**BANKING AND FINANCE**

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**Abstract**

We survey research on banks׳ financial accounting. After providing a brief background of the theoretical models and accounting and regulatory institutions underlying the bank accounting literature, we review three streams of empirical research. Specifically we review studies associating bank financial reporting with the valuation and risk assessments, associating bank financial reporting discretion with regulatory capital and earnings management, and examining banks’ economic decisions under differing accounting regimes. We discuss what we have already learned and about what else we would like to know. We also discuss methodological challenges associated with predicting the effects of alternative accounting and regulatory capital regimes.

**Introduction**

We review the empirical accounting literature that focuses on banking, which is a relatively large industry specific literature. Potential explanations for the prominence of banks in accounting research include the prevalence of financial assets and liabilities in banks, the use of recognized accounting numbers in the prudential regulation of banks, and easier isolation and modeling of banks’ dominant accrual (i.e., the loan loss provision). In addition, the link between accounting changes and banking crisis, such as the reintroduction of fair value accounting after the savings and loan crisis in the late 1980s (see Fig. 1 that shows changes in accounting standards around banking crises), combined with the economic importance of banks’ liquidity and capital provision roles further supports an important economic role for bank accounting. Each of these explanations for researching bank accounting is reflected in the existing literature to varying degrees. Existing bank accounting research primarily focuses on asymmetric information between banks and equity investors and between banks and regulators. Surprisingly, information asymmetry between borrowers and depositors (i.e., creditors) has not played a central role in the empirical bank accounting literature, despite the potentially fertile ground for studying the effects of financial reporting on information asymmetry provided by banks’ special role in addressing information problems between borrowers and depositors. In particular, the greater information asymmetry associated with bank assets provides an advantageous setting to examine the importance of accounting information in addressing information problems.2

We classify bank accounting research into three streams based on the questions and the underlying economic issues being studied. Specifically, we focus on research examining (1) valuation and risk relevance of bank accounting information, (2) the use of accounting discretion to manage earnings and reported regulatory capital, and (3) the effect of accounting on banks׳ economic behaviors before, during and after the financial crisis. To examine these issues, bank accounting research has primarily focused on loan loss provisions and fair value accounting. The focus on the loan loss provision in the literature can be explained, at least in part, by the predominance of this accrual for banks, the importance of estimated losses in assessing opaque assets, i.e., bank loans, and the effect of the provision on regulatory capital ratio calculations. In contrast, the assets banks recognize at fair value tend to be less opaque and tend not to affect regulatory capital ratios, although the debate over the role of fair value accounting in the recent financial crisis often assumes an important relation between fair values and capital regulation. The focus on bank fair values arises primarily due to the greater extent of fair value accounting requirements for banks relative to nonfinancial firms and due to the evolution of fair value accounting around banking crises.

The valuation and risk relevance literature, which we review first, examines how the equity and debt markets price bank accounting information. These studies focus on banks’ use of the loan loss provision to mitigate information asymmetry, and on the value and risk relevance of accounting methods such as fair value accounting and securitizations. When surveying the fair value accounting literature, we focus on value and risk relevance research published after the thorough reviews by Barth et al. (2001) and Holthausen and Watts (2001). In general, this literature has ignored both the bank specific and non-bank specific agency problems that accompany information asymmetry (e.g., between regulators and banks, and between managers and outside investors) and therefore fails to distinguish between the signaling and moral hazard hypotheses. In addition, most of the provision studies in this literature are concentrated in the early to mid-1990s and most fair value studies are narrowly focused on individual accounting rules and clustered around adoptions of new accounting rules (e.g. FAS 107, 115, and 119). Further, even though depositors׳ information problems are at the heart of the microeconomic theory of banks, most pre-crisis research focuses on the perspectives of outside equity investors rather than creditors. While more recent studies have begun to investigate public debt market implications, we still understand very little about how bank accounting information addresses bank creditors’ information problems. Finally, while some studies attempt to understand the value or risk relevance in alternative proposed regulatory regimes, the insights are limited by a failure to consider potential bank behavior changes around shifts in regimes.

