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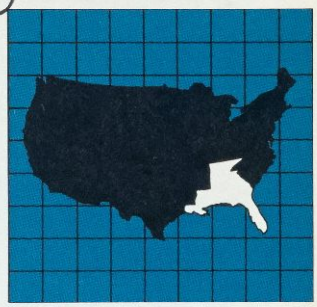


FEDERAL RESERVE BANK OF ATLANTA DECEMBER 1981

ALL-SAVERS Success or Burden?

BIG GOV'T Federal Sector's Hidden Size

INCENTIVES Southeast Lures Foreign Investors

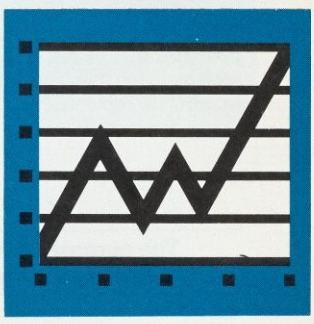
NOWS Competition in Southeastern Cities

FORECASTS State Models in Southeast







Economic Review

FEDERAL RESERVE BANK OF ATLANTA

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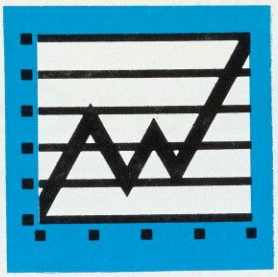





VOLUME LXVI, NO. 8

Is the All-Savers Certificate A Success?
Evidence from the Southeast

A survey of southeastern All-Savers depositors suggests that the Certificate offers some help to thrifts but presents little competition to money market funds. In fact, the ASC's benefits to financial institutions appear small compared to the costs in lost federal tax revenues.

The controversial All-Savers Certificate (ASC) has been hailed by proponents as a boon to the ailing thrift industry, but panned by critics as offering too little help to thrifts at too much cost to the Treasury. A spokesman for the mutual funds industry painted a frightening picture of the ASC as "a giant vacuum cleaner ... drawing funds away from normal investment with some serious consequences."[1] The National League of Cities worried that the ASC would be in direct competition with tax-exempt municipal bonds, forcing up the cost of running cities and raising property taxes.[2]

But if the ASC is a vacuum cleaner, it seems to be operating in neutral—merely churning up funds within the same institution. Early evidence from the Southeast reveals that, while the All-Savers program will provide modest relief for thrift institutions, its cost to the U. S. Treasury is likely to be substantially greater than its benefits to thrifts. Specifically, a Federal Reserve Bank of Atlanta survey suggests the following conclusions:

1. Consumers are not pulling funds from one kind of institution (bank, thrift, or credit union) and putting them into another.
2. Surprisingly, although the ASC provides a lower level of tax benefits for families earning less than $30,000 per year, over 40 percent of new ASC depositors fall into that category.
3. The All-Savers Certificate is producing modest cost savings for thrifts and banks.
4. Congress estimated the ASC will cost the federal government about $3.3 billion in tax revenues. Since we estimate that it will increase thrift's earnings by at most $1.9 billion, for every dollar the ASC saves the thrifts, it will cost the Treasury almost two dollars.
5. Consumers are not putting much money from passbook savings into the ASC.
6. The ASC is not presenting serious competition to money market funds.
7. Most ASC deposits are coming from money market certificates.

Why the All-Savers Certificate?

Background

In the Economic Recovery Tax Act of 1981, Congress sought to address the financial problems of the thrift industry by authorizing thrift institutions, commercial banks and credit unions to issue a new type of certificate of deposit. A portion of the earnings on this new certificate—called the All-Savers Certificate—is exempt from federal income taxes. This feature allows the nation's depository institutions to offer a deposit that costs them less than market indexed deposits, such as money market certificates, and at the same time, provides high returns to investors.

With the ASC, Congress sought to bolster the earnings and financing capacity of thrift institutions. Savings and loan associations and mutual savings banks have been hard hit in the past two years by portfolio imbalances: they have had to borrow at rates often higher than longer-term rates at which they lend. S&L earnings dropped from a record $3.9 billion in 1978 to $.8 billion in 1980 to a loss of $1.8 billion during the first half of 1981. Their net worth declined by $3.2 billion, 9.8 percent, during the first three quarters of 1981.

The designers of the ASC hoped to attract investors with higher incomes—people with great-

er access to investments such as money market mutual funds which compete with depository institutions—by offering a tax-free yield of 70 percent of the investment yield on 52 week Treasury Bills. For households with marginal tax brackets of 30 percent or higher, the ASC's tax-equivalent yield is equal to or above the 52 week Treasury Bill yield. The ASC rate in effect for most of October—12.14 percent—gave an after-tax yield of 16.19 percent to taxpayers with a 1982 taxable income of $20,000-$24,000 and filing a joint return; taxpayers filing a joint return with taxable incomes of more than $85,000 would earn an after-tax equivalent return of 24.28 percent.

Commercial banks and credit unions were also allowed to issue ASCs at the same rates and maturities as thrift institutions. Had they not been allowed to do this, it is quite likely that there would have been deposit flows from the commercial banks and credit unions to thrift institutions when the ASC was introduced. Since ASC deposits would probably be taken out of taxable instruments, federal tax revenue would be lost. Congress sought to limit this loss of tax revenue by limiting the time period in which it could be issued and the amount of income from the certificate that is covered by the tax-exemption. The certificates may only be issued between October 1, 1981 and December 31, 1982. For persons filing individual tax returns, $1,000 of income is tax exempt; for persons filing joint returns, the exemption is $2,000.

To further aid the thrift institutions, the Depository Institutions Deregulation Committee rescinded early withdrawal penalties on certificates of deposit that were converted into ASCs if the original certificate paid a higher interest rate than the ASC. The DIDC thus discouraged depositors from converting lower cost certificates to ASCs and encouraged them to convert higher cost deposits.

What emerged from this blend of Congressional objectives is a fairly simple concept bounded by detailed law and regulation. Features which will boost the financial industry are the tax exempt status of earnings from the certificate, the indexing of the certificate's yield at 70 percent of market yield on a similar instrument and the ease of converting higher cost certificates to all savers certificates. The main restrictions are the limits on the amount of income from ASCs that may be deducted and the limited time during which the certificates may be offered.

