hypothesize bank risk profiles in an alternative form as follows:

H2: The likelihood of early adoption is positively related to bank risk profiles.

The above leads to an intriguing issue questioning whether a bank that chooses early adoption can better access external financing *ex post* than if it does not choose early adoption. Consequently, I hypothesize better access to external financing in an alternative form as follows:

H3: A bank that chooses early adoption can better access external financing than if it does not choose early adoption.

CHAPTER 3
LIKELIHOOD OF EARLY ADOPTING ACCOUNTING STANDARDS

3.1 Empirical Predictions

In the previous section, I illustrate a bank manager's motive for early adoption to provide information and to obtain better access to capital markets. Now, I describe the test variables used to study these incremental benefits/costs to early adoption. I explain other control variables which are commonly used in prior literature. Finally, I discuss the variables used to control for accounting standard characteristics which represent incremental costs and benefits to management when they decide to early adopt an accounting standard.

3.1.1 Test Variables

The first set of test variables relate to bank profitability. The proxy for bank profitability is *NIM*, the ratio of net interest income to total assets adjusted for the average *NIM* of peer banks at the first quarter-end after the adoption of a new standard.[6] I expect a negative relationship between early adoption and *NIM*, as discussed in section 2.2. To examine whether banks' incentive to disclose preemptive bad news drives the negative relationship instead of their incentive to better access external financing, I include an indicator variable *BADNEWS*. *BADNEWS* is equal to 1 if *NIM* is less than zero and 0 otherwise. I predict a negative relationship between early adoption and *BADNEWS* if the concern for potential litigation liability and management reputation costs is not an issue in banks' early-adoption decisions. I also examine whether high-profit banks are more likely to choose early adoption when they are more certain of receiving a positive response to the disclosure as suggested by Suijs (2007). That is, to examine whether the negative relationship between early adoption and *NIM* is moderated as the level of response certainty increases, I include a proxy for response certainty and interact it with *NIM*. Response certainty, *RPCERTAINTY*, is measured by the percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past

[6] A primary objective in asset-liability management for banks is managing net interest margin (NIM). It measures how well banks minimize interest paying to liabilities (e.g., deposits and long-term debts) while maximizing interests receiving from assets (e.g., loans) to produce consistent growth in the loan portfolio and shareholder earnings (Demirgüç-Kunt and Huizinga 1999). I adjust the net interest margin for the average net interest margin of peer banks to remove the effect of the macroeconomic conditions specific to the time period. This adjusted measure also proxies for the information not yet expected by the market. A drawback of this measure is that the time-series property of the profitability measure of a bank is not controlled for. I also use ROA instead of NIM, and the results are qualitatively the same.

twelve quarters before the announcement date of an accounting standard.[7] A higher level of response certainty means that a bank is more certain of receiving a positive response following the disclosure of its performance. Therefore, conditional on knowing its performance, a bank is more likely to disclose its profitability when it is more certain of receiving a positive response following the disclosure. Consequently, I predict a positive relationship between early adoption and *RPCERTAINTY* as well as *NIM_RPCERTAINTY* (an interaction term between *NIM* and *RPCERTAINTY*).

The second set of predictions relates to bank risk profiles (i.e., interest rate risk, credit risk, exposures and credit risk on derivatives, and operational risk on noninterest income). I predict that banks with higher risk profiles are more likely to early adopt an accounting standard. I evaluate bank risk profiles in four dimensions: (1) interest rate risk, (2) credit risk, (3) exposures and credit risk on derivatives, and (4) operational risk. All risk proxies are adjusted for the corresponding average risk proxies of peer banks except for indicator variables. This adjustment controls the effect of macroeconomic conditions on banks' risk management or risk-taking behavior. The following paragraphs provide detailed discussions on the proxies chosen.

The two proxies for interest rate risk are *AFSOFINV*, the ratio of available-for-sale securities (excluding equity securities) to total investment securities, and *CONTRACT*, an indicator variable equal to 1 if the bank holds interest rate derivative contracts and 0 otherwise. Banks with higher proportion of available-for-sale securities out of total investment securities have greater financial flexibility in managing interest rate risk and thus have lower interest rate risk (e.g., Beatty 1995; Hodder, Kohlbeck, and McAnally 2002; Papiernik, Meier, and Rozen 2004). Therefore, this paper expects a negative relationship between early adoption and *AFSOFINV*. Banks can hold derivative contracts to manage interest rate risk or to speculate (e.g., Chen, Liu, and Ryan 2008). Thus, I do not predict the sign of *CONTRACT*.

The proxy for credit risk on loan portfolios is *LOANRISK*, the ratio of the allowance for loan losses to average loans. It measures the amount of buffer the bank management creates for the whole loan portfolios in case of future write-offs (e.g., Joyce 1996). Banks with a higher ratio of loan loss allowance to average loans are associated with lower credit risk and higher loan

[7] The results are similar regardless of the length of period the response certainty is measured (ranging from 4 quarters to 20 quarters). The average profitability of peer banks is chosen as a benchmark because it is a legitimate proxy for the investors' prior expectations of a bank's profitability. Although analysts' EPS forecasts can be another benchmark used to construct response certainty, doing so would reduce more than half of the sample observations. Therefore, I choose to use the average net interest margin of peer banks as a benchmark.

quality (Eccher, Ramesh, and Thiagarajan 1996, p. 103). Therefore, I expect a negative relationship between early adoption and *LOANRISK*.

The proxy for exposures of derivatives is *EXPOSUREDER*, the ratio of the gross notional amount of derivative contracts other than purchased options to total assets. Derivative contracts such as futures, forward contracts, written options, and swaps have no particular limits on the exposures. The financial exposures of purchased options, however, are limited to their book values accounted for in the financial statements (Nissim and Penman 2007). The proxy for credit risk of derivatives is *CREDITRISKDER*, an indicator variable equal to 1 if the gross notional amount of over-the-counter (OTC) derivative contracts is greater than that of exchange-traded derivative contracts and 0 otherwise. Exchange-traded derivative contracts such as futures and exchange-traded options have trivial credit risk because the exchanges act as the counterparty to each contract (Nissim and Penman 2007). As a result, banks with greater proportion of OTC derivative contracts relative to exchange-traded derivative contracts are positively associated with credit risk on derivative contracts. Therefore, I expect a positive relationship between early adoption and *EXPOSUREDER*/*CREDITRISKDER*.

The proxy for operational risk is *NONINTCHG*, the average quarterly growth in noninterest income over the past six quarters. Noninterest income has become an increasingly important source of revenues in the banking industry. However, noninterest income growth is much more volatile than the net interest income growth, largely due to volatile trading revenues. In addition, it is shown that the higher the share of income derived from noninterest activities, the lower the risk-adjusted returns and the higher the insolvency risk (e.g., Stiroh 2004). Therefore, banks with a higher share of income derived from noninterest activities are positively associated with higher operational risk. I expect a positive relationship between early adoption and *NONINTCHG*.

3.1.2 Control Variables

I control for several variables used in prior early adoption literature. In particular, I control for bank size, *SIZE*, the logarithm of total interest and noninterest income. The effect of size is most commonly attributed to political visibility (e.g., Ayres 1986; Moyer 1990; Scott 1991; Ali and Kumar 1994). However, differences in accounting choices between large and small firms could be due to other reasons (e.g., Trombley 1989). For example, size can also proxy for compliance costs (e.g., Ball and Foster 1982; Sami and Welsh 1992; Langer and Lev

1993). In the context of government regulations, Ball and Foster (1982) suggest that the compliance costs could decrease in firm size. Sami and Welsh (1992) suggest that large firms are more likely to have the necessary resources to adopt an accounting standard early if information production costs associated with adoption are high. Prior studies also document that size is positively associated with firms' litigation risk which in turn influences firms' disclosure decisions (e.g., Cao and Narayanamoorthy 2011). Therefore, I do not predict a sign on the relationship between early adoption and *SIZE*.

I use *LEVERAGE*, the ratio of total liabilities to total assets, as a proxy for banks' propensity to access capital markets (e.g., Aboody, Barth, and Kasznik 2004). The easier it is for banks to access capital markets, the lower the benefits associated with early adoption of an accounting standard. On the other hand, Cao and Narayanamoorthy (2011) show that leverage ratio is positively associated with firms' litigation risk and that the likelihood of voluntary disclosure increases in litigation risk. Thus, I do not predict a sign on the relationship between early adoption and *LEVERAGE*.[8]

I use *DROE* as a proxy for bank management's incentives to delay early adoption of income-increasing accounting standards to maximize current and future compensation (e.g., Ali and Kumar 1994; Gujarathi and Hoskin 2003). *DROE* is an indicator variable equal to 1 if a BHC's return on equity (ROE) falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs and 0 otherwise. *NIEFF* is coded as 1 if the income effect of adoption is expected to be positive, -1 if negative, and 0 if the direction of the income effect is undetermined or if there is no income effect of adoption (e.g., Ali and Kumar 1994; Gujarathi and Hoskin 2003). I expect a positive relationship between early adoption and *NIEFF*. To test the conditional effect of *DROE* on the likelihood of early adoption, an interaction term is created, *DROE_NIEFF*, between *DROE* and *NIEFF*. Managers of banks with extreme ROE are less likely to early adopt an income-increasing accounting standard, as it is less likely to make a difference in the calculation of bonus compensation (e.g., Gujarathi and Hoskin 2003). Therefore, I expect a negative relationship between early adoption and *DROE_NIEFF* and do not predict the sign of the relationship between the likelihood of early adoption and *DROE*.

[8] The debt ratio may also proxy for the tightness of existing debt covenants (Aboody, Barth, and Kasznik 2004). However, it is not feasible to test the debt covenant hypothesis without a discussion on the income effect of the adoption and thus the effect on debt contracting costs. Therefore, I do not predict the sign of the relationship between early adoption and *leverage* if *leverage* is viewed as a proxy for the tightness of existing debt covenants.

While early-adoption decisions on various accounting standards seem independent from each other, some consistency in the adoption policy of each bank over time may exist. Therefore, a bank that chose early adoption of previously issued accounting standards will likely continue to choose early adoption of a new accounting standard. To control for the consistency in the adoption policy, I construct a variable, *CULTURE*, which measures the percentage of times that a bank chose to early adopt accounting standards issued in prior periods. I predict that a bank is more likely to early adopt a new accounting standard when *CULTURE* is higher.[9]

Market competition may be another important consideration factor. First, market competition may explain the negative relationship between bank profitability and early adoption. Specifically, banks which operate in highly concentrated markets (i.e., with monopoly power) tend to have high profitability. On the other hand, banks that operate in competitive markets tend to have lower profitability than those that operate with monopoly power. This information suggests a positive relationship between profitability and market concentration; therefore, there is possibly a correlated omitted variable problem. To relieve the problem, I include a measure of market concentration (*MKTHERF*) in the early-adoption decision model. *MKTHERF* is calculated as the sum of squared market shares in terms of total revenues (i.e., total net interest income and noninterest income) of all BHCs in population operating in the same geographic region.[10] Second, market concentration itself may also contribute to early-adoption decisions. In particular, voluntary disclosure literature suggests that proprietary costs may keep firms from making disclosure (e.g., Verrecchia 1983; Graham, Harvey, and Rajgopal 2005). One commonly used measure of proprietary costs is the level of market concentration. Several empirical studies in the voluntary disclosure literature suggest a positive relationship between the level of proprietary costs associated with information disclosure and the level of market concentration (e.g., Scott 1994; Botosan and Harris 2000; Sengupta 2004). However, the results on this relationship are often mixed. Given the above discussion, I do not predict a sign on *MKTHERF*.

