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Models of Accounting Disclosure by Banking Institutions

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Models of Accounting Disclosure by Banking Institutions

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ABSTRACT

In this monograph, I advocate and illustrate an emerging stream of accounting literature that deploys economic models to study issues of accounting disclosure by banking institutions. To motivate the focus on a specific industry (banking), I identify two banking specificities: first, banks are fragile to the risk of runs due to their economic roles in liquidity creation, and second, banks are heavily regulated due to a desire to protect uninformed and dispersed depositors. More importantly, I show that considering these banking specificities, accounting disclosure by banks can play a prominent role in influencing the stability and the efficiency of the banking system. I present workhorse models that can be adapted as building blocks to capture the roles of accounting disclosure in the banking industry. I also draw on recent studies to illustrate specific accounting applications of the workhorse models and discuss their potential to generate implications that inform policy debates and empirical tests.

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1

Introduction

Banking institutions play a central role in modern economies. As stated by Merton (1993, p. 20), "A well developed smoothly functioning financial system facilitates the efficient life-cycle allocation of household consumption and the efficient allocation of physical capital to its most productive use in the business sector." Indeed, before the recent development of market-based financial systems, banks were almost the sole provider of many financial intermediary services. Banks offer payment services, monitor borrowers, provide liquidity and transform assets in terms of credit risk, liquidity, and maturity (Freixas and Rochet, 2008).

Numerous events, especially the ones during the 2007–2009 financial crisis, have also highlighted that accounting disclosure has profound impacts on the banking system. For example, accounting disclosure has been employed as the primary performance measure in banking regulation, where accounting measurements are used to calculate bank capital in the minimum capital requirements policies. In this light, both banks and regulators are concerned with the regulatory use of fair-value accounting in triggering sharp write-offs/write-downs on banks' assets, severely eroding their capital, and forcing them to deleverage excessively during economic downturns, which can exacerbate instabilities in

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the banking sector (Allen and Carletti, 2008; Plantin *et al.*, 2008). At the same time, however, regulators have also alleged that traditional accounting measurements such as historical-cost accounting methods are "too little, too late" in prompting effective and timely regulatory responses. The problem of lenient recognition of accounting losses in the savings and loan crisis is one early example (Moysich, 1997). In response, regulators have made policy changes to address the "too little, too late" problem, and most recently, proposed Expected Credit Loss (ECL) models requiring banks to recognize their losses more timely. Nonetheless, whether the intended benefit of ECL can materialize is still a topic of intense debate (Basel Committee, 2021). For another example, the 2007–2009 financial crisis has revealed that, even with deposit insurance, banks remain fragile to the risk of runs, in which (explicitly or implicitly) coordinated actions by banks' creditors cause severe liquidity problems to banks (Shin, 2009). In the policy debate, many argue that the disclosure of information, especially public information, plays a prominent role in affecting the occurrences of banking panics (Bernanke, 2013). This information channel also implies that accounting disclosure can have significant impacts on banking stability, as accounting information is the major source of public information in banks' information environment.

Not surprisingly, the issues of accounting disclosure by banks have also attracted intense research efforts by scholars in accounting, economics, and finance. The accounting literature that focuses specifically on banks is vast. This literature is mainly empirical and has already contributed to addressing many banking issues that are both interesting and important from conceptual and policy perspectives. For instance, they have studied whether fair-value accounting could make banks' leverage procyclical (Amel-Zadeh *et al.*, 2017; Beatty and Liao, 2011), how recognitions of accounting losses affect banks' risk profile and the stability of the banking system (Bushman and Willimans, 2012, 2015), etc.

Compared to the flourishing empirical literature, the analytical literature in the field of bank accounting is still relatively small, although studies that model banks generally have been extensive in the

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economics and finance literature. The importance of developing an analytical approach that complements the empirical approach to addressing accounting issues in banking should be readily apparent. Theoretical banking models can be used to generate predictions for empirical tests, guide empirical designs, improve empirical identifications, etc. Bushman (2014) gives an excellent discussion of the value of economic theory in bank accounting research: "(b)ecause of the centrality of banks to economic growth and development, theory research in banking embodies a rich pool of ideas and insights produced by some of the best economic minds in the world. Confronting the theory literature in a field like banking is a daunting prospect and requires significant investment of energy. But the investment can really pay off. A solid knowledge of the underlying economic theory generally manifests in more interesting and more impactful banking research as it does in other strands of accounting research." (Bushman, 2014, p. 386) Another reason that motivates the need for theories is the forward-looking nature of many banking issues. Dewatripont *et al.* (2010) argue that regulation should be designed to avoid the next crisis rather than "to fight the previous crisis." In this regard, Beatty and Liao (2014, p. 379), at the end of their review of the empirical accounting literature of banking, state that "(t)o gain insights about how to avoid the next crises will likely require an understanding of how banks may react to alternative counter-factual regulations designed to avoid the future crises." In this light, the analytical approach seems a plausible remedy because of its comparative advantage in delivering *counter-factual implications.*

The theoretical literature that examines banking and accounting disclosure issues separately is rich and extensive. However, it is not straightforward to apply general banking theories or general theories of accounting disclosure to study the specific issues of accounting disclosure by banks. On one hand, most banking theories in economics and finance are developed not to address accounting issues, and applying them to inform bank accounting issues often requires considerable extrapolation, and sometimes even "a leap of faith." On the other hand, the theories of accounting disclosure have primarily focused on generic firms and do not incorporate bank-specific features. The implications of these theories for banks' disclosure issues are hence relatively limited and, if not

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understood appropriately, can even lead to faulty inferences. Therefore, I believe that understanding bank disclosure requires research effort to develop specific models to address issues of accounting disclosure in banking. The potential rewards for such effort can be promising, especially considering the field is still young and growing.

Any advocacy of modeling firms in a specific industry requires one to point out the specificities of these firms. Identifying banking specificities is essential as researchers can then build analytical models of accounting disclosure around these banking features. I summarize my view of banking specificities and, more importantly, how these specificities can be connected to accounting disclosure at a conceptual level in Section 2. I then illustrate some modeling applications of the conceptual ideas in Sections 3 and 4. I will draw liberally from classic economic models of banking as well as some extant accounting work. A portion of the discussion will be drawn from some of the work I have been associated with as they reflect my view of the roles of accounting information in different banking contexts. In this course, I will connect these discussions to the broader literature. However, I do not attempt a review of the extensive literature on the topic of banking and accounting, for which I refer readers to the excellent surveys in Beatty and Liao (2014), Bushman (2014), Goldstein and Sapra (2014), and Acharya and Ryan (2016). My focus is to elaborate on the roles accounting plays in the banking industry from a conceptual perspective and how these conceptual issues can be captured in formal economic models.

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