BOX 1

Main Features of the All Savers Certificate

Tax Exemption	$1,000 individual return $2,000 joint return
Time Period for Issue	15 months (Oct. 1, 1981 - Dec. 31, 1982)
When Interest Paid	as accrues *or* at maturity
Highest Minimum Deposit	$500
Buyers Eligible for Tax Exemption	individuals, partnerships, estates of purchasers
Interest Taxable	if certificate redeemed, used to secure a loan
Maturity	1 year
Interest Rate	70 percent of investment yield on 52 week U.S. Treasury Bills, most recent auction before week ASC is issued.
Investment Ties	Beginning first quarter 1982, 75 percent of lower of net new retail time and savings deposits or value of all savers certificates issued during the previous quarter must go to residential or agricultural financing. Otherwise, the institution must not issue certificates until the requirement is met.
What Are Residential and Agricultural Financing	☐agricultural loans ☐insured or guaranteed home improvement loans ☐mortgages on single or multifamily dwellings ☐new purchases of FNMA, GNMA, FHLMC and private mortgage pass through or mortgage backed securities ☐mobile home loans ☐construction and rehabilitation loans on single and multifamily residences

Is It Working?

Survey Results

In evaluating the success of the ASC so far, we need to ask two kinds of questions: (1) Is it producing the intended effects, and (2) Is it producing unintended effects? In order to gain early insight into these questions, we surveyed purchasers of ASCs from banks and savings and loan associations in the Sixth Federal Reserve District.

We solicited the voluntary cooperation of the largest banks and S&Ls in the District. In our invitation, we explained that participating institutions would be the first to receive survey results and interpretations. Thus, from a "self-interest" standpoint, the institutions could gain valuable marketing information by participating. Within 30 days of the survey, the participating institutions had the survey results and a profile of All-Savers deposits in the region.

The institutions which participated in Alabama represented 33 percent of the state's total deposits; in Florida, 18 percent; in Georgia, 22 percent; in Louisiana, 4 percent; in Mississippi, 28 percent; and in Tennessee, 23 percent. Both savings and loans and commercial banks were represented in all of the states except Alabama and Georgia, where no S&Ls responded. Commercial bank customers' responses made up 74 percent of the total sample; savings and loans' customers comprised the remaining 26 percent. These proportions roughly parallel the proportion of total deposits held by these institutions in the Southeast.[4]

Table 1. Alternative Instruments for Investment of All-Savers Certificate Funds

Alternative Instrument	Percent of ASC Funds
Money Market Certificate	64.5
Small Saver Certificate	5.1
Fixed-Rate Time Certificate or Passbook Sources	8.4
Other Internal Sources	2.0
Money Market Mutual Fund	12.1
State or Municipal Securities	1.4
U.S. Treasury Securities	1.8
Other External Sources	3.4
No Response	1.3

Note: Items do not add to 100% because of rounding.

Table 2. Institutional Source of All-Savers Certificate Funds

Institution	Percent of Funds from Institution
Same Institution	61.2
Other Depository Institutions	
Commercial Bank	12.7
S&Ls	8.9
Credit Union	.7
Other Institutions	8.6
Multiple Institutions	7.0
No Response	.9
	100.0

The institutions asked their customers who invested in the ASC during October 1-7 period to fill out a survey form. The key questions asked of the customer were amount of deposit, institutional source of funds, alternative financial instrument for the funds, percent of the depositor's savings invested in the ASC, and the depositor's age, and income. Each institution chose 3-5 branches in different parts of its state in which to conduct the survey. The surveys were administered during the first five working days of October. Nearly 3,200 completed forms were returned and processed, representing $28 million in All-Savers deposits.

Is the ASC providing the intended benefits? The primary question is whether funds coming in to ASCs will come predominantly from high cost or from low cost deposits. In the Southeast, the evidence is that fears that the ASC would raise the cost of funds are unfounded (see Table 1). Savers reported that only eight percent of All-Savers' funds would have wound up in passbook savings or fixed rate certificates of deposits, and 70 percent of the money would have gone into higher cost money market certificates or small savers certificates.

A second major purpose of the ASC was to bring new money into depository institutions.

All-Savers Survey Highlights

61 percent of All-Savers depositors kept their funds in the same institution.

Only 3.5 percent of ASC deposits were taken out of S&Ls and put into commercial banks. Only 4.3 percent went from banks into S&Ls.

The ASC represented very little competition to money market funds. About 12 percent of ASC funds in the survey came from money market funds.

65 percent of ASC deposits came from money market certificates.

Only eight percent of ASC deposits came from passbook savings and other fixed rate time deposits, suggesting that consumers are still wary of committing these funds for as long as a year.

Since most of the money going into ASCs is being rolled over from higher-yielding accounts, some institutions may experience improvement in interest margins.

Even though the ASC's tax advantages are less effective for families earning less than $30,000, over 40 percent of new ASC depositors fell into that "lower income" category.

On this score, the ASC was only moderately successful. Our survey showed that more than 60 percent of ASC deposits were transferred from accounts within the same institution. Nineteen percent came from other sources outside of the depository institutions, such as money market funds, stocks, or securities.(See Table 2).

The ASC was also intended to stimulate certain kinds of investment. Thrifts and banks must invest 75 percent of their inflow of ASCs or of their net inflow of consumer time and savings deposits in "housing and agriculture." Housing and agriculture are broadly defined in the Tax Act to include securities of the Federal Home Loan Mortgage Corporation, the Government National Mortgage Corporation and the Federal National Mortgage Corporation, as well as mortgage, construction, home improvement and farm loans made to the private sector.

These investment requirements should not be difficult for most institutions to fulfill. Thrift institutions already invest predominantly in housing related assets. Commercial banks, while not generally specializing in real estate and agricultural loans, will be investing cash flow from ASC deposits and other sources that provide substantial amounts of funds. This large flow of investment relative to the ASC gains seems likely to allow most banks to meet investment requirements without much difficulty.Conversations with several larger Southeastern banks indicate this to be their expectation also.

Side Effects

The second kind of concern about the ASC has to do with unintended side effects. To the extent that ASCs promote inflows of funds into depository institutions, for example, they will take funds from other institutions and instruments that savers use. Most important of these to the thrifts are the money market mutual funds. ASCs' tax exempt feature also gives them some similarity to state and municipal securities. ASCs may also be substitutes in investment portfolios for short-term obligations of the U. S. Treasury, and for corporate securities.

To determine what financial instrument is getting the most competition from the All-Savers, we asked the customer, "Where would you place these funds if the ASC were not available?" Sixty-five percent answered the six-month money market certificate. Even more, 71 percent, of the money which was transferred within the same institution was converted from money market certificates.

The money market mutual funds lost only a modest amount of money to All-Savers. During

October, their assets nationwide climbed almost $9 billion to $170 billion. In the Southeast, we found that only 12 percent of deposits flowing into the all-savers certificates would have gone into or remained in money market funds if all-savers had not existed. Much smaller percentages of funds would have gone into state and municipal securities or U. S. government securities.