The earnings and capital management literature, which we survey next, focuses on agency problems arising from the information asymmetry between banks and equity investors and regulators and the implications for financial reporting discretion. This research largely emphasizes earnings management around regulatory capital requirements through discretion in the loan loss provision and in recognition of securities gains and losses. Similar to the first research stream, studies in this literature ignore the agency problems in the credit market despite the importance of depositors’ information problems. This literature faces several challenges. First, there is an ongoing debate over the determinants of banks’ capital levels, whether capital regulations are a binding constraint and the extent to which capital levels are chosen based on market considerations. Second, identification of earnings versus capital management is a challenge for studies in this area because loan loss provisions decrease both earnings and capital in the current regulatory regime.3 Further, several alternative models of expected loan loss provisions have been used in this literature but no consensus about the best model has emerged. To facilitate research on this issue we use factor analysis to identify three factors underlying these alternative models of expected loan loss provisions and develop four models built on these factors to better understand the differences and commonalities across the models.

The third literature that we discuss examines the effect of accounting methods on banks’ economic behaviors such as lending choices and investment maturity. For example, this research studies how loan loss provision timeliness affects the pro-cyclicality of bank lending and risk taking and how fair value accounting affects fire sales and other investing and operating behaviors. Interest in how accounting affects banks’ operating activities was heightened during the financial crisis when some argued that the existing accounting rules decreased banks’ willingness to lend and led to fire sales.4 This literature uses the loan loss provision and fair values to study the economic consequences of bank accounting before, during and after the financial crisis. The focus on operating activities distinguishes this literature from the first two that we survey, which focus on capital market reactions and the use of discretion to circumvent regulatory capital requirements. Although some studies in this literature argue that regulatory capital provides the channel through which fair value accounting methods would lead to changes in operating activities, e.g., fire sales or pro-cyclicality, the possibility of other channels that could also allow accounting methods to affect operating activities has been suggested by Plantin et al. (2008). While the literature that associates fair value accounting with pro-cyclicality is growing rapidly, the weak and mixed evidence does not support a definitive conclusion. In addition, the empirical literature has not fully explored whether market mispricing during crises for reasons other than illiquidity alters the effect of fair value accounting on firm real activities.

Similar to the changes in bank regulation, which are often designed to “fight the previous crisis” rather than to avoid the next one, most banking studies focus on the effects of existing regulation rather than the possible effects of alternative regulatory regimes. Understanding banks’ responses to new regulation is likely to be important in avoiding future crises. In addition, much of the banking research faces methodological concerns related to the evaluation of regulatory changes. Specifically, these concerns arise in research that evaluates newly enacted regulation by comparing firms before and after the change. Observed changes typically cannot cleanly be attributed to the new regulation because of difficulties identifying legitimate control groups. There are even greater methodological challenges in studies attempting to predict the effect of a proposed regulation that rely on the highly unlikely assumption that banks will not change their economic behavior in response to the policy change or to circumvent the new requirement or policy. Gaining insights about avoiding future crises will likely require an understanding of how banks will react to alternative proposed regulations.

The most recent financial crisis has led to several regulatory changes, including BASEL III, the Dodd-Frank Act, and several accounting rule changes (e.g. elimination of the Qualified Special Purpose Entity concept) and exposure drafts (e.g. financial instrument measurement and impairment). The crisis also led to rethinking the economic models of bank opacity and the likely effects of requiring greater transparency and of the cost of bank equity and the potential implications of increasing capital requirements. These regulatory and theoretical innovations create abundant opportunities for future accounting research that addresses these issues.

In Section 2, we provide a brief background of the micro-economic theory important for conducting bank accounting research, which examines why banks exist, why they are regulated, and how the accounting regime affects banks’ economic decisions. We provide background institutional information about regulatory capital requirements and banks׳ financial statements in the third section. In Section 4, we review empirical research examining the relation between bank financial reporting and outside equity and debt focusing on what we can learn from that research about how properties of accounting information affect information asymmetries between managers and investors. We discuss research on financial reporting discretion and regulatory capital and earnings management in Section 5. We review empirical work that examines how differing accounting regimes, which may or may not have an effect on regulatory capital calculations, affect banks’ economic decisions in Section 6. We discuss directions for future research including methodological issues that will need to be addressed for accounting research to provide insights into the likely effects of alternative regulatory and accounting regimes in Section 7. We provide a brief summary and conclusion in Section 8.

**Section snippets**

**Theory of banks**

Freixas and Rochet (2008) state that there was no microeconomic theory of banking prior to 1980 because the economic role of banks cannot be explained under the complete markets assumption of the Arrow-Debreu general equilibrium model. In a simple model extended to include a banking sector, they show that “if firms and households have unrestricted access to perfect financial markets, then in a competitive equilibrium: banks make a zero profit; the size and composition of bank’s balance sheets