

Banking Markets and Interstate Entry in the Southeastern United States

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Abstract

This study analyzes the characteristics that make urban banking markets attractive for interstate holding company entry. It differs from previous research because it focuses on interstate rather than intrastate entry. The current sample, containing states from one of the first regional interstate banking compacts, reveals that interstate entry is attracted to relatively large, fast growing markets in statewide branching states. The results are largely consistent with previous studies of intrastate entry with the additional importance of statewide branching to interstate bank entry. This study is of use to regulators concerned with questions of potential competition in future bank merger cases, as well as legislators considering liberalization of interstate banking laws.

Introduction

The issue of the competitive consequences of multibank holding company entry into intrastate banking markets has received much interest in the literature (Boczar, 1977; Schweitzer and Green, 1979; Rose and Savage, 1983; Duncan, 1985; Hooks and Martell, 1985; Lawrence and Watkins, 1986; and Thomas and Rivard, 1990). These works have analyzed, among other things, whether, and what types of, multibank holding company entry has procompetitive or anti-competitive effects. The market characteristics that are attractive for intrastate entry also have been identified. These studies have dealt only with intrastate entry because interstate bank expansion effectively was prohibited until recently. This paper is an extension of previous research to the analysis of interstate bank expansion.

Many dire predictions have been offered on the anticompetitive effects of interstate banking. It has been argued that interstate banking likely will result in

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increased concentration of banking services, increased chance of collusion and mutual forbearance, decreased soundness of the banking system, and a reduction in the choices and levels of banking services. On the other hand, many commentators have concluded that interstate banking will be procompetitive rather than anticompetitive. In this case, the effects of interstate banking include more competitive interest rates, higher service quality, and the expansion of banking services.¹ The data necessary to conduct empirical studies on the effects of interstate banking are just becoming available.² Previous empirical studies that have addressed the effects of interstate banking look at prior intrastate expansion and then extrapolate the results to interstate banking.

For instance, Duncan (1985) uses new entry into metropolitan markets in statewide branching states to see if new entry increases or decreases concentration and then uses his findings to determine implications for interstate banking. He finds that *de novo* entry and small mergers tend to decrease concentration, while large mergers tend to increase concentration. Evanoff and Fortier (1987) find that concentration in banking over time has fallen, not risen, with intrastate holding company expansion and expect that trend to continue with interstate banking. Boczar (1977) and Lawrence and Watkins (1986) identify the market characteristics that are attractive to intrastate holding company entry, at least in part to help regulators deal with the question of potential competition in future bank merger cases. Lawrence and Watkins explicitly state that their results can be used to identify attractive markets to out-of-state firms as the removal of interstate banking restrictions proceeds.

This paper looks at the pattern of actual interstate bank entry within one of the first regional interstate banking compacts. The market characteristics that affect interstate bank entry in the states of Florida, Georgia, North Carolina, South Carolina, Tennessee, and Virginia are investigated. Rose (1989, p. 121) identifies this area as one of the regions of the U.S. with the most interstate bank entry.

The restrictions on interstate banking have been relaxed during the deregulation wave of the 1980s, and interstate expansion now is allowed under certain conditions. The McFadden Act of 1927 and the Douglas Amendment to the Bank Holding Company Act of 1956 until recently effectively prohibited interstate

¹ See Watkins (1985), Evanoff and Fortier (1987), Calem (1987), Frieder (1988), and Rose (1989) for a discussion of the possible consequences of interstate banking.

² Rose (1989, p. 116) discusses the lack of empirical literature on interstate banking entry and provides some areas for fruitful research. The present study takes up his call to study the "factors that may influence the decision to choose one local market over another." Goudreau and Wall (1990) describe the magnitude of interstate bank entry by state for some of the states in the current sample. Lawrence and Klugman (1991) analyze the effects of interstate banking in rural midwestern banking markets. They compare several deposit ratios for acquired and nonacquired banks to determine differences in bank behavior.

commercial banking. The interstate activities that were allowed under these acts consisted of banking offices grandfathered under the McFadden and Bank Holding Company acts, the operation of nonbank subsidiaries, and offices engaged in international banking allowed under the Edge Act. The Garn-St Germain Depository Institutions Act of 1982 allowed banks and thrifts to expand across state lines to take over failing banking institutions.³

