The Quarterly Review of Economics and Finance xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

The Quarterly Review of Economics and Finance

journal homepage: www.elsevier.com/locate/qref

Extended shareholder liability as a means to constrain moral hazard in insured banks

Alexander W. Salter[a,*], Vipin Veetil[b], Lawrence H. White[b]

[a] Rawls College of Business, Texas Tech University, United States
[b] Department of Economics, George Mason University, United States

ARTICLE INFO

Article history:
Received 25 October 2015
Received in revised form 24 March 2016
Accepted 10 April 2016
Available online xxx

JEL classification:
E42
E44
G21

Keywords:
Bagehot hypothesis
Deposit insurance
Double liability
Moral hazard
Triple liability
Unlimited liability

ABSTRACT

Extended liability for bank shareholders offers a possible method for mitigating moral hazard in insured banks. The dominant approach to maintaining financial stability seeks to constrain banks' profit-maximizing responses to distorted incentives by means of ad hoc restrictions. By contrast, extended liability seeks to create healthier incentives. We examine how a variety of extended liability regimes worked historically, and consider leading concerns about their potential disadvantages. We conclude by discussing how extended liability avoids the difficulties of both 'microprudential and 'macroprudential' approaches to systemic stability.

1. Introduction

It has long been understood that deposit guarantees and "too big to fail" policies create a moral hazard problem – that they incentivize banks to take on too much risk by shielding depositors and shareholders from left-tail outcomes – in American banking (Kane, 1985; Stern & Feldman, 2004). Congress passed the Federal Deposit Insurance Corporation Improvement Act (FDICIA) in 1991 to try to mitigate the moral hazard problem by restricting forbearance and implicit subsidies for undercapitalized banks. But the mandates of the Act (particularly early intervention to reorganize undercapitalized banks) were ignored when they might have made a difference just before and during the recent financial crisis. Common recommendations for mitigating moral hazard would have the FDIC adopt the techniques that private insurance companies use (deductibles, coinsurance, lower effective limits on coverage), but these have not been adopted, in part because (as seen in the UK case of Northern Rock) they give ordinary depositors reasons to run on suspect banks.

Today the principal methods by which regulators try to control excessive bank risk-taking are capital requirements and supervision, both of which large banks may learn to game in ways that make them ineffective in risk control. So long as creative risk-taking allows a bank to better exploit the option value of guarantees, attempts to reduce risk-taking by restricting particular activities and balance sheet entries would seem to be like squeezing a balloon to reduce its size. As Edward Kane (Kane, 2009, pp. 1–2) puts it, an optimizing US bank today seeks to "expand its access to implicit safety net subsidies" through "loophole mining" that uses "financial engineering techniques to exploit defects in government and counterparty supervision."

Here we consider a different method for mitigating moral hazard: extended liability for bank shareholders. This reform does not seek to put additional legal *restrictions* on bank activities, but instead seeks to reduce banks' *incentives* to take excessive risks by at least partially neutralizing current safety-net subsidies to risk-taking. It shifts the risk of left-tail events, bank losses in excess of equity, from deposit-guarantee agencies to equity-holders as a means to reduce the moral hazard that promotes inefficient risk-taking. Given that the root of the current incentive

* Corresponding author. Tel.: +1 806 834 8186.
E-mail addresses: Alexander.w.salter@ttu.edu (A.W. Salter), Vipin.Veetil@gmail.com (V. Veetil), Lwhite11@gmu.edu (L.H. White).

http://dx.doi.org/10.1016/j.qref.2016.04.006
1062-9769/

distortion lies in deposit and TBTF guarantees, a more straightforward approach would be simply to remove the guarantees, shifting risk from guarantee agencies to depositors and giving them an incentive to monitor and reward safe banking. Portfolio, activity, and capital restrictions might also then be removed, and liability arrangements allowed to be freely chosen by banks, ushering in a free banking regime (Beckworth, 2012; Salter, 2014a, 2014b; Selgin, 1988; White, 1989; White, 1999). While such a move might be first-best, here we take for granted here that the guarantees will not be removed. The question to be addressed is whether adding extended liability would be an improvement over today's status quo.

Assuming that deposit guarantees remain in place, the potential gain from introducing extended liability is not as a substitute for deposit guarantees, but as a cost-effective way of reducing moral-hazard distortions. In putting this case on the table our argument supports other suggestions made in recent years for the (re-)introduction of extended liability into banking (Admati & Martin, 2013; Cowen, 2012; Grossman & Imai, 2010; Hill & Painter, 2010; Hendrickson, 2014; Leijonhufvud, 2010; Peirce, 2012; Ridyard, 2013; Turner, 2014).

In what follows we review the theoretical and historical literature on the consequences of extended liability in banking, consider its potential drawbacks, and make a case for extending shareholder liability in publicly guaranteed banks today.