Our survey revealed another public reaction to the ASC which was surprising. A large proportion of ASC depositors had gross incomes of less than $30,000—indicative of marginal tax rates of less than 30 percent for those filing joint returns. The tax advantage for an individual is determined by comparing the effective taxable yield he can receive on the All-Savers Certificate to the current yield on money market funds or other high-paying instruments. For a family in the 30 percent tax bracket, the initial All-Savers yield of 12.61 percent was equal to a taxable yield of approximately 18 percent. For the family in the 20 percent bracket, a comparable taxable yield would be 15.8 percent. Therefore, most analysts expected that the lower income (but not necessarily low income) groups would choose to invest in a money market fund where yields are well over 16 percent than tie their money up in the lower-yielding All-Savers Certificate. Our survey indicates, however, that the largest proportion of accounts and funds in ASCs came from depositors with household incomes of less than $30,000.

Investment in All-Savers Certificate by Income Group

Household Income	Percent of Deposits	Percent of Accounts
$0-30,000	30	41
30-39,999	21	20
40-49,999	15	12
50-59,999	10	7
60,000+	15	11
No Response	9	9

There may be several explanations for this trend. The lower income investors may be predominantly those who file individual tax returns. Marginal tax rates and tax adjusted ASC yields are higher for these taxpayers than for those filing joint returns. Lower income groups may be less likely to perceive money market funds as a viable alternative investment. The funds are often handled by a brokerage firm or investment company and may be alien to individuals who do not invest frequently or with any volume. It seems likely that households with lower incomes would keep a larger proportion of their assets in depository institutions. Those survey respondents in the less than $30,000 income bracket who did take money out of a money market fund to invest in the ASC represented only 7 percent of the deposits for that income group.

If money market funds are not perceived as a viable investment alternative, then the ASC is very attractive to an investor with less than $10,000 (which is the minimum investment in the six month money market certificate) who does not want to tie up money for 2½ years in the small-savers certificate. The ASC's effective yield for an investor in the 20 percent tax bracket has been very close to the 2½ year small-saver certificate yield. This appeal of the ASC to lower income groups could be part of the reason why money market funds have suffered very little from its introduction.

Higher income groups may recognize that, for them, tax-free money market funds or municipal bonds may yield a higher return than the ASC. They may also want the liquidity of the money market funds, something the ASC does not provide.

The average size of deposit increased as income increased. It ranged from $6,500 per deposit for the under $30,000 income bracket to $12,000 per deposit in the over $60,000 income range.

National Effects of the ASC

Since the All-Savers Certificate breaks new ground, there is considerable difference of opinion about its projected impacts. Our survey provides new evidence on several features of the public's response to the certificate. We can use these figures from the Southeast to estimate the national effects of the all savers program on competition among institutions, and on institutions' costs.

First, institutions apparently are not raiding each other for ASC funds. Our survey indicated that a majority of funds deposited in ASCs came from within the same institution and that even when funds moved between institutions there was little crossover between banks and S&Ls. Only a small proportion of ASC deposits at the banks and S&Ls we surveyed came from credit unions. In addition, we found that banks and thrifts got similar percentages of their All-Savers

funds from outside sources such as money market mutual funds. Banks' and thrifts' proportions of ASC funds reported in the survey were very similar to the proportion of consumer time and savings deposits that they held. Our results indicate that the ASC is producing only small flows of funds among different types of institutions.

Second, the ASC seems likely to produce modest savings in costs of funds for thrifts and banks. We estimated the cost savings for thrift institutions and commercial banks on the basis of a maximum volume of ASC deposits of $110 billion.This estimate seems reasonable in light of the first month's ASC experience. It is the midpoint between recently revised estimates of $150 billion by Data Resources Incorporated (on the high side) and the estimate of $70 billion which is consistent with the tax loss estimates of the Congress' Joint Committee on Taxation (on the low side). The box explains the details of our method. Since spreads between the costs of ASCs and alternative sources of funds are crucial to cost savings estimates, we made two estimates. The first was based on yield spreads in 1980, a year of high interest rates when short-term rates were often above long-term rates. The second was based on yield spreads in 1978 when interest rates were lower and short-term rates were generally below long rates.

On the basis of the larger 1980 rate spreads, we estimate the 1982 cost savings to thrifts would be $1.1 billion (1.7 percent of their 1980 cost of funds, almost twice their depressed 1980 earnings levels) (see Table 3). Banks would also

Table 3. Cost Savings from ASCs Compared with Costs and Earnings of Financial Institutions

	Commercial Banks	Thrifts
Cost savings 1982		
1980 spreads (million $)	938.0	1061.0
1978 spreads (million $)	605.0	691.0
Cost of funds 1980	217.8	58.6
Cost of deposits 1980	196.2	52.2
Net after-tax income	14.0	.5
Cost savings as percent of:		
Cost of funds		
1980 spreads	.4	1.7
1978 spreads	.3	1.2
Cost of deposits		
1980 spreads	.5	2.0
1978 spreads	.3	1.3
Net after-tax income		
1980 spreads	6.7	198.7
1978 spreads	4.3	129.4

BOX 2

In order to project the ASC's impact on institutions' cost of funds, we examined three factors: (1) the distribution of All-Savers deposits among institutions, (2) the differences between the rates paid for All-Savers deposits and the rates the institutions would have paid for the deposits from alternative sources, and (3) the dollar volume of All-Savers deposits.

Our evidence supports the assumption that All-Savers deposits are distributed among the various types of institutions in the same proportion as are consumer time and savings deposits. As of September 1981,commercial banks held 44.7 percent of these deposits and thrift institutions held 49.9 percent. Credit unions held the remaining 5.4 percent.

Having assumed the proportionate distribution of deposits among institutions, we are faced with the task of projecting total All-Savers deposits. Early results seem to be consistent with an estimate of $110 billion. This estimate lies midway between the recent $150 billion projection of Data Resources Inc. and the $70 billion that can be derived from the tax loss estimates of the Joint Committee on Taxation of the Congress. This will be our primary estimate of all savers deposits at their maximum level. That level should be reached in late 1982. We further assumed that half of the year end 1982 level would be deposited by the end of 1981.

We know that the amount of ASCs outstanding on January 1, 1984 will be zero (at least under the program passed this year) and we assume that year end 1981 and 1982 values would be $55 and $110 billion respectively. From those totals we can compute yearly average All-Savers deposits. These estimates can be multiplied by the difference between the All-Savers rate and rates on alternatives to All-Savers deposits to estimate cost savings brought to the targeted institutions by the ASC (see Appendix).