The Douglas Amendment left open the possibility of the expansion of interstate banking by allowing state legislatures the option of passing laws permitting the entry of out-of-state bank holding companies. Maine in 1975 was the first state to pass such a law, but it had no takers because the home state of the new entrant had to grant reciprocal rights to Maine-based holding companies. The wave of legislation allowing interstate banking began in 1982 with the New England experiment in interstate banking and proceeded until 14 states had passed some form of interstate bank legislation by 1985. These state laws differ, with some not requiring reciprocity, some requiring reciprocity from states within a specified region, and some extending entry with reciprocity to any state in the union.⁴

A regional reciprocal interstate banking area was established in the mid-1980s in the southeastern United States among Tennessee, Virginia, North Carolina, South Carolina, Georgia, and Florida. Interstate entry began in earnest in this region after the June 1985 U.S. Supreme Court ruling in *Northeast Bancorp v. Board of Governors* (472 U.S. 159) that declared regional interstate banking legal. There has been a great deal of interstate entry in this region since this ruling.

This study analyzes the determinants of interstate bank holding company entry in urban markets within this reciprocal banking area. The characteristics that affect the probability and size of entry are identified. Knowledge of the types of markets that are attractive to interstate multibank holding companies can help regulators assess the impact of potential competition in future merger cases as well as give some indication of the likely direction and effects of more liberalized interstate banking.

Determinants of Market Entry

The literature on market entry indicates that profitability, market structure, and growth are the major market characteristics that influence firm decisions

³See Duncan (1985) for a discussion of the limits to interstate banking through the early 1980s.

⁴See Calem (1987), Amel (1988), and Goudreau and Wall (1990) for a discussion of the different interstate banking laws among the various states. Goldfeld and Chandler (1986) provide a good overview of geographic restrictions in commercial banking.

about entry. Boczar (1977) examines market characteristics and intrastate multibank holding company entry in the early 1970s and finds that new entry is most likely in relatively fast growing markets with relatively large deposits per bank office, relatively high rates of return, and relatively low concentration. These characteristics of attractive and unattractive markets were offered as help to banking regulators trying to determine the amount of potential competition when studying bank merger applications. Lawrence and Watkins (1986) study rural intrastate holding company entry and obtain similar results. They find that banking firms are attracted to "larger, growing, and relatively less concentrated rural banking markets that have not experienced [multibank holding company] entry" (Lawrence and Watkins, p. 127). The profitability of the markets is not a statistically significant determinant in their study.

The *a priori* directions of influence of the above variables on entry are not clear. The impact of profitability on market entry either could deter or attract entry. One would expect that *de novo* entry would be more likely in profitable markets, other things equal, but entry through merger is more complex. More profitable markets may be more attractive markets in which to do business, but the price of banks will be higher. Less profitable markets may be less attractive, but there may be bargain banks to be found.⁵

Market structure consists of market concentration and market size. The expected influence of concentration on entry also cannot be determined *a priori*. Highly concentrated markets may be associated with high barriers to entry and/or an unfavorable economic climate, making these markets less attractive for entry. Potential antitrust considerations also may inhibit large scale entry into highly concentrated markets. On the other hand, high concentration may mean that a market is attractive for new entry because it may be easier to collude.⁶ Boczar and Lawrence and Watkins both state that the probable effect of concentration on entry is negative.

Market size is expected to have a positive effect on entry. This could be due to a bigger potential for profits, better ability to experience economies of scale, or more prestige associated with larger markets. Size can be measured by total deposits, total number of banks, total population, total income, or other demographic features of the markets.

Market growth is expected to increase the likelihood of entry. The markets that are experiencing growth are the markets that are expected to have the poten-

⁵See Rose and Scott (1979) and Lawrence and Watkins (1986) for a discussion of the impact of market profitability on entry. Because multibank holding companies were precluded from *de novo* entry in the sample states, the impact of profitability on entry cannot be determined *a priori*. This study analyzes the characteristics that make urban banking markets attractive for interstate holding company acquisitions. For a discussion of the choice of target bank, see Rose (1989), especially chapters 6 and 7.

⁶Boczar (1977, p. 139) discusses the possible effects of concentration on entry.

tial for profits in the future. Lawrence and Watkins also point out that growing markets can give opportunities for expansion without taking customers from rivals and, therefore, will be less likely to experience price wars.

