THE BURDEN OF FED MEMBERSHIP FOR SIXTH DISTRICT BANKS

by Stuart G. Hoffman

It is widely recognized that Federal Reserve System membership entails a burden to member banks because System reserve requirements are generally more stringent than the state reserve requirements levied against nonmember banks.[1] This is certainly true of the six states in the Sixth Federal Reserve District, as shown in Table 1. Each state has lower required reserve ratios than the System and/or allows some part of the requirement to be satisfied by interest-earning assets as well as cash. For example, Mississippi imposes reserve requirement ratios on its nonmember banks identical to the System's, but the Mississippi nonmembers can hold up to 30 percent of their required reserves in interest-bearing, short-term securities. Florida has much higher reserve requirements than the System but permits its nonmember banks to satisfy potentially all of their reserve requirements with unpledged interest-earning securities. Thus, relative to a comparably sized nonmember bank, a member bank incurs an opportunity cost from holding larger required reserves in the form of noninterest-earning vault cash or deposits at its District Reserve Bank or Branch. The foregone earnings on the required reserves held by member banks in excess of the amount that they would hold in cash as nonmembers represent the burden of System membership.

In several recent analyses, the staff of the Board of Governors has investigated the membership burden for all member banks.[2] The most recent estimate of the nationwide burden is a reduction in pretax earnings of roughly $650 million, or 7.4 percent, in 1977.[3] The Board staff arrived at those figures by comparing the noninterest-earning assets of member banks with those of comparably sized nonmember banks and calculating the interest foregone on the difference. From that amount, certain tangible benefits of membership were subtracted to derive a *net* burden estimate.[4]

In this study, the same method is used to estimate the 1977 burden of membership for Sixth District member banks.[5] This methodological consistency allows a direct estimate of District member banks' share of the estimated national burden

[1] Proposals to reduce significantly System reserve requirements, especially for smaller banks, and impose reserve requirements on the largest nonmember banks are now being discussed by Congress. If legislation along these lines is enacted, it would likely eliminate the burden of membership for most banks.

[2] "The Burden of Federal Reserve Membership, NOW Accounts, and the Payment of Interest on Reserves," Staff Study, Board of Governors, June 1977; "Revised Estimate of the Burden of Federal Reserve Membership," Perry Quick and James Brundy, Board of Governors, unpublished correspondence, May 22, 1978; and "The Burden of Federal Reserve Membership," James Brundy and Perry Quick, Board of Governors, September 29, 1978.

[3] Excluding estimated foreign earnings of large banks, the burden represents roughly 9.5 percent of all member bank *domestic* pretax earnings in 1977.

[4] Some tangible System services such as functional cost analysis, along with certain intangible benefits of membership such as "status" or regulatory preference, are not accounted for in the net burden calculation. Thus, it's quite possible that the actual burden is lower than estimated, at least for some member banks.

[5] A criticism of this methodology is that while it may provide a reasonable total burden estimate, it grossly underestimates the foregone earnings of the nation's largest banks (over $2 billion in deposits). However, since there was only one bank in the District with total deposits of over $2 billion at year-end 1977, the methodology applied to the Sixth District seems appropriate and less sensitive to the large bank bias criticism.

TABLE 1

STATE RESERVE REQUIREMENTS IN THE SIXTH DISTRICT

State	Deposits Subject to Reserve Requirements	Reserve Requirement Ratios	Reserve Assets Eligible to Meet Reserve Requirements: Vault Cash	Demand Balances Due From Banks	Securities: U.S. Gov't	Securities: All Others	Other
Alabama	Total demand	10%	X	X			Series E bonds
	Time and savings	3%	X	X			Series E bonds
Florida	Total deposits minus secured public deposits	20%	X	X	X[1]		
Georgia	Total demand minus secured public demand	15%	X	X	X[2]		Unpledged CDs
	Total time and savings minus secured public time and savings	5%	X	X	X	X	Unpledged CDs
Louisiana	Total demand minus cash items in process of collection and demand balances due from banks	7.5% on first $2 mil., 10.0% on $2-$10 mil., 12.0% on $10-$100 mil., 13.0% on $100-$400 mil., and 14.0% on over $400 mil.	X	X	X[3]	X[4]	
	Time and savings	3%	X	X	X[3]	X[4]	
Mississippi	Total demand	Same as Federal Reserve	X	X	X[5]		X[6]
	Time and savings	Same as Federal Reserve	X	X	X[5]		X[6]
Tennessee	Total demand	10%	X	X			Local CIPC
	Time and savings	3%	X	X			Local CIPC