Projecting rate spreads is quite chancy, so instead we chose to use two sets of spreads. For a high interest rate environment in which the average yield curve had a slight negative slope we chose 1980. For an example of lower rates with positively sloping yield curve, we chose 1978. (Rate spreads for an even lower rate environment—1976—yielded the same results as those for 1978.)

Table 4. Cost Impact of All-Savers Certificate on Commercial Banks and Thrift Institutions
(billions $)
(Average Spread 1980)

	Commercial Banks				Thrifts			
Alternative Instrument	1981	1982	1983	Total	1981	1982	1983	Total
Money Market Certificate	−.1	−.7	−.4	−1.2	−.1	−.7	−.5	−1.3
Small Savers Certificate	− *	−.1	− *	−.1	− *	−.1	− *	−.1
Other Internal Sources	+ *	+.1	+.1	+.2	+ *	+.1	+.1	+.2
Outside Funds	− *	−.3	−.2	−.6	− *	−.4	−.2	−.6
Total	−.1	−.9	−.6	−1.7	−.1	−1.1	−.7	−1.9

*Less than $.05 billion
Note: Items may not add to totals because of rounding.

benefit, saving about $.9 billion in 1982 (four tenths of one percent of their 1980 cost of funds, almost seven percent of their 1980 earnings) (see Tables 4 and 5). The savings are only about two-thirds as much when we use the lower 1978 spreads. The estimates for 1982 cost savings computed with these spreads are $.7 billion for thrifts and $.6 billion for banks.

Compared to the thrifts' estimated 1981 losses, however, even the higher estimate of savings is quite modest. Insured S&Ls lost $1.8 billion during the first half of 1981; their net worth declined by an additional $1.4 billion in the third quarter. This loss is well above our higher estimate of annual cost saving for the thrifts ($1.1 billion) and more than two and one half times our lower estimate ($.7 billion).

While the ASC's benefits may be modest compared to recent thrift losses, our survey found that the cost savings to issuing institutions was higher than other recent estimates. For example, we found almost 65 percent of All-Savers deposits had money market certificates (at rates higher than ASCs) as an alternative while the Federal Home Loan Bank Board recently estimated that only 40 percent came from this source. We found slightly more than 8 percent of all savers funds had an alternative use in fixed rate certificates and passbook accounts (at rates lower than ASCs) while the same Home Loan Bank Board estimate reported 30 percent from this source. Our evidence, in short, suggests that more money than expected came from higher-cost funds, and consequently, cost savings are higher than indicated by other estimates.

The ASC will have a third impact on the national economy—it will reduce tax revenues. The Joint Conference Committee that drew up the final version of the Economic Recovery Tax Act estimated in its report that the ASC would mean a $3.3 billion loss in federal tax revenue. That estimate is quite similar to our higher estimate of cost saving to financial institutions and almost double our higher estimate of the cost savings for thrift institutions. It is almost three times our lower cost savings estimate for the thrifts.

This estimate of federal tax losses represents minimum tax costs associated with the ASC. State tax collections may also be reduced. Since interest on ASCs is not included in federal taxable income, it would not be included in state taxable income where the income for state taxes is based on the federal level. There were 26 of these states when the Economic Recovery Tax Act was signed last August. Unless they change their tax computation, each will bear some tax cost of the ASC program.

If our survey results are indicative of public behavior, the ASC appears unlikely to move funds among the different types of depository institutions, but rather to allow each type to pull in some new funds. These funds, our survey indicates, will come primarily from money market mutual funds, themselves intermediaries with liquid assets to enable them to handle their reduced inflows. Small effects on state and local government and federal borrowing seem likely.

Table 5. Cost Impact of All-Savers Certificate on Commercial Banks and Thrift Institutions
(billions $)
(Average Spread 1978)

	Commercial Banks				Thrifts			
Alternative Instrument	1981	1982	1983	Total	1981	1982	1983	Total
Money Market Certificate	– *	–.4	–.3	–.7	– *	–.4	–.3	–.8
Small Savers Certificate	– *	– *	– *	–.1	– *	– *	– *	–.1
Other Internal Sources	– *	– *	– *	– *	– *	– *	– *	– *
Outside Funds	– *	–.2	–.1	–.3	– *	–.2	–.1	–.3
Total	–.1	–.6	–.4	–1.1	–.1	–.7	–.5	–1.2

*Less than $.05 billion
Note: Items may not add to totals because of rounding.

Most funds shifted within institutions would otherwise have been placed in higher yielding alternatives. This means lower costs of funds—a prime objective of the certificate. Banks are likely to reap almost as much of these cost savings as thrifts although their earnings have not been seriously affected by the forces that have hurt the thrifts. Banks' gains must be considered a cost to the taxpayer of maintaining competitive balance.

If one looks only at the cost savings of the thrifts in comparison with the estimated tax losses from the all savers program, one must conclude that the program will be no bargain. Our higher estimate of these cost savings is only a little more than half of the Congress's estimate of revenue lost as a result of the exemption of ASC earnings from the federal income tax (in other words, the ASC costs the U. S. Treasury almost two dollars for every one dollar in cost savings to thrifts); our lower estimate is only about 37 percent of the estimated loss of tax revenue. The All-Savers program, then, seems likely to provide moderate aid to the institutions at which it was targeted and to do so without seriously disturbing competition among thrift institutions, commercial banks and credit unions. These benefits are likely to be accomplished at costs to the Treasury that are high relative to the benefits to the institutions that it helps.

—Donald L. Koch, B. Frank King and Delores W. Steinhauser

The writers wish to thank the participating banks and S&Ls for their cooperation. The writers also express appreciation for the contributions of Ronnie Caldwell, Bob Sexton, Steve Collins, Randy Elliot, Cheryl Cornish, Ethyl Jackson, Kathy Fulton and Sherley Wilson.

1 Reginald Green, Investment Company Institute, in **Congressional Quarterly**, July 11, 1981, p. 1214.
2 **Congressional Quarterly**, July 11, 1981, p. 1214.
3 52 week Treasury Bills are auctioned monthly; therefore, a new auction rate is set each month.
4 A more complete description of the survey is found in the Appendix.

APPENDIX

We computed the average monthly spreads between the All-Savers rate that would have held in the time period and rates on four alternative sources of All-Savers deposits. These four sources were:

1. Money Market Certificates (the auction rate on six month U.S. Treasury Bills.)
2. Small Savers Certificates (the constant maturity market rate on U.S. Treasury Notes and Bonds of 2½ years maturity).*
3. Passbook accounts and fixed rate certificates (the 1978 average dividend paid by S&Ls) .Because the average dividend rate in 1980 included market indexed certificates, we chose the weighted aver-

age rate on passbook, transactions accounts and fixed rate certificates for savings and loans on September 30, 1980.