[9] I also construct another variable which considers a bank's historical adoption pattern regarding similar types of accounting standards. However, including this variable in the early-adoption decision model reduces the total sample observations by half and the coefficient on this variable is not statistically significant.

[10] Following Moyer (1990), I consider five geographic regions: Eastern, Southeast, Midwest, Southwest, and West. I construct another market concentration measure based on 13 Federal Reserve Districts: Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, San Francisco, and Washington, D.C. The last way to classify markets is that I assume large BHCs (total assets greater than $10 billion) operate at a national level whereas small (total assets less than $1 billion) or mid-sized BHCs (total assets between $1 billion and $10 billion) operate in local or regional markets. The results are qualitatively the same.

3.1.3 Accounting Standard Characteristics

The FASB issued 16 accounting standards from January 1995 to March 2008 that allowed reporting entities to early adopt those pronouncements. All of these standards are fair-value related. Topics of these standards relate to leases, servicing assets and liabilities, stock compensation, retirement benefits, derivatives and hedging, intangibles, asset retirement, exit or disposal cost obligations, fair value measurements and disclosures, and financial instruments. The diversity in standard characteristics given in this set of sample accounting standards enables me to examine features representing costs and benefits that discourage or encourage early adoption across standards. Inclusion of these costs and benefits in the analyses yields a more complete picture of banks' early adoption behavior. Out of 16 accounting standards, five are expected to have definitive income-decreasing effects, two with definitive income-increasing effects, five with *ex ante* undetermined income effects, and four with no income effects (i.e. only disclosure requirements). Three standards prompt changes in the calculation of regulatory capital. An overview of the sample accounting standards examined in this paper is provided in Appendix I.

I control for three dimensions of standard characteristics: (1) disclosure requirements, (2) impact on the calculation of regulatory capital, and (3) implementation costs. Disclosure requirements speak to whether an accounting standard requires only footnote disclosure or recognition in financial statements proper. Prior studies have shown that financial statement users place less weight on disclosures in footnotes than those in financial statements because footnote disclosures are only subject to a standard audit (e.g., Titman and Trueman 1986; Amir and Ziv 1997a, b). Consequently, firms benefit less from early adopting a disclosure-only accounting standard than from early adopting an accounting standard that requires recognition. The proxy used is *DISCLOSURE*, an indicator variable equal to 1 if the accounting standard only requires disclosures and 0 otherwise. I expect a negative relationship between early adoption and *DISCLOSURE*.

New accounting standards may lead to changes in the calculation of regulatory core capital under bank regulators' discretion.[11] Banks have every incentive to stay well-capitalized.

[11] Since the Financial Institutions Reform, Recovery and Enforcement Act of 1989, banks have been required to adopt generally accepted accounting principles (GAAP) (Furlong and Kwan 2007). In addition, the Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) requires that regulatory accounting standards be at least as strict as GAAP (Beatty, Chamberlain, and Magliolo 1996; Ramesh and Revsine 2001). In situations where

For example, banks that are classified as well-capitalized are subject to less regulatory scrutiny, obtain more operational flexibility, and face fewer restrictions on financial activities in which they could engage. They also enjoy expedient treatment in certain transactions where regulatory approval is needed such as mergers and acquisitions. In addition, it is often costly to raise equity capital quickly if banks are not well capitalized. A bank is expected to hold a buffer of capital to limit the chances of falling below the well-capitalized cutoff (Beatty, Chamberlain, and Magliolo 1996; Furlong and Kwan 2007, p. 10). Hence, I expect that banks are more (less) likely to early adopt accounting standards that lead to positive (undetermined) changes in the calculation of regulatory capital under bank regulators' discretion for the benefit of adjusting their capital to an optimal level. The proxy used is *REG_POS* (*REG_UN*), an indicator variable equal to 1 if the pronouncement of an accounting standard could lead to positive (undetermined) changes in the calculation of regulatory capital and 0 otherwise. I expect a positive relationship between early adoption and *REG_POS* as bank management can utilize the changes in the calculation of regulatory capital to adjust their capital to an optimal level. I expect a negative relationship between early adoption and *REG_UN* as the benefit of adjusting banks' capital to an optimal level is less clear to bank management.

Implementation costs speak to the continuing move by the FASB toward a principles-based approach. The FASB intends to smoothly converge to the International Financial Reporting Standards (IFRSs) and to reduce complexity in accounting standards and firm costs of applying new accounting standards (Choi and McCarthy 2003; Schipper 2003).[12] Therefore, I predict that it is more costly for banks to early adopt a more complex standard than a less complex one. I use *PAGE*, the number of pages of a sample accounting standard as issued to proxy for standard complexity. I expect a negative relation between early adoption and *PAGE* because it is more costly to early adopt an accounting standard with greater complexity.

3.2 Research Design and Descriptive Statistics

To test the predictions discussed in the previous subsection, I estimate the following logit model using maximum likelihood estimation:

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concerns about the calculation of regulatory capital exist with the implementation of new accounting pronouncements, bank regulators develop interim capital rules as they see fit in a timely fashion and publish them in Federal Register.

[12] A principles-based accounting framework is subject to some criticisms, however. One is that the framework allows more professional judgment made by managers and auditors. Hence, it is essential to "strengthen enforcement while reduce the incidence of litigation over accounting treatments" (Schipper 2003).

$$EARLY_{ij} = \sum_{N=1}^{9} \beta_{0N} YEAR_{Ni} + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij}$$
$$+ \beta_4 BADNEWS_{ij} + \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij}$$
$$+ \beta_8 EXPOSUREDER_{ij} + \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij}$$
$$+ \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij} + \beta_{14} NIEFF_j + \beta_{15} DROE\_NIEFF_{ij}$$
$$+ \beta_{16} MKTHERF_{ij} + \beta_{17} CULTURE_{ij} + \beta_{18} DISCLOSURE_j + \beta_{19} REG\_POS_j$$
$$+ \beta_{20} REG\_UN_j + \beta_{21} PAGE_j + \varepsilon_{ij}. \quad (1)$$

The dependent variable, $EARLY_{ij}$, is equal to 1 if BHC *i* early adopted the accounting standard *j* and 0 otherwise. $YEAR_N$ is an indicator variable equal to 1 if the accounting standard was issued in year *N* and 0 otherwise. I include year fixed effects to control for the effects of macroeconomic conditions surrounding the pronouncements of accounting standards. All other variables are discussed in the previous subsection and defined in Appendix II.

In order to examine whether income effects of accounting standards affect banks' early-adoption decisions for the purpose of having better access to external financing, I estimate the following logit model separately for accounting standards with (1) income-decreasing effects, (2) income-increasing effects, (3) *ex ante* undetermined income effects, and (4) only disclosure requirements:

$$EARLY_{ij} = \beta_0 + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij}$$
$$+ \beta_4 BADNEWS_{ij} + \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij}$$
$$+ \beta_8 EXPOSUREDER_{ij} + \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij}$$
$$+ \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij} + \beta_{14} MKTHERF_{ij} + \beta_{15} CULTURE_{ij}$$
$$+ \varepsilon_{ij}. \quad (2)$$

Table 1 describes the procedures used in reaching the final sample. The total number of BHCs listed in the Bank Regulatory data base during 1995-2008 is 9,293. To hand collect the adoption status of each sample accounting standard disclosed in 10Q/10K filings for each BHC, all 10Qs/10Ks filed by banks between 1994 and 2008 were researched using the Morningstar Document Research data base.[13] A total of 581 BHCs filed 10Qs/10Ks during the period. The

[13] The 10Qs and 10Ks are only available in electronic files starting on January 1, 1994. Therefore, the earliest accounting standard allowing for early adoption that I could attend to with a complete adoption period (i.e., a period starting from a standard announcement date to a standard effective date) is SFAS No. 121, "Accounting for the impairment of long-lived assets and for long-lived assets to be disposed of", which was issued in March 1995 and effective on and after December 15, 1995. The sample period ends in March 2008 because SFAS No. 161, "Disclosures about derivative instruments and hedging activities—an amendment of SFAS No. 133", was the most

total available number of BHC-standard observations is 5,218, which is less than expected (i.e., 581 BHCs × 16 accounting standards = 9,296 BHC-standard observations) due to two reasons. First, not every BHC provides a discussion on the adoption status of each sample accounting standard in its filings. Second, some BHCs only file 10Q/Ks up to some point in time during the sample period. As a final step, observations without the required information from the Bank Regulatory data base are eliminated to calculate all independent variables at the bank level. This action yields a final sample of 3,822 BHC-standard observations (486 unique BHCs).

Table 2 presents the sample distribution by bank size (small, mid-sized, and large) and early adoption status of each sample accounting standard. Small BHCs is the biggest group of the total sample (52.2%), followed by mid-sized BHCs (36.9%) and large BHCs (10.9%). On average, 3.3% of small BHCs, 3.8% of mid-sized BHCs, and 10.8% of large BHCs choose to early adopt sample accounting standards. Differences in early adoption rates exist between peers and between standards. For example, no large BHCs early adopted SFAS No. 133 (FASB 1998) while 20% of small BHCs and 15% of mid-sized BHCs chose to early adopt the standard. SFAS No. 123R (FASB 2004) presents another extreme case, as only 0.8% of small BHCs chose early adoption. As to SFAS No. 157 (FASB 2006), 16.7% of large BHCs chose to early adopt the standard, while approximately 5% of small and mid-sized BHCs chose early adoption. Finally, the results reveal that no BHCs chose to early adopt the following four accounting standards: SFAS No. 123 (FASB 1995), SFAS No. 132 (FASB 1998), SFAS No. 144 (FASB 2001), and SFAS No. 132R (FASB 2003). There is a lack of cross-sectional variation in early adoption of other standards as well. To consider the effects on the inferences, I keep BHC-standard observations related to five accounting standards with the most early-adoption cases and estimate the early-adoption decision model. A brief discussion is provided in section 4.