A dummy variable also is included to distinguish states that allow statewide branching (Florida, North Carolina, and South Carolina) from those that do not. There would be a negative effect on interstate entry in statewide branching states if the large scale entry needed to establish a network of competitive banks deterred new entrants. A positive effect would indicate that the ability to establish a network of banks across the state is attractive to out-of-state entrants.

Sample and Data

The sample consists of the 40 SMSAs in Florida, Georgia, North Carolina, South Carolina, Tennessee, and Virginia that do not cross state lines and for which complete data could be obtained. Banks still are prohibited from branching across state lines. The SMSA commonly is used in the literature as an appropriate approximation to a banking market.⁷ This study looks at interstate entry through 1989 in these states. Banking firms had 4.5 years to enter (July 1985–December 1989, inclusively); the time period should be sufficient to identify the relatively attractive markets.

Data on the number of commercial banks, total commercial bank deposits, and the Herfindahl index of concentration calculated from these deposits came from the 1982 and 1985 Federal Deposit Insurance Corporation (FDIC) summary of deposits master file tapes and the FDIC *Data Book—1989—U.S., States, Counties, Other Areas*. Commercial bank returns on assets were calculated and provided by the Federal Reserve Bank of Atlanta. Population, median household income, and retail sales by SMSA came from *Sales and Marketing Management*. Statewide and limited branching states were identified from the 1985 and 1989 FDIC *Data Books*. Table 1 gives the names and descriptions of the variables used.

Following Boczar, the dependent variable in this study is the amount of total deposits in commercial banks controlled by out-of-state banks at the end of 1989. This interstate entry is identified from the FDIC master file tapes and the fall 1990 edition of McFadden's *Southern Bankers Directory*. Market size variables include total commercial bank deposits in 1985 and total number of banks in 1985 by SMSA. The market concentration variable is the Herfindahl index for commercial bank deposits in 1985. Return on assets, averaged over all firms in the SMSA, is the profitability variable. Market growth variously is defined as

⁷Smirlock (1985) states that virtually all banking structure studies approximate the market with an SMSA or non-SMSA county.

the percentage change in population, retail sales, and median household income in the SMSA between 1976 and 1985. One purpose of this paper is to aid policy makers in identifying attractive and unattractive markets for interstate holding company entry. Therefore, the independent variables come from 1985, while the dependent variable is the actual amount of interstate entry that occurred 4.5 years later.

Empirical Results

Table 2 contains the empirical results for the multivariate Tobit regressions explaining the amount of total SMSA commercial bank deposits controlled by out-of-state banks at the end of 1989.⁸ After correcting for heteroskedasticity, Tobit estimation is used because the dependent variable has a lower bound of zero and there are 11 observations at this limiting value.⁹ Ordinary least squares is an improper procedure when dealing with a truncated dependent variable.

The likelihood ratio test indicates that all regressions are significant at the .01 level. The regressions in general also indicate that market size, market growth, and statewide branching significantly are related to interstate entry.¹⁰ Market size, as measured by total commercial bank deposits in 1985, is related positively to interstate entry and is significant at the .01 level. Market size, as measured by the number of banks in the market in 1985, is related positively to interstate entry and is significant at the .01 and .05 levels. Market growth, measured by the percentage change in population, is related positively to interstate entry and is significant at the .01 level. Market growth, measured by the percentage change in median income, is related positively to interstate entry and is significant at the .05 level. Market growth, measured as the percentage change in retail sales, is related positively to interstate entry, but is not statistically significant. The statewide branching dummy variable is positive and statistically

⁸There were 110 cases of entry through 1989 in these 40 markets, ranging from a high of 11 entrants into West Palm Beach, Florida to no entrants in 11 markets. In total the interstate new entrants controlled over \$42 billion in commercial bank deposits at the end of 1989 in these markets.

⁹The authors thank an anonymous referee for comments on the possibility of heteroskedasticity in this cross-section study. The authors divided both sides of the regression equation by TOTDEP85 to correct for heteroskedasticity. The authors also thank this referee for suggesting a test from Greene (1990, p. 736) to determine whether Tobit estimation is a proper procedure. This is a likelihood ratio test using the Tobit model, the probit model, and the truncated regression model. The likelihood ratio statistic from Greene's test shows no significant difference between the log likelihood from the Tobit model and the combined log likelihoods from the probit model and the truncated regression model. Therefore, the Tobit model is applicable.