4. Three month certificates of deposit issued by large commercial banks—(an estimate of the alternative cost of raising outside funds deposited in all savers certificates).

We multiplied these spreads by our estimates of yearly average All-Savers deposits having the various alternatives. This gave us the cost savings for banks and for thrifts on deposits with each alternative. We subtracted the quarter point differential from the rates on small savers certificates and internal funds in our computations for commercial banks. Table A1 gives our spreads.

*The 2½ year rate was unavailable in 1978, so we substituted the 3-5 year rate.

Table A1. Average Spread Between All Savers Certificate Yields and Yields on Alternative Uses of Funds

	Average Spread (All Savers Rate Less Alternative Rates)	
	1980	1978
Thrifts		
Money Market Certificate	-.0271	-.0162
Small Savers Certificate	-.0307	-.0235
Other Internal Sources	.0199	-.0061
Outside Sources	-.0454	-.0230
Banks		
Money Market Certificate	-.0271	-.0162
Small Savers Certificate	-.0282	-.0210
Other Internal Sources	.0224	-.0036
Outside Sources	-.0454	-.0230

Participating Institutions

	Universe			Sample								
	Oct. 7 Total Deposits ($ bil.)	% of Region's Total Deposits	% of State's Total Deposits	No. of Instit. Parti. in Surv.	No. of Offices	Surveyed Inst. Dep. as % of St. Total Dep.	No. of Survey Respon.	% of Region's Total Survey Respon.	% of State's Total Survey Respon.	Amount of Surveyed All-Savers Deposits ($ mil.)	% of Region's Surveyed All-Savers Deposits	% of State's Surveyed All-Savers Deposits
Alabama	17.5	9	100	3	30	33	395	12	100	3.56	13	100
CB	13.1		75	3	30	33	395		100	3.56		100
SL	4.4		25	0	0	0	0		0	0		0
Florida	83.2	44	100	5	31	18	555	17	100	5.45	20	100
CB	37.6		45	3	20	14	291		52	2.79		51
SL	45.6		55	2	11	4	264		48	2.66		49
Georgia	25.4	13	100	3	24	22	227	7	100	1.88	7	100
CB	15.7		62	3	24	22	227		100	1.88		100
SL	9.7		38	0	0	0	0		0			0
Louisiana	27.9	15	100	2	18	4	256	8	100	2.21	8	100
CB	20.6		74	1	14	3	174		68	1.38		62
SL	7.3		26	1	4	1	82		32	0.83		38
Mississippi	11.8	6	100	4	22	28	568	18	100	4.88	17	100
CB	9.4		80	2	13	21	408		72	3.27		67
SL	2.4		20	2	9	7	160		28	1.60		33
Tennessee	24.0	13	100	5	48	23	1,192	37	100	9.93	36	100
CB	17.9		75	3	34	20	883		74	7.34		74
SL	6.1		25	2	14	3	309		26	2.59		26
TOTAL	189.8	100	100	22	173		3,193	100	100	27.935	100	100
CB	114.4		60	15	135		2,378		74	20.240		72
SL	75.4		40	7	38		815		26	7.695		28

CB=Commercial Bank
SL=Savings & Loan

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NOW Competition in Southeastern Cities

Although banks are doing better than expected in the race against S&Ls for NOW accounts, S&Ls are closing the gap. An analysis of the competition in 43 southeastern cities shows that on July 1, S&L market shares were still generally lower than projections based on New England's NOW experience.

Beginning on January 1, 1981, southeastern savings and loans began competing with banks for interest-bearing checking (NOW) accounts. Banks generally set higher minimum balances for their NOWs, perhaps relying on depositors' reluctance to change financial institutions. S&Ls, in offering checkable deposits for the first time, set lower minimum balances to attract new customers. Bankers and S&L officials alike were more than a little anxious about where the NOW dollars would go. Previous articles in this **Review** have shown how NOW accounts started strongly, with banks doing better than expected in the race for a share of the market. Our earlier studies traced the competition on a state-by-state basis.

In this article, we extend the description to 43 metropolitan areas throughout the Southeast. In some cities, S&Ls were making the bankers even more anxious, while in others, bankers noticed hardly a ripple in their dominance of the market. Daytona Beach S&Ls, for example, held an impressive 39 percent of the NOW balances on July 1, while Florence, Alabama S&Ls were trailing the banks 97 percent to three percent. (Our choice to focus on S&L shares was arbitrary. Bank shares, of course, represent the complement to all S&L figures in this study.)

The diversity is due in part to the fact that S&Ls with many offices in a city (compared to bank offices) tend to gain a larger share of the market than S&Ls with relatively few offices compared to banks. Since NOWs are new accounts, even at banks, a customer must make some effort to open an account. Generally, people prefer to open an account at an office near where they live or work. Thus, the more offices an S&L has, the larger its market share should be.

By July 1, 1981, the S&Ls had captured 11 percent of NOW dollars Districtwide, but their share of the market varied widely. In general, S&Ls have done better in urban areas, where they have been gradually increasing their share (see Box 1).

Market Share Patterns

From February (after the initial rush to open accounts) through June, S&Ls steadily increased their market share in all District cities except Bradenton and Chattanooga. The degree of increase, however, was far from uniform. The areas we studied fell into three broad categories. In one group of cities, S&Ls held less than eight percent of NOW dollars on July 1. In the largest group of cities, S&Ls held between 8 and 18 percent. In the third group, S&Ls had captured over 18 percent of the NOW dollars on July 1. S&Ls which gained three percentage points or more in market share between February 1 and July 1 we classified as "strong gainers." A gain of less than three points was "a weak gain." Grouping the cities on the basis of these two variables, several distinct patterns emerge (see Table 1).

