

Prudential Regulation and Capital Controls

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The useful framework for thinking about the stability of banking systems assumes that bank owners compare the present value of the franchise that follows a safe strategy that does not call on deposit insurance relative to the present value of the franchise that follows a high risk strategy so that insurance is used and the franchise terminated. Reaching for risk and increased leverage increases earnings in the near term but shortens the expected life of the franchise and forfeits the bank's capital. Bankers care about safety and soundness but only as long as the safe strategy results in a higher present value.

A large set of incentives and institutional arrangements determine the value of these two strategies and, in turn, the stability of the financial system. In this chapter we focus on how the explosion of growth in international capital flows in recent years might have tipped the incentives for banks toward a high-risk strategy. In cases where the incentives are tipped toward high-risk strategies we argue that capital controls can make an important contribution to effective prudential regulation and financial stability. In particular, required reserves on foreign deposits at domestic financial institutions are equivalent to deposit rate ceilings for foreign investors.

The equivalence of reserves and deposit rate ceilings is important because it has been demonstrated that deposit rate ceilings and, by extension, required reserves on foreign deposits can be more effective than capital requirements in ensuring financial stability.¹ In some cases increasing capital requirements for insured intermediaries to international standards will not be effective in preventing high-risk strategies if domestic institutions have free access to foreign investors. While deposit rate ceilings are no longer considered a feasible instrument within domestic financial systems reserves for foreign deposits have been used in many countries, including Iceland, with some success.²

The primrose path or sound banking?

Keeley (1990) argued that the US banking system had been surprisingly stable after 1936 in spite of deposit insurance because anticompetitive regulation made bank charters quite valuable as long as the bank did not utilize the insurance. In this environment the safe strategy was optimal both for the banker and the rest of us. He showed that in the United States as financial regulation was relaxed and nonbank intermediation grew the value of safe strategies was reduced and failures increased. In that paper, and in other contributions of which I am aware, the factor that tipped the balance toward risky behavior was a decline in the present value of the safe

¹ Hellmann, Murdock and Stiglitz (2000).

² For Iceland's experience see Pétursson (2018). Several experts have suggested that Iceland should reduce or eliminate this policy, Edwards (2018), Forbes (2018), IMF (2018). In this Chapter we offer an analysis that supports the use of capital controls.

strategy.³ Financial innovation and deregulation reduced banks' market power in deposit and credit markets and made a safe long-lasting strategy less valuable. We argue below that more recently the important shift in incentives in countries like Iceland was been an increase in the present value of high-risk strategies.

Hellmann, Murdock and Stiglitz (1990) set out a formal model of the dynamic nature of a bank's decision to risk intervention by the authorities to terminate the bank. They focus on the deposit rate ceilings as a prudential policy and argue that rate ceilings are superior to capital requirements in insuring that banks manage risk in order to enjoy long-run profits. The intuition is straightforward. Deposit-rate ceilings permanently increase bank profits and therefore the franchise value of a safe strategy. Capital requirements decrease the value of the high-risk strategy insolvency to the bank owners but also decrease the future profitability of the safe strategy.

Put another way, it is obvious that capital requirements increase the owner/manager's skin in the game and that some level of required capital will encourage safe strategies. But it is also clear *if* near-term profits from a high-risk strategy are high enough the rational manager can pull enough earnings out of the bank to more than cover the onetime loss of the capital when the bank is eventually

³ The World Bank, for example, has frequently pointed out the dangers of reducing the profitability of sound banking. See Caprio, and Summers (1996).

terminated. Moreover, this bank will have no trouble attracting additional capital since this is a profitable strategy.

Recent international discussions of prudential regulation have focused on international standards for capital requirements. In our view the comparison of capital requirements and deposit rate ceilings has not gained traction because deposit rate ceilings proved to be a very difficult policy to implement. In the United States, for example, deposit rate ceilings were an effective deterrent to banks competing with other banks for deposits but generated significant problems for the system as competition for deposits by nonbank financial intermediaries became quantitatively important. It seems likely that the gradual elimination of deposit rate ceilings contributed to the instability of the US system in two ways. First, as emphasized by Keeley (1990) and others the loss of market power in the deposit market reduced the franchise value of safe strategies. But in our view the more important lesson for today is that the elimination of deposit rate ceilings in increasing the profitability of high-risk strategies.

One of the parameters in the HMS model is the elasticity of demand for an individual bank's liabilities with respect to the deposit rate offered by that bank. Imagine a virtuous bank considering going for broke. In a closed economy with an effective deposit rate ceiling the demand for the individual banks deposits is very inelastic. Moreover, other policies such as limits on interstate banking and branch networks limit the market for a bank's deposits. In countries such as Iceland with highly

concentrated banking systems attempts to capture deposits from a few other banks will invite retaliation and generate limited increases in deposit market share. The bank can always substitute higher for lower risk assets but cannot quickly leverage the high-risk strategy.

Our conjecture is that the growth of gross international capital flows tipped the balance toward risky behavior leading to the 2008 crisis. In many countries domestic prudential regulation was successful before 2008 because an individual bank's ability to increase its market share of domestic deposits and, in turn, quickly leverage a high-risk strategy was quite limited. But, as gross capital flows across national borders grew rapidly after 2000, the constraint on the high-risk strategy eroded and it is possible that this tipped the balance toward risky behavior in many countries, including Iceland.

The explosion of gross international capital flows meant that banks gained access to a much larger set of depositors. In the context of the HMS model this increased the elasticity of demand for the individual bank's deposits. In turn the risky asset choice could be levered and the value of going for broke increased, perhaps substantially. It is not necessary or useful to assume anything different about the behavior of nonresidents as compared to residents. That is, individual residents and nonresidents have the same supply elasticity but a much larger pool of nonresidents makes the market elasticity for a bank's liabilities, including capital, much larger. The problem with international investors is that there are so many of them.

Note also that this development makes capital requirements less effective. If the high-risk strategy becomes much more valuable the bank will have no problem in attracting new capital to the now more profitable franchise. It also seems likely that domestic institutions will have no trouble in attracting international managers familiar with high-risk strategies.

An obvious regulatory response is to limit nonresident access to the domestic financial system. The attraction of capital controls is that the authorities do not have to identify or deal with all the other distortions that are encouraging their financial institutions to go for broke or even which institutions have gone to the dark side. There are, of course, many problems with capital controls but the problems are shared by other prudential regulations. The best menu of second-best prudential regulations for a country is an empirical question.

Conclusions

The analysis fits with recent contributions by BIS economists (2015) based on what they call the “triple coincidence.” Their idea is that economic statistics and analysis and the policy-making institutions designed to influence economic outcomes were developed in an era where economic activity, currency use and policy regimes largely interacted within the borders of one or a few sovereign nations. They argue that the explosion of gross international capital flows in recent years has made the correspondence between finance and geography much less reliable.

In the good old days national boundaries provided inelastic demand curves for individual bank's liabilities. The growth of gross international capital flows in recent years has opened the door to leverage and high-risk strategies. The main problem with international investors for financial stability is that there are a lot of them. The predominant policy response has been increasing and unifying capital requirements for financial institutions. But this policy reduces the attractiveness of both safe and high-risk strategies. For many countries limiting domestic financial institutions access to foreign investors can be an effective component of prudential regulation.

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