Table 3, panel A presents descriptive statistics for the variables used in the analyses. In general, approximately 4.3% of BHC-standard observations choose early adoption. *NIM* distributes with no skew and a mean close to zero (i.e., -0.03%). *RPCERTAINTY* ranges from 0 to 1 and distributes with a mean of 0.405 (median = 0.391). This data shows that, on average, the sample banks are not highly certain of receiving a positive response following the disclosure of their performance (e.g., 10Q/K filings). Approximately 59% of total sample observations are

recent accounting standard allowing for early adoption at the time when I researched 10Qs and 10Ks for banks' early-adoption decisions.

experiencing low performance relative to peer banks. The statistics of *AFSOFINV* show that approximately 75% of the BHC-standard observations hold more of the total investment portfolios in available-for-sale securities than their peer banks. Approximately 37% of the BHC-standard observations are involved with interest rate related derivative contracts. The mean of the adjusted ratio of loan loss allowance to average loans, *LOANRISK*, is approximately -0.2%. *EXPOSUREDER* ranges from -.029 to 44.520, which shows diverse bank derivative activities even after adjusted for the derivative activities of peer banks. The results show that 38% of the banks hold more OTC than exchange-traded derivative contracts. *SIZE* distributes with positive skew and dispersion, ranging from 7.867 to 18.880. The mean of *LEVERAGE* is 0.908, which is expected for the banking industry. More than half of the observations are within one standard deviation around the mean of *LEVERAGE*. The mean of *DROE* is approximately 0.5 by construction. Finally, *MKTHERF* ranges from 0.023 to 0.363, which suggests widely-varied market competition in which banks operate (from unconcentrated to high concentration).

Table 3, panel B compares the variables used in the analyses between early and late bank adopters by using t-tests and Wilcoxon tests for differences in means and medians. Most differences are significant and consistent with predictions. For example, consistent with predictions, *NIM* is significantly smaller for early bank adopters than for late bank adopters for both mean and median at the 1% level. In addition, *AFSOFINV* is significantly smaller while *EXPOSUREDER* and *CREDITRISKDER* are significantly greater for early adopters than for late adopters.

3.3 Primary Findings Related to Likelihood of Early Adopting Accounting Standards

Table 4 shows the results from estimating equation (1). Model (1) and model (2) are subsets of equation (1) because including *NONINTCHG* and *CULTURE* in the model would lead to a total loss of 459 observations in estimation. Model (3) is the full model as specified in equation (1). In general, the results are consistent with the predictions. Because the results for model (1), model (2), and model (3) are similar, the following discusses the results based on model (3) more in depth.

Relating to *H1*, *NIM* is significantly and negatively related to the likelihood of early adoption (*p*-value = .008). This result indicates that more profitable banks with fewer concerns about attracting funds from capital providers are less likely to early adopt an accounting standard. To examine whether the level of response certainty moderates this negative relationship, I

include *RPCERTAINTY* and *NIM_RPCERTAINTY*. *NIM_RPCERTAINTY* is significant (*p*-value = .022), while *RPCERTAINTY* is insignificant. The standardized coefficient on *NIM* shows that a one standard-deviation increase in *NIM* while holding *RPCERTAINTY* at zero decreases the odds ratio (early adoption to late adoption) by 46.6%. *BADNEWS* is significant with predicted sign in every model. This data implies that a bank's incentive to disclose preemptive bad news in early adoption does not drive the negative relationship between early adoption and bank profitability. In general, *H1* is supported by the results.

Relating to *H2*, all measures for bank risk profiles except *CREDITRISKDER* are significant with predicted signs. In particular, *AFSOFINV* and *LOANRISK* are significantly and negatively associated with the likelihood of early adoption (*p*-value = .008 and .031, respectively). This data indicates that banks with lower interest rate risk on investment portfolios and credit risk on loan portfolios are less likely to early adopt an accounting standard. Also as predicted, the coefficients on *EXPOSUREDER* and *NONINTCHG* are significantly and positively associated with the likelihood of early adoption (*p*-value = .005 and .000, respectively). This finding denotes that banks with greater derivative exposure and higher operational risk are more likely to choose early adoption. The coefficient on *CONTRACT* is different from zero (*p*-value = .023), which indicates that holding interest-rate-related derivative contracts is also associated with the likelihood of early adoption. The standardized coefficients on *AFSOFINV* and *LOANRISK* suggest that a one standard-deviation increase in each variable decreases the odds ratio by 19.1% and 23.3%, respectively. On the other hand, a one standard-deviation increase in *EXPOSUREDER* and *NONINTCHG* increases the odds ratio by 12.7% and 13.9%, respectively. Therefore, *H2* is supported by the results.

Relating to accounting standard characteristics that encourage/discourage early adoption, as predicted, a positive impact on the calculation of regulatory capital, *REG_POS*, and an undetermined impact on the calculation of regulatory capital, *REG_UN*, are significant with predicted signs (*p*-value = .000 and .010, respectively). Therefore, banks are more likely to early adopt a standard that provides an opportunity for them to increase regulatory capital to an optimal level than a standard that does not, but less likely to early adopt a standard that can

impact banks' capital either upwardly or downwardly. Lastly, no support is found for *DISCLOSURE* and *PAGE* (*p*-value = .126 and .151, respectively).[14]

Relating to the control variables, *SIZE* is significantly different from zero in model (1) and model (2) (*p*-value = .027 and .062, respectively). It does lose significance when the model includes *CULTURE* in model (3). *LEVERAGE* is not significant in any cases. Similar to *SIZE*, *DROE_NIEFF* is significantly and negatively related to the likelihood of early adoption in model (1) and model (2) (*p*-value = .027 and .029, respectively). This finding signifies that managers of banks with ROE in the extreme quartiles are less likely to early adopt an income-increasing standard because the adoption is unlikely to make a difference in the bonus compensation calculation. However, *DROE_NIEFF* is no longer significant in model (3) where *CULTURE* is included. Both *DROE* and *NIEFF* are not significantly different from zero in any models. The insignificant results may suggest that these commonly used variables have less power in explaining banks' early-adoption decisions than other industrial firms' early-adoption decisions. Lastly, market concentration (*MKTHERF*) is not statistically significant in any cases, but a bank's past early-adoption policy (*CULTURE*) is significantly and positively associated with early adoption (*p*-value = .006).

Table 5 shows the results from estimating equation (2) given different income effects of accounting standards. Relating to bank profitability, the likelihood of early adoption is significantly and negatively related to *NIM* under three scenarios: when the income effects of accounting standards are increasing or *ex ante* undetermined, and when accounting standards only require disclosure (*p*-value = .049, .004 and .001, respectively). The negative relationship is moderated by *RPCERTAINTY* in the latter two cases (*p*-value = .008 and .000, respectively).[15] The main effect of *RPCERTAINTY* is insignificant under the scenario of *ex ante* undetermined income effects but significantly negative under the scenario of only disclosure requirements. *NIM* is not significant in explaining early-adoption decisions on accounting standards with

[14] *DISCLOSURE* is significant with the opposite predicted sign in model (1) and model (2). One possible explanation is that accounting standards with only disclosure requirements may incur low contracting costs and regulatory costs relative to standards with income effects. Therefore, banks are more willing to choose to early adopt an accounting standard with only disclosure requirements than with income effects for the purpose of having better access to external financing. Although *PAGE* is insignificant in model (3), it is significant with predicted sign in model (1) and model (2).

[15] Note that the negative relationship between early adoption and bank profitability is not moderated by *RPCERTAINTY* when I only consider accounting standards with income-increasing effects. Therefore, the documented negative relationship is also consistent with the political costs hypothesis that highly profitable firms tend not to early adopt an accounting standard with income-increasing effects.

income-decreasing effects. The main effect of *RPCERTAINTY* is significant with predicted sign (*p*-value = .046), whereas *NIM_RPCERTAINTY* is insignificant. *BADNEWS* is significant with predicted sign under every scenario except the scenario of accounting standards with income-decreasing effects. The results suggest that banks are less likely to choose early adoption when they experience relatively bad performance. However, in the context of income-increasing accounting standards, the negative relationship is also consistent with the argument that banks with relatively bad performance are less likely to early adopt income-increasing accounting standards so to minimize their potential litigation costs.

Relating to bank risk profiles, *AFSOFINV* is only significant with predicted sign when used to explain early-adoption decisions on accounting standards with *ex ante* undetermined income effects. *LOANRISK* is significant with predicted sign in two scenarios: accounting standards with income-decreasing effects and with only disclosure requirements. *EXPOSUREDER* is significant with predicted sign when used to explain accounting standards with undetermined income effects, but is significant with the opposite predicted sign when used to explain accounting standards with income-increasing effects. *CREDITRISKDER* is not significant in any cases. *NONINTCHG* is only significant with predicted sign when used to explain early-adoption decisions with only disclosure requirements. In contrast, it is significant with the opposite predicted sign when used to explain early-adoption decisions on accounting standards with income-decreasing effects and with *ex ante* undetermined income effects.

Relating to the control variables, *SIZE* is significantly related to the likelihood of early adoption when used to explain accounting standards with income-decreasing and income-increasing effects (*p*-value = .010 and .026). In particular, the findings that the likelihood of early adoption is positively associated with *SIZE* in the context of income-increasing accounting standards are not uncommon. For example, Scott (1991), Sami and Welsh (1992), and Ali and Kumar (1994) all find a positive relationship between early adoption and firm size for an income-increasing standard (i.e., SFAS No. 87, pension accounting). *LEVERAGE* is significantly related to early-adoption decisions on accounting standards with income-decreasing effects or with *ex ante* undetermined income effects (*p*-value = .022 and .021, respectively). *DROE* is significantly and negatively related to early-adoption decisions on accounting standards with income-increasing effects. *MKTHERF* is only statistically significant when used to explain early-adoption decisions on accounting standards with income-increasing effects and with only

disclosure requirements. Finally, banks' past early-adoption policy (*CULTURE*) is significantly and positively associated with early adoption in various scenarios except accounting standards with income-decreasing effects.

Taken together, the results show that banks are more likely to choose early adoption of accounting standards with *ex ante* undetermined income effects and with only disclosure requirements for the purpose of better accessing external financing.

3.4 Comparisons of the Financing Activities between Early and Late Adopters

The previous subsection provides evidence on bank profitability and bank risk profiles in explaining early-adoption decisions. As bank profitability and risk profiles characterize banks' motivation for information disclosure and thus better access to external financing, it merits examining whether early bank adopters do *ex post* experience higher growth of funds. In this subsection, I examine my third hypothesis during the period between the issued date and the effective date of an accounting standard (i.e., the testing period).

Both *H1* and the results suggest that banks with high profitability are less likely to voluntarily disclose information because they have few concerns about raising funds. Consequently, it is likely that late bank adopters with high profitability experience comparable financing activity growth without early adoption to those of early bank adopters. To address this issue, I match each early adopter to a late adopter with comparable profitability based on the net interest margin measured at the most recent quarter-end before standard announcement dates. In addition, banks' financing strategies may change with the macroeconomic conditions in general. For instance, loan demands increase during economic expansions and hence banks' demand for funds also increases. On the other hand, loan demands decrease during economic contractions and hence banks' demand for fund also decreases. I therefore expect early adopters to experience higher growth of funds than matched late adopters during the testing periods that are in economic expansions.