Table 1

Metropolitan Areas in the Sixth District States Grouped by Level and Gain of S&L Market Share[1]

	WEAK GAIN (less than three percentage points from Feb. 4 - July 1)	STRONG GAIN (three or more percentage points from Feb. 4 - July 1)
S&Ls in these cities had a low share (8 percent or below) of NOW dollars on July1, 1981.	**Low Share/Weak Gain** Anniston, Alabama Florence, Alabama Gadsden, Alabama Montgomery, Alabama Baton Rouge, Louisiana Lafayette, Louisiana Lake Charles, Louisiana Nashville-Davidson, Tennessee	**Low Share/Stong Gain** Clarkesville- Hopkinsville, Tennessee
S&Ls in these cities had a moderate share (between 8 and 18 percent) of NOW dollars on July 1, 1981.	**Moderate Share/Weak Gain** Bradenton, Florida Fort Myers, Florida Lakeland-Winter Haven, Florida Sarasota, Florida Tallahassee, Florida Columbus, Georgia Jackson, Mississippi Biloxi-Gulfport, Mississippi	**Moderate Share/Strong Gain** Birmingham, Alabama Huntsville, Alabama Tuscaloosa, Alabama Albany Georgia Atlanta, Georgia Augusta, Georgia Macon, Georgia Savannah, Georgia Alexandria, Louisiana New Orleans, Louisiana Kingsport, Tennessee Knoxville, Tennessee
S&Ls in these cities had a high share (18 percent or higher) of NOW dollars on July 1, 1981.	**High Share/Weak Gain** Mobile, Alabama Gainesville, Florida Daytona Beach, Florida Jacksonville, Florida Melbourne-Titusville-Cocoa Florida Miami, Florida Panama City, Florida Tampa-St. Petersburg, Florida Pascagoula-Moss Point, Mississippi Chattanooga, Tennessee	**High Share/Strong Gain** Ft. Lauderdale-Hollywood Florida Orlando, Florida Pensacola, Florida West Palm Beach-Boca Raton, Florida

[1](NOW balances at savings and loan associations) ÷ (NOW balances at banks and savings and loan associations).

Projected Market Shares and April-June Market Shares

As a rule, those cities with proportionately more S&L offices could be expected to have higher S&L market shares. That rule generally held true. It is misleading, therefore, to compare Baton Rouge S&Ls with Fort Lauderdale S&Ls, because Fort Lauderdale S&Ls have many more offices *vis a vis* banks than do their Baton Rouge colleagues. To account for this difference and to get some idea of the relative success of S&Ls in various parts of the Southeast, we calculated a "projected July 1 market share." Comparing actual July 1 shares with projected July 1 shares provides a better indication of how successfully S&Ls are competing with banks across the Southeast (see Box 2).

As it turned out, Southerners converted checking accounts in banks to NOW accounts in much greater numbers than we expected. Total bank NOW balances and market shares were higher than projected. Because of these early conversions, S&Ls in almost all cities began with a worse than expected showing in the race for NOW dollars. In most cases, however, their share on July 1 was not indicative of gains during the Spring. To measure the success of S&Ls in attracting new balances after the initial wave of conversions, we calculated a market share for NOW balances acquired from April through June, the "second quarter" or "new" market share. In general, S&Ls noticeably increased their share of NOW balances during the second quarter.

Market Share Patterns in the Six States

NOW balances in both banks and S&Ls increased during February and March. In the middle of the second quarter, overall growth of NOW accounts in the Southeast began to flatten out. In May, however, the patterns for S&Ls and banks diverged. From May 1 to July 1, S&L balances increased in all six states, but bank NOW balances declined in Alabama, Florida, Georgia, and Mississippi.

Box 1

Under the rules of the Monetary Control Act of 1980, all but the smallest institutions are required to post reserves against their NOW account balances and to submit weekly reports of those balances to the Federal Reserve. This study takes advantage of that new source of data. These newly available data are solely dollar balances of NOWs, *not the number of accounts.* With the dollar values from the reporting institutions, we have calculated the market share of NOW accounts captured by the savings and loans in each city. For each dollar of NOW accounts in a city, in other words, how many cents worth are on the books of S&Ls (and how many cents worth are on the books of commercial banks).* It provides one measure of how successful S&Ls have been in capturing the NOW account dollar.

*In many cases, credit unions have been offering share draft accounts in the Southeast for several years. These accounts are functionally equivalent to NOW accounts at the banks and thrifts, and comprise about five percent of NOW-type balances of the region. Only a small slice of the share draft accounts have been added since the beginning of 1981, however, so we have not included the share drafts in our discussion of market shares.

Box 2

To compare actual and projected market shares, we first determined the number of bank offices and S&L offices in each SMSA. In order to predict market shares with this information, it was necessary to make assumptions about the relative numbers of accounts in banks and S&Ls and the respective average NOW balances. An analysis of the NOW account experience in New England suggested that thrifts would be twice as aggressive in opening NOW accounts.* We therefore assumed that S&Ls would open twice as many NOW accounts per office. Based on price (minimum balance) differences, we also expected that banks would have 2¼ times the average balance that S&Ls do.

With the office information and the assumption regarding relative average number of accounts and balances, we projected market shares. Keep in mind that these "projected market shares" are based on the number of offices only.

*William N. Cox, "NOW Accounts: Applying the Northeast's Experience to the Southeast," **Economic Review**, Federal Reserve Bank of Atlanta, September/October 1980, pp. 4-10.

S&Ls gradually increased their share of the market from February through June. This pattern was repeated in most, but not all, of the local markets in the District.

S&Ls in non-metropolitan areas followed about the same pattern, although as Table 1 shows, S&L market shares were consistently lower in non-metro areas. Over the first half of 1981, however, S&Ls steadily increased their market shares in both metro and non-metro areas, with almost identical patterns. Since there are more S&L offices relative to bank offices in metro areas, it is not surprising that the metro S&Ls have higher market shares.

(The charts on page 22 show market share patterns for Sixth District states and for each local area.

S&L Market Shares[1] in Metro and Non-Metro Areas in Sixth District States (percent)

	Statewide S&L Market Shares on 7/1/81	Metropolitan[3] Areas S&L Market Share on 7/1/81	Non-Metropolitan Areas S&L Market Share on 7/1/81
Alabama	9	11	6
Florida	22	23	16
Georgia	11	13	5
Louisiana[2]	8	10	4
Mississippi[2]	8	9	6
Tennessee[2]	8	10	4

[1](NOW Balances at S&Ls) ÷ (NOW balances at commercial banks and Savings and Loans) [2]Sixth District Portion of States only.
[3]Metropolitan areas are here defined as the areas of the state lying within the boundaries of an SMSA.

State-by-State Analysis

Alabama

The eight cities in Alabama demonstrated three different patterns. As of July 1, depositors had put 18 percent of the NOW dollars into S&Ls in Mobile, but S&Ls there had held over 15 percent of the NOW market on February 4. This placed Mobile in the High Share/Weak Gain pattern. Birmingham, Huntsville and Tuscaloosa each followed the Moderate Share/Strong Gain market share pattern. In these three cities S&Ls held from 10 to 14 percent of the NOW market, generally gaining around 4 points since February. The patterns in Anniston, Florence, Gadsden and Montgomery were Low Share/Weak Gain.

