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The Effects of Interstate Banking

Since the late 1970s, many states have enacted interstate banking legislation, permitting bank holding companies headquartered in selected other states to operate bank subsidiaries in their state. Bank holding companies (BHCs) are firms that own at least one bank. Recent bills in Congress propose to liberalize interstate banking laws further by permitting banks themselves to operate their own *branches* across state lines.

Proponents of such legislation argue that further liberalization would generate some significant benefits. Among those benefits are a more efficient and stronger banking industry and re-invigorated competition in the commercial banking market. Opponents are concerned that interstate branching would lead to excessive concentration and ultimately to a less competitive banking market.

The purpose of this *Letter* is to discuss the possible benefits and costs of interstate banking and branching and to present evidence pertinent to those issues. The main benefit of interstate provisions appears to be enhanced competition. Therefore, interstate branching would likely not lead to excessive concentration in the banking market.

Economies of scale and scope?

By increasing the size and scope of the market in which banking organizations can operate, interstate provisions may yield the benefit of lower costs. Lower costs would come from economies of scale or synergies gained by an increased scope of activities.

Synergies of scope would arise, for example, in a situation where affiliated banks (banks that are subsidiaries of the same BHC) or branches of the same bank benefit from one another's experience in lending to different, but related, sectors of, say, the high technology industry. Interstate banking and branching would enhance banking firms' ability to take advantage of such synergies when the sectors are centered in different states.

To determine whether these potential benefits are real, one must determine whether there even is any relationship between efficiency and size or efficiency and the scope of activity in banking. The structure of costs at banks has been the subject of numerous studies that have, in general, concluded that economies related to scale or scope are relatively small. They suggest that one must look elsewhere for any benefits from interstate banking and branching.

Elsewhere may be the effectiveness of management. Economists Allen Berger and David Humphrey used actual average costs for all insured commercial banks in 1984 to estimate the contributions of various factors to differences in those costs. They estimated differences of 25 percent or more in average costs between the highest and lowest cost groups of banks due to inefficient management, and differences of only 5 percent or less due to scale or product mix.

Their findings suggest that effective management is important for cost savings and that there is room for improvement in the efficiency of bank management. To the extent that interstate banking and branching increase competitive pressures on banks by increasing the number of competitors that each bank faces, they may help increase efficiency by forcing management changes and reforms for banks of all sizes.

Enhanced competition?

Another possible benefit of interstate banking and branching may be an increase in the competitiveness of previously protected banking markets. For example, banking firms may enjoy above-normal profits in a state whose boundaries define an area that accommodates only a limited number of "efficient"-sized banking firms. To the extent that enlarging the area within which banks can operate increases the threat of competitive entry, interstate banking and branching may enhance competition.

Some banking observers are concerned that the mergers and acquisitions facilitated by interstate banking or branching could lead to fewer banks in the nation and, thereby, *decreased* competitiveness in banking. Underlying this concern is the assumption that the relevant determinant of competitive vigor is the total number of banking firms in the whole country. Most banking economists believe that the relevant market for most consumer or retail banking services is much smaller than the nation.

As a result, even if interstate provisions were to decrease the number of banking firms in the whole country, they would not necessarily decrease the number of banking firms within the relevant market. For example, without interstate banking, a different set of three BHCs, for a total of 15, may serve each of five one-state areas. With interstate banking, there may be a total of only 10 BHCs in the five-state region, but all ten would serve each state.

Fewer bank failures?

A decrease in the probability of bank failures is yet another possible benefit of the market expansion that arises from interstate banking or branching. Risk is "diversifiable" to the extent that the expansion of business opportunities improves the tradeoff between risk and expected return faced by banks. The improvement comes in the form of lower risk for a given expected return, or a higher expected return for the same risk.

In an expanded geographical market, many of the new combinations of risk and expected return open to a bank are likely to yield a lower probability of bank failure. In principle, a bank that geographically diversified its assets to reduce risk would face a lower probability of insolvency.

Whether an interstate bank would choose a combination of risk and expected return that reduced its probability of insolvency would depend on a number of factors. Among those factors are the bank managers' incentives, which may be affected by the existing system of deposit insurance.