¹⁰The model also was estimated with 1982 data instead of 1985 data with substantially similar results.

significant, indicating more entry in states that allow statewide branching, other things equal.

Positive, but statistically insignificant, relationships between market profitability and interstate entry as well as between market concentration and interstate entry are found. The signs on these variables indicate more interstate entry in the more profitable and more concentrated banking markets.

The above results indicate that the larger, faster growing markets in statewide branching states are the attractive markets for interstate entry within this regional interstate banking compact. This is more or less consistent with previous studies on intrastate entry.¹¹ Where this study differs from the previous work on intrastate entry is in the insignificance of market concentration and the importance of statewide branching to interstate entry. The ability to establish a network of banks throughout the state evidently is attractive to banks considering entering new markets across state lines.

Conclusion

Conditions in the mid-1980s can be used to determine attractive markets for interstate entry through 1989. This paper can aid policy makers by identifying the type of banking market that is attractive for interstate entry in one of the first regional interstate banking compacts. Interstate entry in the states in this study is attracted to relatively large, fast growing markets in statewide branching states. Market profitability and market concentration are found to have positive, but insignificant, effects on interstate entry.

The major contribution of this paper is in identifying attractive markets and unattractive markets for interstate entry to antitrust authorities interested in the effect of interstate banking on potential entrants. The major new finding of this research is that interstate entrants are attracted to statewide branching states. As interstate banking expands the number of potential entrants to particular markets, the attractive markets should experience the most procompetitive effects of expanded potential competition. These effects may include lower loan rates, higher deposit rates, and more and better banking services. This study indicates that the least attractive markets for interstate entry are the smaller, slower growing markets in limited branching states. These are the markets that should most trouble antitrust authorities concerned with potential competition.

¹¹Rose (1985), summarizing the consensus of studies on intrastate banking entry, says that "the evidence suggests that banking markets attractive for new entry are those that are relatively large, unconcentrated, and characterized by good growth prospects. Other variables, such as market profitability and per capita income, may also be important, but the evidence on these variables is limited and mixed." (p. 741).

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Table 1
Description of Variables

Variable	Description	Variable	Description
INTERDEP	Deposits under control of out-of-state entrants as of 12/31/89 (thousands)	PCPP7685	Percentage change in population between 1976 and 1985 (%)
TOTDEP85	Total deposits in market in 1985 (thousands)	PCRS7685	Percentage change in retail sales between 1976 and 1985 (%)
ROA85	Average return on assets in market in 1985 (%)	PCIN7685	Percentage change in household median income between 1976 and 1985 (%)
HINDEX85	Herfindahl index for 1985 deposits	STATEWID	A dummy variable equal to 1 for Florida, North Carolina, and South Carolina (statewide branching states) and 0 otherwise
NMBK85	Number of commercial banks in the market in 1985		

Table 2
Tobit Regression Results for 40 SMSAs in Florida, Georgia, North Carolina,
South Carolina, Tennessee, and Virginia¹

Independent Variables	Dependent Variable INTERDEP		
	(1)	(2)	(3)
Intercept	-766,300** (2.27)	-1,023,600** (2.51)	-1,548,400*** (3.28)
TOTDEP85	.30*** (3.50)	.31*** (3.29)	.29*** (3.21)
ROA85	63,118 (.68)	1,554 (.02)	62,970 (.80)
HINDEX85	9,794 (.01)	1,035,400 (.89)	1,294,100 (1.20)
NMBK85	29,293 (1.59)	52,604*** (2.77)	43,099** (2.38)
STATEWID	309,180** (2.06)	547,070*** (3.36)	625,940*** (3.74)
PCPP7685	1,091,600*** (2.91)		
PCRS7685		28,970 (.19)	
PCIN7685			618,410** (2.05)
Likelihood Ratio	35.17***	26.17***	30.41***

t-statistics in parentheses

- *** Significant at the .01 level
- ** Significant at the .05 level
- * Significant at the .10 level

¹All variables were divided by TOTDEP85 to correct for heteroskedasticity