On July 1, S&Ls in Alabama were not doing as well as we had expected. In most cities, in fact, S&L shares were less than half of what we projected. There were other surprises as well. Based on the number of offices, we expected Tuscaloosa to have the highest S&L market share followed by Birmingham and then Mobile. Instead, we found that Mobile had the highest share, followed by Tuscaloosa. Florence S&Ls had the lowest share among Alabama cities and, in fact, fell farther short of projections than S&Ls in any other Alabama city.

Things began to pick up for Alabama S&Ls in the second quarter, however. Shares gained during the second quarter were quite close to projections in Mobile, Montgomery, Anniston, and Birmingham and much higher than projections in Gadsden, Huntsville, and Tuscaloosa. Only in Florence did these new market shares fall markedly short of projected levels.

S&L Portion of Total NOW Account Balances — Alabama (percent)

	Actual S&L Market Share on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Anniston	5	7	10
Birmingham	11	26	24
Florence	3	20	11
Gadsden	5	15	51
Huntsville	12	19	37
Mobile	18	25	25
Montgomery	8	20	22
Tuscaloosa	13	31	100 [1]
Alabama - Total State	9	19	24

[1]NOW Balances actually declined in Tuscaloosa banks.

Florida

In Florida cities the levels of market share were in general higher and the February-June increases smaller than in other metropolitan areas.

The sixteen metro areas of Florida experienced market share patterns of three types. Tallahassee, Fort Myers, Sarasota, Lakeland and Bradenton had moderate shares but weak gains. S&Ls in a large group of cities started fast, but then gained less than three percentage points over the February-July 1 period. In this High Share/Weak Gain category were Melbourne, Jacksonville, Gainesville, Miami, Daytona Beach, Panama City, and Tampa. S&Ls in the remaining cities, Ft. Lauderdale, Orlando, Pensacola, and West Palm Beach, got out of the starting blocks fast and then accelerated. Fort Lauderdale S&Ls, for example, grabbed a whopping 77 percent of new NOW dollars during the second quarter.

While S&Ls did better in Florida compared to cities in other states, their market shares were still lower than projected in all cases. The degree to which Florida S&Ls fell short of projections was in general slightly less than in other Sixth District cities. However, it appears that the relatively high S&L market shares in Florida cities resulted in large part from the proportionately high number of S&L offices in Florida.

In the majority of Florida cities, S&Ls did very well in the second quarter, with new market shares exceeding July 1 shares by a wide margin. However, Florida is the only state with some cities where the S&L share of new second quarter balances was lower than total July 1 shares. In Gainesville, Miami and Panama City, S&Ls lost ground slightly during the second quarter. In other Florida cities, including Bradenton, Ft. Lauderdale, Melbourne, Pensacola, Sarasota and West Palm Beach, S&Ls doubled their February-June pace during the second quarter. In the remaining metropolitan market areas, S&Ls were gaining at more moderate rates.

S&L Portion of Total NOW Account Balances — Florida (percent)

	Actual S&L Market Share on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Bradenton	16	36	38
Daytona Beach	38	52	45
Ft. Lauderdale -Hollywood	27	45	77
Fort Myers	13	36	23
Gainesville	21	31	19
Jacksonville	18	37	28
Lakeland -Winter Haven -Bartow	17	41	19
Melbourne -Titusville -Cocoa	26	37	66
Miami	23	38	21
Orlando	31	36	43
Panama City	21	33	16
Pensacola	19	25	38
Sarasota	16	52	40
Tallahassee	14	26	14
Tampa - St. Petersburg	18	36	25
West Palm Beach - Boca Raton	26	43	58
Florida - Total State	22	41	34

Georgia

S&Ls in Georgia fared moderately well in the NOW competition. Customers in Augusta, Atlanta, Albany, Macon, and Savannah were cautious at first, but responded well to S&Ls later in the year. Macon S&Ls scored the strongest gains, picking up over six percentage points from February through June.

By July 1, S&Ls in Savannah and Augusta had captured close to the projected level of market shares. S&Ls in all other Georgia cities fell significantly short of expectations, with the widest gap occurring in Macon.

Comparing new second quarter shares with projections, we found that S&Ls' share of new NOW balances exceeded projections in all cities except Atlanta. Second quarter shares were close to the expected level in Atlanta and Columbus. In Albany, Augusta, Macon and Savannah, S&Ls were doing much better than projected, attracting over 40 percent of the new NOW balances.

S&L Portion of Total NOW Account Balances — Georgia (percent)

	Actual S&L Market Share on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Albany	11	27	43
Atlanta	13	28	27
Augusta	15	20	42
Columbus	13	20	24
Macon	12	34	44
Savannah	17	19	45
Georgia - Total State	11	22	34

Louisiana

In the cities of Louisiana, market share varied rather sharply. New Orleans and Alexandria S&Ls fared reasonably well, with market shares of 13 percent and 11 percent respectively and share gains of 3 points. Baton Rouge, Lafayette, and Lake Charles S&Ls, on the other hand, followed the Low Share/Weak Gain pattern. Lake Charles and Lafayette had market shares around six percent, while Baton Rouge's three percent S&L market share was the lowest in any of the Sixth District major cities.

As in Georgia and Alabama, Louisiana S&Ls' July 1 shares were markedly short of projected levels. Comparing actual and projected shares, S&L performance was relatively strong in Alexandria and Lafayette and poor in Baton Rouge.

The new second quarter market shares for Louisiana S&Ls were much higher than July 1 figures, suggesting that S&Ls in Louisiana were attracting an impressive portion of the new NOW balances. The higher level of the new shares was more in line with projected share levels. The new second quarter shares of Baton Rouge, Lake Charles and New Orleans were slightly less than projected, while S&Ls in Alexandria and Lafayette almost doubled the projections during the second quarter.

S&L Portion of Total NOW Account Balances — Louisiana (percent)

	Actual S&L Market Share[1] on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Alexandria	11	15	26
Baton Rouge	3	21	17
Lafayette	5	13	22
Lake Charles	6	21	20
New Orleans	13	38	32
Louisiana - Total State	8	21	22

[1]Sixth District Portion only.

Mississippi

The three metropolitan areas in Mississippi followed two different patterns. Jackson and Biloxi had moderate shares but weak gains. The patterns of these two cities were at slightly different levels, but the trend was much the same. Pascagoula fell into the High Share/Weak Gain category, but S&Ls there experienced an initial dip in market share, then a strong increase.

In Mississippi we observe the familiar pattern of July market shares much lower than expected. The ranks of Mississippi cities are in the same order as predicted with the largest S&L share in Pascagoula and the smallest in Jackson.

New second quarter shares were much higher than July shares in all three metropolitan areas. Second quarter shares in Biloxi and Pascagoula were almost identical to the projected levels. Jackson S&Ls greatly exceeded projected shares in the second quarter alone.