Another factor is the effect of any diversification on operating costs. A pure portfolio investor who holds assets only passively can decrease the probability of insolvency by diversifying assets to reduce risk. Bank loans, however, are special types of assets that also require administrative input, and, more importantly, monitoring of covenants and terms. When a banking firm diversifies assets, the probability of insolvency may rise because the pure portfolio effects are outweighed by a deterioration in the ability to administer and monitor varied and dispersed loans. The term "operating risk" refers to the latter effects.

Using a sample of banking organizations with differing levels of geographic dispersion, economists Nellie Liang and Stephen Rhoades investigated whether the effects of increased operating risk outweighed the portfolio effects of diversification. Specifically, they examined whether the effects of an increase in operating risk on the *level* of earnings outweighed the effects of an increase in pure "financial diversification" on the *variability* of earnings in such a way that they increased the probability of bank failure.

Liang and Rhoades' empirical results supported the conclusion that geographic dispersion does reduce the probability of bank insolvency. However, they cautioned that operating risk appears to influence the probability of bank failure significantly, and should therefore not be discounted in any assessment of the effects of bank portfolio diversification. Although the more geographically dispersed banking firms had lower earnings variability, they also had lower earnings levels, which Liang and Rhoades attributed to the effects of operating risk.

Thus, banking firms that take advantage of interstate banking and branching to increase the geographic scope of their market are likely to reduce their probability of insolvency, although not by as much as standard portfolio theory would predict.

What experience tells us

The evidence presented so far seems to indicate that interstate banking and branching do offer potential benefits. Whether banks can reap these benefits is an empirical issue.

Some studies have addressed the question of whether interstate banking organizations enjoy some competitive advantage over banking organizations that do not operate on an interstate basis. Most of them indicate that interstate banking firms do not enjoy any long-run competitive advantage over non-interstate banking firms of comparable size. This finding is consistent with the evidence cited above indicating that synergies related to an expanded scope of activities contribute relatively little to efficiency.

Evidence pertaining to the relationship between the geographic dispersion of bank offices and actual bank failures can be found in the work of economist Hilary Smith. Using data from actual bank closures, Smith found empirical evidence that intrastate branching restrictions, which limit branching to a confined area, increase the incidence of bank closure. One may extrapolate from this result to say that interstate branching and banking provisions would decrease the probability of bank closure. However, no one has yet investigated the degree to which banking firms actually take advantage of existing interstate banking laws to widen their geographic range. Further evidence on this issue is necessary to assess fully the effect of interstate banking or branching on bank performance.

Evidence from bank stock returns

Examining the response of the stock returns of BHCs to the passage or enactment of interstate banking laws offers an alternative means of assessing the possible effects of such laws. Although such an approach can only provide information on the market's *perception* of possible gains or losses, it offers an important advantage over direct comparisons of interstate and non-interstate banking firms. Namely, it provides evidence on the effect of interstate provisions on the *entire* banking market. Such evidence is especially important for determining the effect on competition in the banking market.

Preliminary work at the Federal Reserve Bank of San Francisco indicates that BHC stock returns have shown a statistically significant negative response to the implementation of interstate banking laws since the late 1970s. Laws permitting out-of-state BHCs to acquire in-state banks appear to reduce the stock returns of in-state BHCs. Moreover, the negative effect is stronger the greater the number of states whose BHCs are permitted to acquire in-state banks. This suggests that the market perceives interstate laws to enhance competition and to erode excess profits previously protected by geographic restrictions.

The results of this preliminary work do not rule out the idea that interstate operations may reduce insolvency by allowing greater asset diversification. Diversification opportunities would likely encourage stock returns to respond positively to interstate banking laws. Potential acquisition targets would see their stock price bid up in anticipation of the higher acquisition price that out-of-state acquirers, with more to gain through geographic diversification, would pay. The overall negative response of bank stock returns merely suggests that the negative effects of increased competition on *all* bank stocks outweigh the positive effects for possible acquisition targets, if any exist.

Interstate branching

Because very few states permit out-of-state banks to set up or acquire *branches* in their state, we can only infer the potential effects of further geographic liberalization from what we know of interstate banking today.

The available evidence, including preliminary empirical evidence gathered at this Bank, indicates that the main benefits of interstate operations stem from increased competition. There appears to be little reason for concern that interstate branching would lead to the demise of small banks. As found by Berger and Humphrey, efficiencies due merely to bank size or scope of operations are relatively insignificant when compared with the benefits of efficient management. If interstate branching were to become a reality, we could expect it to enhance competition further and to encourage the efficient management of banks of all sizes.

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