Figure 1 compares early adopters and matched late adopters in the growth of funds attributed to changes in deposits, changes in liabilities other than deposits, and changes in preferred and common stock and related surplus during the testing periods.[16] For better illustration, I separately show the growth of funds of banks during the testing periods that take

[16] Liabilities other than deposits include federal funds purchased and securities sold under agreements to repurchase, trading liabilities, other borrowed money, subordinated notes and debentures, and other liabilities.

place in economic expansions and economic contractions. Panel (a) displays the growth of funds during the testing periods in economic expansions, while panel (b) exhibits growth during the testing periods in economic contractions. Panel (a) shows that, in general, regardless of the income effects of accounting standards, early bank adopters experience higher growth of funds than their matched counterparts. On the other hand, panel (b) does not show any particular trend in the growth of funds between early adopters and matched late adopters as expected. In terms of economic significance, the differences in the growth of funds (scaled by total assets) between early adopters and matched late adopters range from -0.8% to 4.9% during the testing periods that are in economic expansions. The difference is only statistically significant when comparing early adopters and their matched counterparts altogether during all testing periods in economic expansions (one-tailed *p*-value = .080).

Further analysis suggests that the growth of liabilities other than deposits mainly accounts for the total growth of funds of early adopters during testing periods that take place in economic expansions observed in figure 1. In terms of economic significance, the differences in the growth of liabilities other than deposits (scaled by total assets) between early adopters and matched late adopters range from 0.7% to 3.9%. In terms of statistical significance, the differences are significant in the cases of early adoption of SFAS No. 122, SFAS No. 133, SFAS No. 156, and SFAS No. 157 (one-tailed *p*-values = .050, .054, .071, and .019, respectively). As for equity capital (i.e., changes in preferred and common stock and related surplus), there does not seem to be a particular trend in the growth of capital between early adopters and matched late adopters during the testing periods in either economic expansions or economic contractions. The differences between early adopters and their matched counterparts are not statistically significant in any case of early adoption. This result suggests that in general, raising equity capital is costly for banks and therefore does not serve as the main driver of the total growth of banks' funds. In summary, early-adopting banks appear to experience higher growth of funds than matched late-adopting banks during the testing periods that take place in economic expansions. Hence, *H3* is supported by the results.

CHAPTER 4
ADDITIONAL ANALYSES

This chapter presents two additional analyses to evaluate the robustness of the findings. The first set of analysis considers the effects of differences in the banking operations between small, mid-sized, and large banks on early-adoption decisions. In the second set of analysis, I investigate the issue of insufficient cross-sectional variations in adoption cases as identified in subsection 3.2.

To analyze the first set, I estimate the early-adoption decision model separately for small, mid-sized, and large BHCs. I conduct this analysis because the banking operations can differ between various bank sizes. Although the testing variables are adjusted for the average measures of peer banks, the remaining variations in the testing variables can still be attributable to differences in banking operations between small, mid-sized, and large BHCs. Table 6 panel A presents the results. In general, the predictions are still supported for small and mid-sized BHCs. The major exception of the results is shown for the large BHC group; specifically, the relationship between bank profitability and early adoption becomes positive but only marginally significant (*p*-value = .087). One plausible explanation is that the information environment of large banks is likely to be transparent. As a result, banks' uncertainty about how investors will respond to the disclosure is not a major concern. Therefore, large and highly profitable banks are more likely to early adopt accounting standards.

Also worth noting, large banks are more likely to choose to early adopt accounting standards with relatively high standard complexity. To examine how banks' early-adoption decisions vary with standard complexity, I classify 16 accounting standards into three levels of complexity based on the number of pages of a standard: low, medium, and high complexity.[17] Instead of using *PAGE*, I use two dummy variables denoting low and high standard complexity in the early-adoption decision model. The results in table 6 panel B suggest that large banks are more likely to early adopt standards with relatively high complexity. On the other hand, small banks are more (less) likely to early adopt standards with relatively low (high) complexity.

[17] Accounting standards with low complexity include SFAS No. 122, SFAS No. 132, SFAS No. 146, SFAS No. 155, and SFAS No. 161. Accounting standards with medium complexity include SFAS No. 121, SFAS No. 142, SFAS No. 143, SFAS No. 144, SFAS No. 132R, and SFAS No. 159. Accounting standards with high complexity include SFAS No. 123, SFAS No. 133, SFAS No. 123R, SFAS No. 156, and SFAS No. 157.

Standard complexity, however, does not seem to affect mid-sized banks' early-adoption decisions. One plausible explanation for the results is that large banks are more likely than small banks to engage in highly-complex transactions. They are also more likely than small banks to be subject to bank regulators' encouragement to choose to early adopt standards which improve disclosures related to complex transactions. In addition, large banks are able to dedicate more resources than small banks to implement new and complex standards. Consequently, large banks are more likely to early adopt accounting standards with higher standard complexity. Evidence that small banks are more (less) likely to choose to early adopt accounting standards with low (high) complexity than with medium complexity is also consistent with the argument that small banks engage in transactions with low complexity. Therefore, for the purpose of information disclosure, it is conceivable that small banks tend to early adopt standards with low complexity than with high complexity.

As mentioned in section 3.2, many of the accounting standards examined in this paper do not have sufficient cross-sectional variations in the number of early-adoption cases. To examine the potential effect on the inferences of the results, I keep BHC-standard observations related to SFAS No. 122, SFAS No. 133, SFAS No. 156, SFAS No. 157, and SFAS No. 159 in the estimation. These five standards are chosen because they contain the most early-adoption cases. I estimate the early-adoption decision model in a pooled regression for all five accounting standards. In general, the untabulated results are similar to those presented in table 4. In particular, the negative relationship between *NIM* and the likelihood of early adoption still holds. The negative relationship is moderated by the level of response certainty, *RPCERTAINTY*, similar to the results documented in table 4. In addition, the results support the prediction that banks with greater risk profiles are more likely to early adopt accounting standards. The results using ROA instead of *NIM* as a bank profitability measure are qualitatively the same.[18]

It is important to note that firms that choose to early adopt SFAS No. 159 also needs to early adopt SFAS No. 157. In the sample observations, 21 banks that chose to early adopt SFAS No. 157 also early adopted SFAS No. 159 and vice versa (i.e., a total of 21 BHCs). Therefore, it is possible that early adoption of SFAS No. 157 reflects the needs for banks to early adopt SFAS

[18] I also estimate the early-adoption decision model separately for (1) accounting standards related to financial instruments (i.e., SFAS No. 122, SFAS No. 133, SFAS No. 155, SFAS No. 156, SFAS No. 157, SFAS No. 159, and SFAS No. 161) and (2) all other accounting standards examined in this study. The results suggest that a bank's incentive to better access external financing predominantly explains a bank's early-adoption decisions on accounting standards related to financial instruments but not on all other accounting standards.

No. 159. I estimate the early-adoption model in a pooled regression by using only SFAS No. 122, SFAS No. 133, and SFAS No. 156. The results are qualitatively the same.[19]

In summary, these additional analyses concur with the inferences made in the previous section. Specifically, bank profitability and bank risk profiles are significantly associated with the likelihood of early adoption. In various cases, the documented negative relationship between bank profitability and early adoption is moderated by the level of response certainty. In addition, standard complexity is of importance in small and large banks' early-adoption decisions. Future research could consider incentives or factors specific to each accounting standard.

[19] All untabulated results are available upon request.

CHAPTER 5
SUMMARY AND CONCLUDING REMARKS

I investigate whether U.S. bank holding companies choose to early adopt accounting standards to provide new information and better access capital markets. In particular, I examine whether the likelihood of early adoption is negatively associated with bank profitability and positively associated with bank risk profiles. The set of the accounting standards employed in this study were issued from January 1995 to March 2008.

I find that the likelihood of early adoption is significantly and negatively related to bank profitability, which is proxied by the net interest margin. Furthermore, I discover that the likelihood of early adoption is significantly and positively related to bank risk profiles, which are proxied by the interest rate risk on the investment portfolios, the credit risk on the loan portfolios, derivative exposures, and the operational risk. Conditional on the income effects of accounting standards, the predictions are best supported when using bank profitability and risk profiles to explain early-adoption decision on accounting standards with *ex ante* undetermined income effects and with only disclosure requirements. Finally, the results indicate that early adopters experience higher growth of funds than matched late adopters during the periods between the issued dates and the effective dates of accounting standards, particularly in economic expansions. This finding reinforces the idea that banks voluntarily disclose information for the purpose of having better access to external financing in the context of early adoption.

This study appeals to both academic and practical audiences. From an academic perspective, my paper complements the existing early-adoption literature by providing an additional motivation for early adoption. This motivation power is at its greatest when used to explain early-adoption decisions on accounting standards with *ex ante* undetermined effects and with only disclosure requirements. This study complements the line of research in managers' voluntary disclosure decisions for capital market reasons in the context of banks' early-adoption decisions (Healy and Palepu 2001, p.420). My research may also interest financial statement preparers and users. The results in this study suggest that implications about a firm's future performance may be gathered by analyzing a firm's early-adoption decisions over time. With the counter-signaling role in the early-adoption decisions, firms may think twice when evaluating early adoption of accounting standards. In a follow-up paper, I examine whether a bank's early-

adoption behavior have implications on future bank performance. Future research may examine conditions under which early-adoption behavior better implies firms' future performances or it may consider whether the motive for early adoption to provide new information and thus better access capital markets applies in other industries.

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APPENDIX A: ACCOUNTING STANDARDS FROM JANUARY 1995 TO MARCH 2008

Accounting Standards	**Issued Date** (or the earliest adoption date)	**Effective Date** (for fiscal years after the date)	**Potential income effects of the adoption**	**Disclosures only?**	**Changes in calculation of regulatory core capital?**	**Number of pages**
No. 121 Accounting for the Impairment of Long-Lived Assets and for Long-Lived Assets to Be Disposed Of	March 1995	December 15, 1995	–			47
No. 122 Accounting for Mortgage Servicing Rights--an amendment of FASB Statement No. 65	May 1995	December 15, 1995	+		✓	35
No. 123 Accounting for Stock-Based Compensation	October 1995	December 15, 1995	–			89
No. 132 Employers' Disclosures about Pensions and Other Postretirement Benefits--an amendment of FASB Statements No. 87, 88, and 106	February 1998	December 15, 1998	?	✓		29
No. 133 Accounting for Derivative Instruments and Hedging Activities	June 1998	June 15, 2000	?		✓	176
No. 142 Goodwill and Other Intangible Assets	March 15, 2001	December 15, 2001	?			75
No. 143 Accounting for Asset Retirement Obligations	June 2001	June 15, 2002	–			49
No. 144 Accounting for the Impairment or Disposal of Long-Lived Assets	August 2001	December 15, 2001	–			65

APPENDIX A (cont.)