2. What is extended liability?

Under today's standard arrangement of *single liability*, when a bank (or any corporation) is declared insolvent and closed with negative net worth, the value of shares goes to zero, but shareholders have no obligation to repay the remaining debts to creditors. Under extended liability – an arrangement common in banking history – they do have an obligation to repay. Shareholders are called upon to cover (in proportion to their shareholdings) some or all of the unpaid debts. Under double liability, the holder of a share with $100 face value may be called upon to chip in up to $100 more; under triple liability up to $200. Under unlimited liability, shareholders are obliged to cover the entire amount of unpaid debt. Their liability can be joint and several as it was in the UK (if some shareholders go bankrupt before paying in full, their unmet burdens fall to the others) or pro rata as in California (each is liable only for his initial share of the unpaid debt). For clarity, note that single, double, and triple liability are all forms of *limited* liability, but double and triple are *extended* by comparison to single liability. Unlimited liability is the limiting case of extended liability.

The same degree of shareholder liability need not apply to all bank debts. Some historical banks' shareholders have retained unlimited liability for banknotes but single liability for deposits. All bank shares need not carry the same degree of exposure: non-voting shares might have single liability, while voting shares have extended liability. And finally, where banks are free to choose the division of default risk between shareholders and creditors, all banks need not adopt the same liability arrangements. Goldman Sachs retained unlimited shareholder liability until 1999, long after other investment banks had switched to single liability. Brown Brothers Harriman today provides "private banking" and other financial services while retaining unlimited liability for its general partners (Economist, 2011).

In a banking system without deposit guarantees, bank shareholders might voluntarily adopt extended liability to provide solvency assurance to depositors and other creditors. By standing more fully behind its debts the bank reduces default risk to depositors and thereby can attract deposits at lower interest rates. A note-issuing bank can likewise attract a larger note-holding clientele. In the presence of deposit guarantees – especially absent deductible, coinsurance, and coverage limits – this motive disappears. If the bank does not repay, the deposit guarantee agency will. Riskier banks no longer have to pay higher rates to attract deposits (below the insured limit). This is of course the core of the moral hazard problem already mentioned.

3. Historical experiences with extended liability

3.1. The United States

Extended liability was common in the US before federal deposit guarantees arrived in 1933. Many states imposed double or greater liability as a feature of their bank charters. All federal charters, offered after 1863 under the National Banking system, specified double liability. Vincents (1957) reports that as of 1932 "about two-thirds of the states . . . [were] imposing double, triple or even unlimited liability on bank shareholders." Cross-sectional studies indicated that extended liability made banks safer for depositors, inducing banks to hold more liquidity and safer assets.

The American colonies under British rule, and following independence the thirteen state governments, inherited the English legal system under which a bank (or any other business firm) seeking incorporation had to go to the legislature for a special chartering act.[1] Such charters routinely limited the shareholders' liability for the corporation's debts to the par value of their shares, a system of single liability. In 1837 the chartering rules began to change as a few and then an increasing number of states adopted "free banking" laws under which any applicant who agreed to standardized terms could obtain a bank charter. The charter terms varied from state to state, but some states required bank shareholders to accept extended liability, including double, triple and even unlimited liability. In a few states, a bank could choose its own shareholders' level of liability, a system known as "voluntary liability" (Grossman, 2001). By 1860 more than half the states in the US had "free banking" laws (Rolnick & Weber, 1985). The National Banking Acts passed during the Civil War created federal charters with double liability. Overall (Grossman, 2007, p. 61), the number of chartering authorities requiring double liability rose from fewer than 10 states in 1851, to the federal government plus 18 states in 1875, to federal plus 34 states in 1930.

In the early 20th century the US as a result had two classes of banks: federally chartered National Banks, subject to double liability, and state-chartered banks that operated under various liability rules. Ten states had single liability, Colorado had triple liability, and California had unlimited liability. Most other states had double liability (Etsy, 1998, p. 191; Macey & Miller, 1993). Between the Civil War and the Great Depression, in brief, most depositors and all noteholders were cushioned from losses in bank failures by shareholders who absorbed some risk beyond the value of their shares.[2]

This set of arrangements, having taken nearly a century to evolve, was reversed in less than a decade. Having apparently proven ineffective at protecting depositors from the huge banking losses of the early Great Depression, extended liability was considered redundant with the creation of federal deposit insurance. In 1933 the Congress "amended the National Bank Act and the

[1] Scottish banking operated under a distinct legal system. Unlike Scotland, many state governments passed "restraining acts" that made it illegal to operate a bank without a charter.

[2] This is not to suggest that government regulatory authorities played no role in early American banking. As Mitchener and Jaremski (2014) note, government regulation did exist, but was light. Early regulators were less interested in system-stability and more in the behavior of individual banks.

Please cite this article in press as: Salter, A. W., et al. Extended shareholder liability as a means to constrain moral hazard in insured banks. *The Quarterly Review of Economics and Finance* (2016), http://dx.doi.org/10.1016/j.qref.2016.04.006