[1] Up to 100 percent of required reserves may be held in unpledged U.S. Government or direct agency securities.
[2] Up to 50 percent of required reserves may be held in unpledged U.S. Government or agency obligations maturing within one year.
[3] Up to 50 percent of required reserves may be held in U.S. Government securities maturing within one year.
[4] Up to 25 percent of required reserves may be held in State of Louisiana securities maturing within two years.
[5] Up to 30 percent of required reserves can be held in U.S. Government or agency securities maturing within one year.
[6] Up to 15 percent of required reserves can be held in CDs maturing within one year issued by banks in Mississippi.

for 1977. Table 2 summarizes the burden calculated for various bank size classes. The net burden for all Sixth District members last year was an estimated $48.9 million, or 7½ percent of the national burden. These foregone earnings represent nearly 11 percent of District member banks' before-tax income in 1977. In other words, District member banks' earnings before taxes would have averaged 11 percent higher in 1977 had those banks been nonmembers. The next section describes the steps followed in the calculations of the burden, as shown in Table 2.

Cash Assets. Row one lists the average noninterest-earning reserves held at the Atlanta Federal Reserve Bank and Branches by Sixth District member banks in 1977. This item is the largest but not the only contributor to the burden of Fed membership. An analysis has shown that to help satisfy System reserve requirements, District member banks in most deposit size categories hold more vault cash relative to liabilities than their nonmember counterparts.[6] The vault cash of member banks in excess of that held by comparable nonmembers for normal operating purposes is listed in row two. It involves an opportunity cost to the member bank

[6] Liabilities are defined to include total deposits, Fed funds purchased, and other liabilities for borrowed funds.

TABLE 2

ESTIMATED MEMBERSHIP BURDEN IN 1977 FOR SIXTH DISTRICT MEMBER BANKS

(million $)

	Bank Size Classes (Net Demand Deposits)						
	0-10	10-100	100-200	200-400	400+	Total*	
1. Reserves at Fed	183.5	741.2	227.2	377.3	318.7	1,847.9	(7%)
2. (+) Vault Cash Adj.	16.1	61.8	24.7	0	0	102.6	(10%)
3. (-) "Due from" Adj.	79.1	379.5	106.5	89.6	113.0	767.7	(7½%)
4. (-) Float Adj.	7.0	29.0	19.3	27.5	34.5	117.3	(4%)
5. (=) Excess Balances	113.5	394.5	126.1	260.2	171.2	1,065.5	(7¼%)
6. (-) Correspondent Earnings Adj.	2.3	16.0	28.2	44.5	37.1	128.1	(5¼%)
7. (=) Unproductive Bal.	111.2	378.5	97.9	215.7	134.1	937.4	(7½%)
8. Earnings Loss at 6½%	7.2	24.6	6.4	14.0	8.7	60.9	(7½%)
9. (-) Value of Discount Window	0.9	4.1	1.7	2.7	2.6	12.0	(8%)
10. (=) NET BURDEN	6.3	20.5	4.7	11.3	6.1	48.9	(7½%)
11. Income Before Taxes (1977)	61.7	209.1	46.2	91.0	40.4	448.4	(5%)
12. No. of Banks	364	255	14	10	4	647	(11⅓%)

* Figures in parentheses are the District's percentage of the national total.

and, thus, adds to the burden of membership.