Accounting Standards	**Issued Date** (or the earliest adoption date)	**Effective Date** (for fiscal years after the date)	**Potential income effects of the adoption**	**Disclosures only?**	**Changes in calculation of regulatory core capital?**	**Number of pages**
No. 146 Accounting for Costs Associated with Exit or Disposal Activities	June 2002	December 31, 2002	+			25
No. 132R Employers' Disclosures about Pensions and Other Postretirement Benefits--an amendment of FASB Statements No. 87, 88, and 106	December 2003	December 15, 2003	?	✓		40
No. 123R Share-Based Payment	December 2004	June 15, 2005	−			171
No. 155 Accounting for Certain Hybrid Financial Instruments--an amendment of FASB Statements No. 133 and 140	February 2006	September 15, 2006	?		✓	18
No. 156 Accounting for Servicing of Financial Assets--an amendment of FASB Statement No. 140	March 2006	September 15, 2006	?			114
No. 157 Fair Value Measurements	September 2006	November 15, 2007	?	✓		86
No. 159 The Fair Value Option for Financial Assets and Financial Liabilities--Including an amendment of FASB Statement No. 115	February 2007	November 15, 2007	?			36
No. 161 Disclosures about Derivative Instruments and Hedging Activities--an amendment of FASB Statement No. 133	March 2008	November 15, 2008	?	✓		32

APPENDIX B: LOGIT MODEL FOR EARLY ADOPTION DECISIONS

Variable Name	Variable Definition
Dependent variable	
EARLY	An indicator variable that equals 1 if BHCs early adopted accounting standards and 0 otherwise. Early adoption information is obtained from 10Q/Ks. BHCs may not discuss all accounting standards examined in this paper in their 10Q/Ks. Therefore, only BHC-standard observations with available discussion on the pertinent accounting standards are included in the initial sample.
Test variables	
Hypothesis 1—Profitability:	
NIM	*NIM* is measured by the net interest income (BHCK4074) divided by total assets (BHCK2170) (net interest margin) at the first quarter-end after the adoption of a new accounting standard and adjusted for the average net interest margin of peer banks.
RPCERTAINTY	The percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past 12 quarters before the announcement date of an accounting standard.
NIM_RPCERTAINTY	An interaction term between *NIM* and *RPCERTAINTY*.
BADNEWS	An indicator variable equal to 1 if *NIM* is less than zero and 0 otherwise.
Hypothesis 2—Risk profiles:	
(a) Interest rate risk	
AFSOFINV	The proportion of available-for-sale securities (excluding equity securities) out of total investment securities, adjusted for the average *AFSOFINV* of peer banks. Total investment securities are the sum of available-for-sale securities (BHCK1773) and held-to-maturity securities (BHCK1754).
CONTRACT	An indicator variable equal to 1 if a BHC holds interest rate derivative contracts and 0 otherwise.
(b) Credit risk	
LOANRISK	The ratio of the allowance for loan and lease losses at the quarter-end (BHCK3123) to average quarterly loans and leases (BHCK3516), adjusted for the average *LOANRISK* of peer banks.
(c) Exposures and credit risk of derivatives	
EXPOSUREDER	The level of exposure to derivative contracts (*EXPOSUREDER*) is measured by the ratio of the gross notional amount of derivative contracts other than purchased options (i.e. futures contracts, forward contracts, written options, and swaps) to total assets (BHCK2170), adjusted for the average *EXPOSUREDER* of peer banks.

APPENDIX B (cont.)

Variable Name	Variable Definition
CREDITRISKDER	An indicator variable that equals 1 if the gross notional amount of over-the-counter derivative contracts (i.e. forwards, over-the-counter options, and swaps) is greater than that of exchange-traded derivative contracts (i.e. futures contracts and exchange-traded options) and 0 otherwise.
(d) Operational risk	
NONINTCHG	Average quarterly growth in noninterest income (BHCK4079) over the past six quarters, adjusted for the average *NONINTCHG* of peer banks during the same period.
Control variables	
SIZE	The logarithm of total revenues. Total revenues are defined as the sum of total interest income (BHCK4107) and total noninterest income (BHCK4079).
LEVERAGE	Total liabilities (BHCK2948) divided by total assets (BHCK2170).
DROE	*DROE* is an indicator variable that equals 1 if a BHC's ROE falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs during a benchmark quarter and 0 otherwise. ROE is calculated as income (loss) before income taxes and extraordinary items, and other adjustments (BHCK4301) divided by the last quarter-end total equity capital (BHCK3210).
NIEFF	The variable is coded as 1 if adoption of a sample accounting standard is expected to have a positive effect on income, -1 if a negative effect on income is expected, and 0 if either a positive, a negative or no direct effect on income is possible.
DROE_NIEFF	An interaction term between *DROE* and *NIEFF*.
MKTHERF	*MKTHERF* is measured by the sum of the squared market shares (based on total interest income and total noninterest income) of banks operating in the same geographic region; five geographic regions are identified: Eastern, Southeast, Midwest, Southwest, and West.
CULTURE	*CULTURE* is measured by the percentage of times that a bank chose early adoption before making the current early-adoption decision on a new accounting standard.
DISCLOSURE	An indicator variable that equals 1 if an accounting standard only requires disclosures and 0 otherwise.
REG_POS	An indicator variable that equals 1 if the pronouncement of an accounting standard could lead to changes in the rule of Tier 1 capital calculation and a positive effect on Tier 1 capital; 0 otherwise.
REG_UN	An indicator variable that equals 1 if the pronouncement of an accounting standard could lead to changes in the rule of Tier 1 capital calculation and an undetermined effect on Tier 1 capital; 0 otherwise.
PAGE	The number of pages of a sample accounting standard as issued.

Note: All variables are measured at the latest quarter-end or for the latest quarter (the benchmark quarter) before standard announcement dates, unless otherwise mentioned. For example, all variables are measured for the fourth quarter in 2005 or at the end of the fourth quarter in 2005 for FAS 156, which was announced in March 2006.

Table 1. Description of the Eliminations Made in Reaching the Final Sample

	Number of BHCs	BHC-Standard Observations
Initial sample of BHCs		
Number of BHCs listed in the *Bank Regulatory* database between 1995 and 2008	9,293	
Remove:		
Number of BHCs with the parent company not in the banking industry (SIC: 6020) and without available 10Q/Ks	(8,734)	
Sample of BHC-Standard observations		
Sample of BHCs with 10Q/Ks describing the adoption status of examined accounting standards between 1995 and 2008	581	5,218
Remove:		
Observations that do not have all the necessary data from the *Bank Regulatory* database		(1,396)
Final sample used in the early adoption model	486	3,822

Table 2. Early Adoption by Standard and Bank Size

Standard	Peer 1			Peer 2			Peer 3			-------- Total --------		
	0	1	Total	0	1	Total	0	1	Total	0	1	Total
121	59		59	27	2	29	10	1	11	96	3	99
122	81	6	87	26	10	36	5	11	16	112	27	139
123	90		90	41		41	15		15	146	0	146
132	69		69	37		37	12		12	118	0	118
133	132	33	165	57	10	67	20		20	209	43	252
142	198		198	100	1	101	26		26	324	1	325
143	99	4	103	42		42	17		17	158	4	162
144	154		154	81		81	23		23	258	0	258
146	126		126	72	1	73	24	1	25	222	2	224
132R	56		56	45		45	16		16	117	0	117
123R	253	2	255	138		138	33		33	424	2	426
155	105	1	106	104		104	29	5	34	238	6	244
156	122	5	127	118	6	124	23	12	35	263	23	286
157	146	7	153	157	8	165	35	7	42	338	22	360
159	137	6	143	164	10	174	39	6	45	340	22	362
161	105	1	106	147	5	152	44	2	46	296	8	304
Total	1,932	65	1,997	1,356	53	1,409	371	45	416	3,659	163	3,822
# of Different BHCs	385	55	385	221	40	221	49	20	50	485	109	486

Note: Peer 1 includes BHCs with total assets less than $1 billion. Peer 2 includes BHCs with total assets between $1 and $10 billion. Peer 3 includes BHCs with total assets greater than $10 billion. 0 denotes late adopters and 1 denotes early adopters.

Table 3. Descriptive Statistics

Panel A. Sample Statistics

Variable	Mean	S.D.	Min	P25	P50	P75	Max	N
EARLY	0.043	0.202	0	0	0	0	1	3,822
NIM	-0.0003	0.003	-0.018	-0.001	-0.0004	0.001	0.027	3,822
RPCERTAINTY	0.405	0.342	0	0.044	0.391	0.696	1	3,822
BADNEWS	0.590	0.492	0	0	1	1	1	3,822
AFSOFINV	0.033	0.227	-0.844	-0.044	0.120	0.165	0.544	3,822
CONTRACT	0.374	0.484	0	0	0	1	1	3,822
LOANRISK	-0.002	0.005	-0.014	-0.004	-0.002	0.000	0.098	3,822
EXPOSUREDER	0.194	2.008	-0.029	-0.025	-0.021	-0.011	44.520	3,822
CREDITRISKDER	0.383	0.486	0	0	0	1	1	3,822
SIZE	11.080	1.701	7.867	9.971	10.800	11.890	18.880	3,822
LEVERAGE	0.908	0.024	0.238	0.899	0.911	0.922	0.980	3,822
DROE	0.498	0.500	0	0	0	1	1	3,822
MKTHERF	0.136	0.087	0.023	0.047	0.129	0.217	0.363	3,822

Table 3 (cont.)
Panel B. Early vs. Late Adopters

	Early Adopters			Late Adopters				
Variable	***n***	**Mean**	**Median**	***n***	**Mean**	**Median**	**T-Test *p*-value**	**Wilcoxon Test *p*-value**
NIM	163	-0.001	-0.0008	3,659	-0.0003	-0.0004	0.001	0.004
RPCERTAINTY	163	0.364	0.261	3,659	0.407	0.391	0.115	0.113
BADNEWS	163	0.601	1	3,659	0.589	1	0.761	0.761
AFSOFINV	163	-0.012	0.068	3,659	0.035	0.122	0.011	0.000
CONTRACT	163	0.552	1	3,659	0.366	0	0.000	0.000
LOANRISK	163	-0.002	-0.003	3,659	-0.002	-0.002	0.390	0.150
EXPOSUREDER	163	1.558	-0.019	3,659	0.133	-0.021	0.000	0.000
CREDITRISKDER	163	0.589	1	3,659	0.374	0	0.000	0.000
SIZE	163	11.780	10.940	3,659	11.050	10.790	0.000	0.050
LEVERAGE	163	0.908	0.912	3,659	0.908	0.911	0.890	0.773
DROE	163	0.436	0	3,659	0.501	1	0.103	0.103
MKTHERF	163	0.128	0.088	3,659	0.137	0.129	0.228	0.102

