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Do Federal Home Loan Bank membership and advances increase bank risk-taking?

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Abstract

Since the early 1990s, commercial banks have turned to Federal Home Loan Bank (FHLBank) advances to plug the gap between loan and deposit growth. Is this trend worrisome? On the one hand, advances implicitly encourage risk by insulating borrowers from market discipline. On the other, advances give borrowers greater flexibility to managing interest rate and liquidity risk. And access to FHLBank funding encourages members to reshape their balance sheets in ways that could lower credit risk. Using quarterly financial and supervisory data for banks from 1992 to 2005, we assess the effect of FHLBank membership and advances on risk. The evidence suggests liquidity and leverage risks rose modestly, but interest-rate risk declined somewhat. Credit risk and overall failure risk were largely unaffected. Although the evidence suggest FHLBank membership and advances have had, at best, only a modest impact on bank risk, we caution that our sample period constitutes one observation and that moral hazard could be pronounced if leverage ratios revert to historical norms.

JEL classification: G21; H25; G28

Keywords: Government-sponsored enterprises; Federal Home Loan Bank; Market discipline; Bank risk; Liquidity management

1. Introduction

Since the early 1990s, commercial banks have turned to Federal Home Loan Bank (FHLBank) advances to plug the gap between loan and deposit growth. Between 1992 and 1999, for example, annual loan growth at US commercial banks averaged 7.6% while annual core deposit growth averaged just 3.0%. The pickup in loan growth in the 1990s reflected the length and strength of the economic expansion while the slowdown in core-deposit growth reflected heightened consumer interest in deposit substitutes such as money-market mutual funds. Between 2000 and 2005, the economic recession and the stagnant stock market brought loan growth and core deposit growth more in line, with each growing at an annual rate of just over 7%. Nevertheless, FHLBank advances remain an important and growing source of bank funding.

The increasing importance of the FHLBank System to commercial banks can be seen in the jump in membership and advances as illustrated in Table 1. Between 1992 and 2003 (the latest available audited financial statements), the number of FHLBank members – banks, thrifts, and credit unions – more than doubled to 8101 while advances outstanding to System members increased more than sixfold to $501.6 billion. This dramatic growth was fueled by the opening of FHLBank membership to commercial banks beginning in 1989. In addition, the Gramm–Leach–Bliley Act (GLBA) of 1999 relaxed membership and collateral requirements for community financial

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Table 1
Trends in FHLB membership and advances outstanding

	1992	2003	Average annual percent change
Membership by type of financial institution			
Thrifts	2291	1344	−4.8%
Large Commercial Banks	116	648	15.6%
Community Banks	1235	5260	13.2%
Total System Members	3624	8101	7.3%
Advances outstanding by member type ($Mil)			
Thrifts	$72,331	$192,500	8.9%
Large Commercial Banks	$4,295	$196,890	34.8%
Community Banks	$1,573	$38,015	29.0%
Total System Advances	$78,780	$501,600	16.8%

Sources: Federal Housing Finance Board, Reports of Income and Condition for US Commercial Banks, 1992 and 2003.
Between 1992 and 2003, Home Loan Bank membership more than doubled, and advances outstanding increased by more than sixfold. During this period, commercial banks came to dominate membership and borrowings while the number of thrift institutions belonging to the System declined. At year end 2003, the last year for which audited financial statements were available, 5908 commercial banks were members, holding $235 billion in advances. Community financial institutions (CFIs) – banks with fewer than $500 million in assets in 1999 dollars – account for the bulk of Home Loan Bank members, though they hold just 7.6% of System advances. Note that total members and total advances also include credit unions and insurance companies.

institutions (CFIs), defined as banks with less than $500 million in (inflation-adjusted) assets. As a consequence, nearly all of the nation's commercial banks are eligible to join the FHLBank System (Feldman and Schmidt, 2000). At year-end 2003, 5908 banks (77%) were members, holding $234.9 billion in advances. This total included 5260 CFIs, which held a collective $38 billion in advances. Although the FHLBank System was originally accessible only to thrifts and a few insurance companies, bank membership far outnumbers the declining thrift membership, and during 2002, advances outstanding to banks topped advances to thrifts for the first time.[1]

Do FHLBank membership and advances lead to greater bank risk-taking? In theory, advances could lead to an increase or decrease in risk. On the one hand, FHLBank advances permit member banks to fund risky activities without paying a market penalty for increases in failure probability. Indeed, previous research (Ashley et al., 1998) has demonstrated that troubled thrifts used FHLBank funding to evade market discipline during the savings and loan crisis of the late 1980s and early 1990s. On the other hand, the FHLBank System allows banks of all sizes to tap the capital markets at minimal transactions costs. Advances come in a myriad of structures (fixed rate, adjustable rate, and blended) and maturities (overnight to 30 years), and the FHLBanks provide asset/liability-management consulting services to help members use products and maturities to manage interest rate and liquidity risk. Finally, access to FHLBank funding implicitly encourages members to reshape their balance sheets in ways that could lower credit risk. Evidence about the cumulative impact of FHLBank activity on risk would help bank managers and bank supervisors distinguish between prudent and imprudent uses of advances.

It is a particularly opportune time to assess the impact of FHLBank activity on bank risk. In the past few years, the other housing government-sponsored enterprises (GSEs), Freddie Mac and Fannie Mae, have come under fire for ineffective interest-rate hedges and irregular accounting practices (Frame and White, 2004). Freddie and Fannie have also drawn criticism for allegedly diverting housing subsidies to their shareholders and threatening the financial system with their explosive growth (CBO, 2004; Passmore, 2003; Poole, 2003). Because the FHLBank System has also grown rapidly, and some FHLBanks have also suffered losses from ineffective hedges, advocates of stronger housing-GSE oversight have lumped the three together, arguing that one safety-and-soundness supervisor be given authority over Freddie, Fannie, and the FHLBanks (Carnell, 2004). But the principal business line of the FHLBank system is "discounting" eligible mortgages, not securitizing conforming mortgages. And the FHLBank System is organized as a cooperative, not a publicly traded firm. These differences argue for a close look at the policy issues arising from FHLBank activity to ensure that reforms in housing-GSE governance appropriate for Freddie and Fannie are also appropriate for the FHLBank System.

Despite its potential public-policy importance, little research has been conducted on FHLBank activities. To date, scientific study of the System has focused on the wisdom of their mortgage-partnership program (Frame, 2003) and the implicit subsidy of community-bank lending (Craig and Thomson, 2003). Some attempt has also been made to model the decisions of community banks to join the FHLBank System (Collender and Frizell, 2002), to quantify the influence of FHLBank funding on the behavior of troubled thrifts (Ashley et al., 1998), to assess the impact of Gramm–Leach–Bliley on the solvency of the FHLBank System (Nickerson and Phillips, 2002), and to gauge the effect of FHLBank advances on the deposit-insurance fund (Bennett et al., 2005). We are aware of no work on the impact of FHLBank membership and funding on bank risk. To remedy this gap in the literature, we utilize quarterly financial and supervisory data to compare the risk profiles of members and nonmembers for the full 1992–2005 sample period, and for two sub-periods before and after implementations of the GLBA in March 2000. We then examine the relationship between dependence on advances and risk-taking among member banks over the same intervals. The evidence suggests liquidity and leverage risks rose modestly for members, but interest-rate risk declined somewhat. Credit risk and overall insolvency risk were largely unaffected, though reliance on commercial real-estate loans picked up after 1999. Although these

[1] Except where noted, all structure and financial data for the FHLBank System were drawn from the Federal Housing Finance Board.