As members of the Federal Reserve System, banks currently receive a number of services without explicit charges. Nonmember banks usually obtain similar services from larger correspondent banks, compensating them by leaving noninterest-earning funds on deposit ("due from" deposits) with them. Consequently, the ratio of "due from" balances to liabilities is lower for member banks than for comparably sized nonmember banks. Row three shows the estimated benefit to member banks of holding relatively lower amounts of noninterest-earning, "due from" deposits.[7]

Float. Float arises in the process of collecting checks when the Federal Reserve credits the account of a member bank before debiting the account of the member bank upon which the check is written. This temporary "loan" of funds to member banks during the collection process reduces the burden of membership. In the Board staff's recent study, the float adjustment nationally was slightly over $3 billion in 1977. About $1.9 billion of the total accrued to banks with total deposits in excess of $2 billion. An analysis of float since 1970 suggests that, on average, about 10½ percent of float nationally is on the books of the Atlanta Fed, although that percentage has been slightly higher in the past few years. Since there is only one bank in the Sixth District with total deposits just over $2 billion, the total benefit of float to District members has been estimated at $117.3 million—10½ percent of the approximately $1.1 billion float enjoyed by banks with *less* than $2 billion in deposits. In row four of Table 2, the total float benefit has been distributed across bank size classes according to the proportion of cash items in the process of collection held by each size class.

Correspondent Earnings. The "excess balances" listed in row five are the sums of rows one and two minus rows three and four. One further adjustment needs to be made to get an accurate estimate of Fed members' unproductive balances. Large members can offer correspondent

[7] It is assumed that 56 percent of "due from" balances are collected, that is, potentially available for investment purposes.

services to nonmember banks because of the formers' access to Federal Reserve services (i.e., check collection, currency shipments, wire transfers, etc.). An analysis has shown that District member banks hold much higher balances "due to" respondents (compensating balances) relative to total liabilities than those held by comparably sized nonmember banks. Since correspondent banks pay no explicit interest on compensating balances and since they can invest the collected portion of "due to's" in earning assets, these funds are profitable to them. The profitable portion of compensating balances attributed to the correspondent's membership in the Federal Reserve System are listed in row six.[8] These balances have been subtracted from the excess balances to arrive at the estimates of District member banks' unproductive balances given in row seven. These are the "extra" noninterest-earning balances held by member banks relative to comparably sized nonmember banks. At an opportunity cost of 6½ percent, these unproductive balances represent the before-tax earnings loss, as given in row eight.[9]

Discount Window. The value of member banks' access to the Fed's discount window nationally in 1977 has been estimated at $150 million. This is the cost to member banks of acquiring similar lines of credit in the private market. A study of discount operations over the past several years suggests that Sixth District member bank borrowings average about 8 percent of total System borrowings, or $12 million of the $150-million benefit to all member banks. Row nine shows the District's total benefit distributed across bank size classes according to their shares of discount window borrowings last year. Finally, subtracting the value of the borrowing privilege from the pretax earning losses gives the estimated before-tax net burden of membership for District members in 1977, which totals $48.9 million, or 7½ percent of the estimated national burden. The net burden for each bank size class is given in row ten.

Burden Relative to Income. Row eleven gives 1977 income before taxes and security gains or losses for each size class, which totaled $448.4 million for all District members, or 5 percent of before-tax income earned by all member banks. The net burden estimate of $48.9 million for District member banks equaled nearly 11 percent of their total income before taxes last year. For each of the three smallest bank size classes in Table 2, the net burden averaged about 10 percent of before-tax earnings. That is, for banks with $200 million or less in net demand deposits, System membership reduced before-tax earnings by 10 percent, on average. For banks with more than $200 million in net demand deposits, the earnings reduction was larger. The estimated net burden for banks in the $200-$400-million size class amounted to nearly 12½ percent of before-tax earnings in 1977. For the District's four large banks with over $400 million in net demand deposits, the estimated net burden was 15 percent of their combined income before taxes last year. However, an unusual operating loss at one of these banks pulled down net income for the group. Excluding that bank's loss, the net burden for banks in the largest size category was about 12½ percent of 1977 before-tax income, the same as for banks in the $200-$400-million category. Thus, the District's smaller banks bore a slightly lower burden from membership, measured in terms of foregone earnings as a percent of actual earnings, than the relatively few larger banks. ■

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[8] It has been assumed that 58 percent of "due to" balances are collected (57 percent for banks over $1 billion in deposits) and one-fifth of collected "due to's" represent profit on correspondent business.

[9] An opportunity cost rate of 6½ percent (same figure used in the Board staff studies) should be interpreted as an expected average cost over a long period of time. While interest rates are currently above 6½ percent, it is not likely that a bank would continually withdraw from and then rejoin the System as interest rates rose above and then fell below 6½ percent, respectively.