Note: The *p*-values for differences in means and medians between early and late adopters are based on two-tailed tests. *EARLY* is an indicator variable that equals 1 if BHCs early adopted accounting standards and 0 otherwise. *NIM* is measured by the net interest income (BHCK4074) scaled by total assets (BHCK2170) at the first quarter-end after the adoption of a new accounting standard and adjusted for the average net interest margin of peer banks. *RPCERTAINTY* is the percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past 12 quarters before the standard announcement dates. *BADNEWS* is an indicator variable equal to 1 if *NIM* is less than zero and 0 otherwise. *AFSOFINV* is the proportion of available-for-sale securities out of total investment securities and is computed as BHCK1773÷(BHCK1773+BHCK1754), adjusted for the average *AFSOFINV* of peer banks. *CONTRACT* is an indicator variable equal to 1 if a BHC holds interest rate derivative contracts and 0 otherwise. *LOANRISK* is the ratio of the allowance for loan and lease losses at the quarter-end (BHCK3123) to average quarterly loans and leases (BHCK3516), adjusted for the average *LOANRISK* of peer banks. *EXPOSUREDER* is measured by the ratio of the gross notional amount of derivative contracts other than purchased options (i.e. futures contracts, forward contracts, written options, and swaps) to total assets, adjusted for the average *EXPOSUREDER* of peer banks. *CREDITRISKDER* is an indicator variable that equals 1 if the gross notional amount of over-the-counter derivative contracts is greater than that of exchange-traded derivative contracts and 0 otherwise. *SIZE* is the natural logarithm of the sum of total interest income (BHCK4107) and total noninterest income (BHCK4079). *LEVERAGE* is total liabilities (BHCK2948) divided by total assets (BHCK2170). *DROE* is an indicator variable that equals 1 if a BHC's ROE falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs during a benchmark quarter and 0 otherwise. *MKTHERF* is measured by the sum of the squared market shares (based on total interest

income and total noninterest income) of banks operating in the same geographic region; five geographic regions are identified: Eastern, Southeast, Midwest, Southwest, and West.

Table 4. Early-Adoption Decision Model—All Standards

Independent Variable	*Expected Sign*	*Model (1)*				*Model (2)*				*Model (3)*			
		Coeff.	*%StdX*	*z-stat.*	*p-value*	*Coeff.*	*%StdX*	*z-stat.*	*p-value*	*Coeff.*	*%StdX*	*z-stat.*	*p-value*
Hypothesis 1:													
NIM	−	-283.77	-50.90	-3.38	0.001	-295.95	-52.50	-3.36	0.001	-248.26	-46.60	-2.43	0.008
RPCERTAINTY	+	-0.09	-3.00	-0.27	0.394	-0.05	-1.60	-0.14	0.446	-0.29	-9.40	-0.74	0.231
NIM_RPCERTAINTY	+	288.00	52.40	2.30	0.011	291.10	54.00	2.18	0.015	272.00	51.30	2.02	0.022
BADNEWS	−	-0.70	-29.20	-2.57	0.005	-0.68	-28.50	-2.34	0.010	-0.67	-28.10	-2.10	0.018
Hypothesis 2:													
AFSOFINV	−	-0.87	-17.90	-2.42	0.008	-0.90	-18.20	-2.37	0.009	-0.97	-19.10	-2.41	0.008
CONTRACT	?	0.47	25.50	2.02	0.043	0.43	23.10	1.82	0.069	0.59	33.50	2.27	0.023
LOANRISK	−	-53.75	-22.50	-2.01	0.023	-62.57	-25.50	-2.33	0.010	-58.34	-23.30	-1.87	0.031
EXPOSUREDER	+	0.06	12.60	2.95	0.002	0.06	13.70	2.99	0.002	0.06	12.70	2.63	0.005
CREDITRISKDER	+	0.39	20.70	1.46	0.073	0.47	25.60	1.73	0.042	0.16	8.30	0.58	0.281
NONINTCHG	+					0.29	13.30	5.21	0.000	0.29	13.90	5.24	0.000
Control Variables:													
SIZE	?	0.19	38.60	2.21	0.027	0.17	33.90	1.87	0.062	0.14	27.40	1.46	0.144
LEVERAGE	?	-5.09	-11.70	-1.33	0.183	-5.21	-11.70	-1.21	0.227	-5.79	-12.90	-1.50	0.135
DROE	?	-0.01	-0.30	-0.03	0.979	-0.03	-1.60	-0.16	0.870	-0.01	-0.60	-0.06	0.951
NIEFF	+	-0.34	-18.20	-0.39	0.350	-0.39	-20.40	-0.44	0.332	0.02	1.30	0.03	0.490
DROE_NIEFF	−	-0.80	-28.60	-1.93	0.027	-0.80	-28.50	-1.91	0.029	-0.55	-20.10	-1.06	0.146
MKTHERF	?	1.15	10.50	0.77	0.439	1.52	14.20	0.96	0.339	2.56	25.00	1.56	0.118
CULTURE	+									1.81	28.60	2.53	0.006
DISCLOSURE	−	0.67	32.80	1.73	0.042	0.70	35.10	1.76	0.040	0.46	22.10	1.15	0.126
REG_POS	+	4.84	147.60	3.66	0.000	4.89	150.60	3.63	0.000	4.62	98.70	4.00	0.000
REG_UN	−	-2.83	-61.40	-3.24	0.001	-2.90	-61.80	-3.21	0.001	-2.21	-52.20	-2.33	0.010
PAGE	−	-0.01	-53.70	-1.83	0.034	-0.02	-56.20	-1.91	0.028	-0.01	-37.90	-1.04	0.151
Year Fixed Effect		Yes				Yes				Yes			

Table 4 (cont.)

Independent Variable	*Expected Sign*	*Model (1)*				*Model (2)*				*Model (3)*			
		Coeff.	*%StdX*	*z-stat.*	*p-value*	*Coeff.*	*%StdX*	*z-stat.*	*p-value*	*Coeff.*	*%StdX*	*z-stat.*	*p-value*
N		3,822				3,628				3,363			
# of clusters		486				462				454			
Pseudo R^2		0.25				0.25				0.24			

Note: The *p*-values are based on one-tailed tests when the prediction is directional, and on two-tailed tests otherwise. The table reports the results of estimating the following model using logit regression with standard errors clustered at the bank level.

$$EARLY_{ij} = \sum_{N=1}^{9} \beta_{0N} YEAR_{Ni} + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij} + \beta_4 BADNEWS_{ij} + \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij} + \beta_8 EXPOSUREDER_{ij} + \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij} + \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij} + \beta_{14} NIEFF_j + \beta_{15} DROE\_NIEFF_{ij} + \beta_{16} MKTHERF_{ij} + \beta_{17} CULTURE_{ij} + \beta_{18} DISCLOSURE_j + \beta_{19} REG\_POS_j + \beta_{20} REG\_UN_j + \beta_{21} PAGE_j + \varepsilon_{ij}$$

EARLY is an indicator variable that equals 1 if BHCs early adopted accounting standards and 0 otherwise. *YEAR* is a year indicator variable. *NIM* is measured by the net interest income (BHCK4074) scaled by total assets (BHCK2170) at the first quarter-end after the adoption of a new accounting standard and adjusted for the average net interest margin of peer banks. *RPCERTAINTY* is the percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past 12 quarters before the standard announcement dates. *BADNEWS* is an indicator variable equal to 1 if *NIM* is less than zero and 0 otherwise. *AFSOFINV* is the proportion of available-for-sale securities out of total investment securities and is computed as BHCK1773÷(BHCK1773+BHCK1754), adjusted for the average *AFSOFINV* of peer banks. *CONTRACT* is an indicator variable equal to 1 if a BHC holds interest rate derivative contracts and 0 otherwise. *LOANRISK* is the ratio of the allowance for loan and lease losses at the quarter-end (BHCK3123) to average quarterly loans and leases (BHCK3516), adjusted for the average *LOANRISK* of peer banks. *EXPOSUREDER* is measured by the ratio of the gross notional amount of derivative contracts other than purchased options (i.e. futures contracts, forward contracts, written options, and swaps) to total assets, adjusted for the average *EXPOSUREDER* of peer banks. *CREDITRISKDER* is an indicator variable that equals 1 if the gross notional amount of over-the-counter derivative contracts is greater than that of exchange-traded derivative contracts and 0 otherwise. *NONINTCHG* is the average quarterly growth in noninterest income (BHCK4079) over the past six quarters, adjusted for the average *NONINTCHG* of peer banks during the same period. *SIZE* is the natural logarithm of the sum of total interest income (BHCK4107) and total noninterest income (BHCK4079). *LEVERAGE* is total liabilities (BHCK2948) divided by total assets (BHCK2170). *DROE* is an indicator variable that equals 1 if a BHC's ROE falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs during a benchmark quarter and 0 otherwise. *NIEFF* is coded as 1 if adoption of a sample accounting standard is expected to have a positive effect on income, -1 if a negative effect on income is expected and 0 if either a positive, a negative or no direct effect on income is possible. *DROE_NIEFF* is an interaction term between *DROE* and *NIEFF*. *MKTHERF* is measured by the sum of the squared market shares (based on total interest income and total noninterest income) of banks operating in the same geographic region; five geographic regions are identified: Eastern, Southeast, Midwest, Southwest, and West. *CULTURE* is measured by the percentage of times that a bank chose early adoption before making the current early-adoption decision on a new accounting standard. *DISCLOSURE* is an indicator variable that equals 1 if an accounting standard only requires disclosure and 0 otherwise. *REG_POS* (*REG_UN*) is an indicator variable that equals 1 if the pronouncement of an accounting standard could lead to changes in the rule of Tier 1 capital calculation and a positive effect (an undetermined effect) on Tier 1 capital; 0 otherwise. *PAGE* is the number of pages of a sample accounting standard as issued.

Table 5. Early-Adoption Decision Model by the Income Effects of Accounting Standards

Independent Variable	*Expected Sign*	*Accounting Standards with Income-decreasing Effects*				*Expected Sign*	*Accounting Standards with Income-increasing Effects*			
		Coeff.	*%StdX*	*z-stat.*	*p-value*		*Coeff.*	*%StdX*	*z-stat.*	*p-value*
Hypothesis 1:										
NIM	−	13.440	5.000	0.102	0.460	−	-600.633	-64.900	-1.660	0.049
RPCERTAINTY	+	2.348	120.300	1.685	0.046	+	0.579	21.900	0.648	0.259
NIM_RPCERTAINTY	+	174.600	44.100	0.762	0.223	+	188.600	22.100	0.342	0.366
BADNEWS	−	0.238	12.600	0.180	0.429	−	-1.761	-58.600	-1.967	0.025
Hypothesis 2:										
AFSOFINV	−	-0.560	-11.800	-0.420	0.337	−	-0.416	-9.400	-0.384	0.351
CONTRACT	?	0.608	32.700	0.525	0.600	?	-1.413	-48.300	-1.248	0.212
LOANRISK	−	-318.683	-84.000	-1.878	0.030	−	24.210	11.400	0.313	0.378
EXPOSUREDER	+	0.313	76.600	0.309	0.379	+	-2.750	-99.400	-1.427	0.077
CREDITRISKDER	+	0.287	14.300	0.254	0.400	+	1.739	125.500	1.275	0.101
NONINTCHG	+	-13.720	-80.000	-2.543	0.006	+	0.508	3.600	0.082	0.468
Control Variables:										
SIZE	?	-1.718	-93.900	-2.584	0.010	?	0.595	167.400	2.195	0.028
LEVERAGE	?	44.080	275.300	2.296	0.022	?	39.700	88.000	1.133	0.257
DROE	+	-0.495	-22.000	-0.468	0.320	−	-0.933	-37.300	-1.416	0.079
MKTHERF	?	-6.091	-34.500	-1.139	0.255	?	-15.610	-67.100	-1.992	0.046
CULTURE	+	-2.468	-34.000	-0.630	0.264	+	2.213	34.000	1.787	0.037
N		875					287			
Pseudo R^2		0.30					0.38			

Table 5 (cont.)

Independent Variable	*Expected Sign*	*Accounting Standards with Ex Ante Undetermined Income Effects*				*Expected Sign*	*Accounting Standards with Only Disclosure Requirements*			
		Coeff.	*%StdX*	*z-stat.*	*p-value*		*Coeff.*	*%StdX*	*z-stat.*	*p-value*
Hypothesis 1:										
NIM	−	-301.984	-46.000	-2.715	0.004	−	-478.519	-60.800	-3.377	0.001
RPCERTAINTY	+	-0.190	-6.300	-0.382	0.352	+	-1.676	-44.100	-2.168	0.015
NIM_RPCERTAINTY	+	342.400	56.600	2.413	0.008	+	601.800	108.600	3.525	0.000
BADNEWS	−	-0.525	-22.500	-1.489	0.069	−	-1.380	-48.800	-2.256	0.012
Hypothesis 2:										
AFSOFINV	−	-1.299	-24.700	-2.987	0.002	−	-0.475	-9.500	-0.521	0.301
CONTRACT	?	0.717	41.600	2.771	0.006	?	2.249	207.400	4.309	0.000
LOANRISK	−	-17.420	-6.600	-0.454	0.325	−	-94.110	-31.700	-2.164	0.015
EXPOSUREDER	+	0.128	33.200	2.135	0.017	+	0.039	9.300	0.909	0.182
CREDITRISKDER	+	-0.152	-7.300	-0.559	0.288	+	-0.091	-4.400	-0.177	0.430
NONINTCHG	+	-3.617	-24.200	-1.901	0.029	+	0.369	38.000	5.919	0.000
Control Variables:										
SIZE	?	-0.039	-6.200	-0.331	0.741	?	-0.109	-15.900	-0.727	0.467
LEVERAGE	?	-10.990	-21.500	-2.317	0.021	?	-11.920	-22.700	-1.505	0.132
DROE	?	0.080	4.100	0.321	0.748	?	-0.253	-11.900	-0.595	0.552
MKTHERF	?	-0.243	-2.000	-0.143	0.886	?	6.149	82.900	2.747	0.006
CULTURE	+	0.820	12.600	1.453	0.073	+	4.927	58.500	2.810	0.003
N		1,343					858			
Pseudo R^2		0.09					0.24			

Note: The *p*-values are based on one-tailed tests when the prediction is directional, and on two-tailed tests otherwise. This table reports the results of estimating the following model using logit regression with heteroskedasticity-corrected robust standard errors:

$$EARLY_{ij} = \beta_0 + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij} + \beta_4 BADNEWS_{ij} + \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij} + \beta_8 EXPOSUREDER_{ij} + \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij} + \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij} + \beta_{14} MKTHERF_{ij} + \beta_{15} CULTURE_{ij} + \varepsilon_{ij}$$

EARLY is an indicator variable that equals 1 if BHCs early adopted accounting standards and 0 otherwise. *NIM* is measured by the net interest income (BHCK4074) scaled by total assets (BHCK2170) at the first quarter-end after the adoption of a new accounting standard and adjusted for the average net interest margin of peer banks. *RPCERTAINTY* is the percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past 12 quarters before the standard announcement dates. *BADNEWS* is an indicator variable equal to 1 if *NIM* is less than zero and 0 otherwise. *AFSOFINV* is the proportion of available-for-sale securities out of total investment securities and is computed as BHCK1773÷(BHCK1773+BHCK1754), adjusted for the average *AFSOFINV* of peer banks. *CONTRACT* is an indicator variable equal to 1 if a BHC holds interest rate derivative contracts and 0 otherwise. *LOANRISK* is the ratio of the allowance for loan and lease losses at the quarter-end (BHCK3123) to average quarterly loans and leases (BHCK3516), adjusted for the average *LOANRISK* of peer banks. *EXPOSUREDER* is measured by the ratio of the gross notional amount of derivative contracts other than purchased options (i.e. futures contracts, forward contracts, written options, and swaps) to total assets, adjusted for the average *EXPOSUREDER* of peer banks. *CREDITRISKDER* is an indicator variable that equals 1 if the gross notional amount of over-the-counter derivative contracts is greater than that of exchange-traded derivative contracts and 0 otherwise. *NONINTCHG* is the average quarterly growth in noninterest income (BHCK4079) over the past six quarters, adjusted for the average *NONINTCHG* of peer banks during the same period. *SIZE* is the natural logarithm of the sum of total interest income (BHCK4107) and total noninterest income (BHCK4079). *LEVERAGE* is total liabilities (BHCK2948) divided by total assets (BHCK2170). *DROE* is an indicator variable that equals 1 if a BHC's ROE falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs during a benchmark quarter and 0 otherwise. *MKTHERF* is measured by the sum of the squared market shares (based on total interest income and total noninterest income) of banks operating in the same geographic region; five geographic regions are identified: Eastern, Southeast, Midwest, Southwest, and West. *CULTURE* is measured by the percentage of times that a bank chose early adoption before making the current early-adoption decision on a new accounting standard.

Accounting standards with income-decreasing effect include SFAS No. 121, SFAS No. 123, SFAS No. 143, SFAS No. 144, and SFAS No. 123R. Accounting standards with income-increasing effect include SFAS No. 122 and SFAS No. 146. Accounting standards with undetermined income effect include SFAS No. 133, SFAS No. 142, SFAS No. 155, SFAS No. 156, and SFAS No. 159. Accounting standards with disclosure requirements include SFAS No. 132, SFAS No. 132R, SFAS No. 157, and SFAS No. 161.

Table 6. Additional Analysis

Panel A. Early-Adoption Decision Model by Bank Size

Independent Variable	*Expected Sign*	*Small BHCs*		*Mid-sized BHCs*		*Large BHCs*	
		Coeff.	*p-value*	*Coeff.*	*p-value*	*Coeff.*	*p-value*
Hypothesis 1:							
NIM	−	-213.381	0.045	-668.938	0.000	325.900	0.087
RPCERTAINTY	+	-0.217	0.373	-0.505	0.261	-1.543	0.082
NIM_RPCERTAINTY	+	487.900	0.005	527.900	0.015	-420.230	0.180
BADNEWS	−	-0.424	0.175	-1.508	0.004	-0.779	0.148
Hypothesis 2:							
AFSOFINV	−	-0.851	0.045	-1.270	0.054	-1.063	0.244
CONTRACT	?	0.581	0.180	1.150	0.011	1.118	0.226
LOANRISK	−	-80.340	0.100	-63.900	0.130	-216.001	0.008
EXPOSUREDER	+	-18.230	0.061	-12.000	0.015	0.051	0.107
CREDITRISKDER	+	0.619	0.115	0.329	0.236		
NONINTCHG	+	-5.970	0.006	0.485	0.000	-11.280	0.003
Control Variables:							
SIZE	?	-0.081	0.832	-0.066	0.860	0.895	0.001
LEVERAGE	?	4.690	0.244	-4.832	0.580	-22.200	0.314
DROE	?	-0.309	0.425	0.561	0.140	-0.040	0.930
NIEFF	+	-15.330	0.000	2.686	0.006	2.292	0.000
DROE_NIEFF	−	-0.285	0.353	-1.535	0.047	0.095	0.463
MKTHERF	?	-0.024	0.994	6.908	0.009	0.453	0.922
CULTURE	+	0.980	0.226	3.549	0.016	0.914	0.203
DISCLOSURE	−	0.873	0.139	-0.063	0.416	0.327	0.178
REG_POS	+	31.590	0.000	4.089	0.001	4.566	0.000
REG_UN	−	-3.029	0.035	-15.230	0.000	0.574	0.121
PAGE	−	-0.016	0.123	-0.002	0.416	0.016	0.000
Year Fixed Effect		Yes		Yes		Yes	
N		1,643		1,325		395	
# of clusters		336		215		49	
Pseudo R^2		0.27		0.34		0.37	

Table 6 (cont.)

Panel B. Standard Complexity

Independent Variable	*Expected Sign*	*Small BHCs*		*Mid-sized BHCs*		*Large BHCs*	
		Coeff.	*p-value*	*Coeff.*	*p-value*	*Coeff.*	*p-value*
Hypothesis 1:							
NIM	−	-197.679	0.040	-662.671	0.000	274.000	0.138
RPCERTAINTY	+	-0.252	0.352	-0.533	0.251	-1.417	0.106
NIM_RPCERTAINTY	+	460.800	0.003	508.800	0.018	-331.699	0.272
BADNEWS	−	-0.424	0.173	-1.497	0.004	-0.704	0.191
Hypothesis 2:							
AFSOFINV	−	-0.857	0.043	-1.265	0.060	-0.946	0.256
CONTRACT	?	0.603	0.165	1.159	0.010	1.203	0.181
LOANRISK	−	-79.470	0.102	-67.560	0.114	-191.289	0.017
EXPOSUREDER	+	-19.050	0.059	-12.640	0.013	0.052	0.095
CREDITRISKDER	+	0.624	0.113	0.322	0.239		
NONINTCHG	+	-5.850	0.006	0.497	0.000	-11.080	0.002
Control Variables:							
SIZE	?	-0.065	0.867	0.007	0.985	0.808	0.001
LEVERAGE	?	4.675	0.240	-4.721	0.585	-24.360	0.276
DROE	?	-0.316	0.411	0.529	0.166	-0.020	0.966
NIEFF	+	-14.400	0.000	2.359	0.005	2.220	0.000
DROE_NIEFF	−	-0.283	0.353	-1.379	0.052	0.018	0.494
MKTHERF	?	0.105	0.974	7.422	0.005	0.818	0.859
CULTURE	+	1.002	0.231	3.512	0.016	0.851	0.225
DISCLOSURE	−	1.733	0.081	0.512	0.143	-0.012	0.488
REG_POS	+	18.270	0.000	3.907	0.001	4.948	0.000
REG_UN	−	-14.920	0.000	-16.480	0.000	0.985	0.010
LOWCOMPLEX	+	11.800	0.000	-0.031	0.490	-0.472	0.246
HIGHCOMPLEX	−	-1.673	0.080	-0.485	0.245	1.254	0.003
Year Fixed Effect		Yes		Yes		Yes	
N		1,643		1,325		395	
# of clusters		336		215		49	
Pseudo R-Squared		0.26		0.34		0.37	

Note: The *p*-values are based on one-tailed tests when the prediction is directional, and on two-tailed tests otherwise. Panel A reports the results of estimating the following model for small, mid-sized, and large banks using logit regression with standard errors clustered at the bank level.

$$EARLY_{ij} = \sum_{N=1}^{9} \beta_{0N} YEAR_{Ni} + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij} + \beta_4 BADNEWS_{ij} + \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij} + \beta_8 EXPOSUREDER_{ij}$$

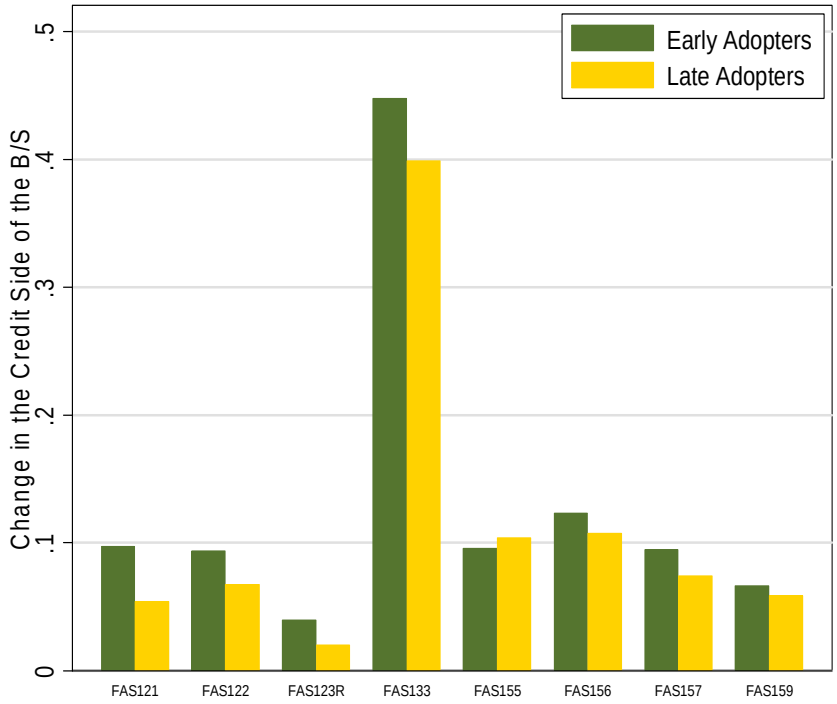
$$+ \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij} + \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij}$$
$$+ \beta_{14} NIEFF_j + \beta_{15} DROE\_NIEFF_{ij} + \beta_{16} MKTHERF_{ij} + \beta_{17} CULTURE_{ij} + \beta_{18} DISCLOSURE_j$$
$$+ \beta_{19} REG\_POS_j + \beta_{20} REG\_UN_j + \beta_{21} PAGE_j + \varepsilon_{ij}$$

Panel B reports the results of estimating the following model for small, mid-sized, and large banks using logit regression with standard errors clustered at the bank level.

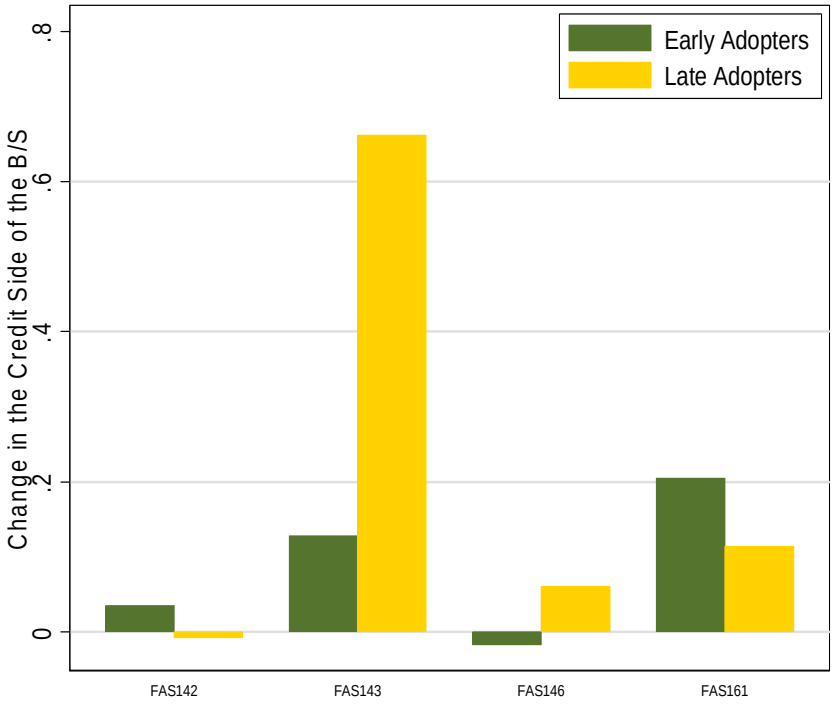
$$EARLY_{ij} = \sum_{N=1}^{9} \beta_{0N} YEAR_{Ni} + \beta_1 NIM_{ij} + \beta_2 RPCERTAINTY_{ij} + \beta_3 NIM\_RPCERTAINTY_{ij} + \beta_4 BADNEWS_{ij}$$
$$+ \beta_5 AFSOFINV_{ij} + \beta_6 CONTRACT_{ij} + \beta_7 LOANRISK_{ij} + \beta_8 EXPOSUREDER_{ij}$$
$$+ \beta_9 CREDITRISKDER_{ij} + \beta_{10} NONINTCHG_{ij} + \beta_{11} SIZE_{ij} + \beta_{12} LEVERAGE_{ij} + \beta_{13} DROE_{ij}$$
$$+ \beta_{14} NIEFF_j + \beta_{15} DROE\_NIEFF_{ij} + \beta_{16} MKTHERF_{ij} + \beta_{17} CULTURE_{ij} + \beta_{18} DISCLOSURE_j$$
$$+ \beta_{19} REG\_POS_j + \beta_{20} REG\_UN_j + \beta_{21} LOWCOMPLEX_j + \beta_{22} HIGHCOMPLEX_j + \varepsilon_{ij}$$

EARLY is an indicator variable that equals 1 if BHCs early adopted accounting standards and 0 otherwise. *YEAR* is a year indicator variable. *NIM* is measured by the net interest income (BHCK4074) scaled by total assets (BHCK2170) at the first quarter-end after the adoption of a new accounting standard and adjusted for the average net interest margin of peer banks. *RPCERTAINTY* is the percentage of times that a bank's net interest margin is greater than the average net interest margin of peer banks during the past 12 quarters before the standard announcement dates. *BADNEWS* is an indicator variable equal to 1 if *NIM* is less than zero and 0 otherwise. *AFSOFINV* is the proportion of available-for-sale securities out of total investment securities and is computed as BHCK1773÷(BHCK1773+BHCK1754), adjusted for the average *AFSOFINV* of peer banks. *CONTRACT* is an indicator variable equal to 1 if a BHC holds interest rate derivative contracts and 0 otherwise. *LOANRISK* is the ratio of the allowance for loan and lease losses at the quarter-end (BHCK3123) to average quarterly loans and leases (BHCK3516), adjusted for the average *LOANRISK* of peer banks. *EXPOSUREDER* is measured by the ratio of the gross notional amount of derivative contracts other than purchased options (i.e. futures contracts, forward contracts, written options, and swaps) to total assets, adjusted for the average *EXPOSUREDER* of peer banks. *CREDITRISKDER* is an indicator variable that equals 1 if the gross notional amount of over-the-counter derivative contracts is greater than that of exchange-traded derivative contracts and 0 otherwise. *NONINTCHG* is the average quarterly growth in noninterest income (BHCK4079) over the past six quarters, adjusted for the average *NONINTCHG* of peer banks during the same period. *SIZE* is the natural logarithm of the sum of total interest income (BHCK4107) and total noninterest income (BHCK4079). *LEVERAGE* is total liabilities (BHCK2948) divided by total assets (BHCK2170). *DROE* is an indicator variable that equals 1 if a BHC's ROE falls in the highest or lowest quartiles of the ROE distribution for the sample BHCs during a benchmark quarter and 0 otherwise. *NIEFF* is coded as 1 if adoption of a sample accounting standard is expected to have a positive effect on income, -1 if a negative effect on income is expected and 0 if either a positive, a negative or no direct effect on income is possible. *DROE_NIEFF* is an interaction term between *DROE* and *NIEFF*. *MKTHERF* is measured by the sum of the squared market shares (based on total interest income and total noninterest income) of banks operating in the same geographic region; five geographic regions are identified: Eastern, Southeast, Midwest, Southwest, and West. *CULTURE* is measured by the percentage of times that a bank chose early adoption before making the current early-adoption decision on a new accounting standard. *DISCLOSURE* is an indicator variable that equals 1 if an accounting standard only requires disclosure and 0 otherwise. *REG_POS* (*REG_UN*) is an indicator variable that equals 1 if the pronouncement of an accounting standard could lead to changes in the rule of Tier 1 capital calculation and a positive effect (an undetermined effect) on Tier 1 capital; 0 otherwise. *PAGE* is the number of pages of a sample accounting standard as issued. *LOWCOMPLEX* is an indicator variable which equals 1 if early-adoption decisions are on SFAS No. 122, SFAS No. 132, SFAS No. 146, SFAS No. 155, or SFAS No. 161, and 0 otherwise. *HIGHCOMPLEX* is an indicator variable which equals 1 if early-adoption decisions are on SFAS No. 123, SFAS No. 133, SFAS No. 123R, SFAS No. 156, or SFAS No. 157, and 0 otherwise.

Figure 1. Comparison between Early and Matched Late Bank Adopters in the Growth of Funds



(a) Banks' Financing Activities during Economic Expansion



(b) Banks' Financing Activities during Economic Contraction

This figure displays the financing activities of early bank adopters and matched late adopters between the issued dates and the effective dates of accounting standards (i.e., the testing periods). Banks' financing activities include changes in deposits, liabilities other than deposits, and preferred and common stock. For each early bank adopter of an accounting standard, a late bank adopter is matched correspondingly based on bank profitability (i.e., net interest margin). Panel a (Panel b) exhibits the early and late bank adopters' financing activities in the testing periods when the economy was in expansion (contraction). Definitions of economic expansions and contractions are available on the NBER website (http://www.nber.org/cycles/cyclesmain.html). The comparison of the total growth of funds acquired between early and matched late bank adopters is not statistically significant in any case. In contrast, the comparisons of the growth of liabilities other than deposits between early and matched late bank adopters are statistically significant in the cases of the adoption of FAS 122, FAS 133, FAS 156, and FAS 157 (paired t-test, one-tailed *p*-value = 0.05, 0.05, 0.07, and 0.02, respectively).