S&L Portion of Total NOW Account Balances — Mississippi (percent)

	Actual S&L Market Share[1] on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Biloxi - Gulfport	11	27	26
Jackson	8	20	43
Pascagoula - Moss Point	21	35	34
Mississippi - Total State	8	17	25

[1]Sixth District Portion only.

Tennessee

Tennessee's five metropolitan areas showed three different patterns. The highest level of S&L penetration of the NOW market was in Chattanooga, where S&Ls had high shares but weak gains. Knoxville and Kingsport S&Ls started moderately but picked up strongly as July approached. S&Ls in Nashville and Clarkesville had the lowest levels of S&L market share.

Chattanooga was the only city in the Sixth District where the actual July S&L market share exceeded projections. In the other Tennessee cities July market shares were far below the projected levels.

The situation brightened for S&Ls in the second quarter, however, as new shares for all Tennessee cities exceeded total July 1 shares, again indicating that S&Ls are picking up steam. In Clarkesville, Kingsport, and Knoxville, S&Ls' shares of new balances were much higher than the projected levels during the second quarter. The greatest success in attracting new NOW balances occurred in Clarkesville, where S&Ls attracted 37 percent of NOW dollars added during the second quarter.

S&L Portion of Total NOW Account Balances — Tennessee (percent)

	Actual S&L Market Share[1] on July 1, 1981	Projected S&L Market Share	S&L Share of NOW Balances Added During Second Quarter
Chattanooga	18	16	22
Clarkesville - Hopkinsville	7	14	37
Kingsport - Bristol	12	21	28
Knoxville	7	19	29
Nashville - Davidson	6	19	15
Tennessee - Total State	8	15	18

[1]Sixth District Portion only.

Conclusion

We found that as of July 1, S&L shares of the NOW market were lower than we expected based on the New England experience with NOWs. Customers were converting bank checking accounts to NOW accounts within the same bank in larger numbers than we expected.

On July 1, S&Ls held 11 percent of the NOW balances Districtwide. This study, which focused on market shares in the 43 metropolitan areas of the Sixth District, found that S&L market shares varied widely, ranging form three percent in Baton Rouge to 39 percent in Daytona Beach. As expected, those cities with more S&L offices relative to bank offices had higher S&L market shares. Interestingly, even in states like Mississippi and Tennessee where S&Ls had only an eight percent share of the market, S&Ls in individual cities in those states did quite well. Pascagoula S&Ls, for example, held 21 percent, and Chattanooga S&Ls held a respectable 18 percent of the NOW balances in their markets.

Although the overall growth of NOW accounts in the Southeast began to flatten in 1981's second quarter, S&Ls throughout the region steadily increased their share of the NOW market by capturing an impressive portion of new NOW balances during the second quarter.

—William N. Cox
and Pamela Van Pelt Whigham

Appendix

Identifying NOW Account Markets

Generally, the competition between banks and savings and loan associations takes place in markets which are less than statewide. The SMSA (Standard Metropolitan Statistical Area) is the most common definition of each city. For some purposes, analysts of retail banking competition have defined markets more narrowly than the SMSAs, which typically comprise several counties.* For other purposes, the SMSA may be too limited a definition.** The SMSA definition seems sensible in the case of NOW accounts, however, because even where institutions on one side of a market may not compete directly with ones on the other side, they were advertising NOW account terms widely throughout the SMSA and perhaps over a larger territory. As a result, branching institutions cannot price NOW accounts differently within the same advertising market. This advertising may also affect pricing patterns in counties surrounding the SMSA. In addition to advertising, another factor may work to expand markets. As S&Ls begin providing other services more like those of banks, market concentration will be reduced in some areas, and banking markets will expand from sub-SMSA to SMSA.

The SMSA definition of banking markets presented another problem, particularly in Florida. Some institutions, particularly S&Ls, are headquartered within one city and report their NOW balances to the Fed as one institution located there, whereas in fact their report includes NOW balances from branches outside that city and in some cases across the state. In these cases, some adjustments were necessary to accurately reflect NOW balances actually held in home offices and branch offices within the SMSA. After some testing by telephone, and recognizing again that NOWs are a new product and that most checking account customers prefer to open their accounts in person and have a physical office close enough to visit if anything goes wrong, we therefore allocated the NOW balances in multicity institutions according to the distribution of their branches. Based on our survey, we also assumed that when the home office is in a SMSA, the branches in non-SMSA areas have balances approximately 50 percent of the amounts in metropolitan branches. For banks, we distributed the balances among branches in the same proportion as demand deposits.

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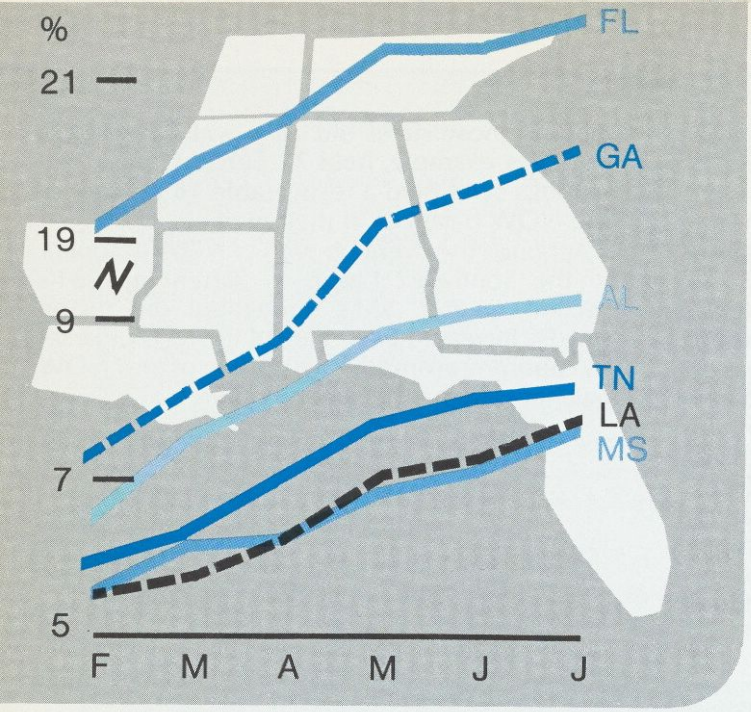
*David D. Whitehead, "Relevant Geographic Banking Markets: How Should They Be Defined?" **Economic review**, Federal Reserve Bank of Atlanta, January/February 1980, pp.20-28.

Arnold A. Heggestad, "Nonlocal Competition for Banking Services," **Economic Review, Federal Reserve Bank of Atlanta, August 1981, pp.21-24.



LEGEND

BIR-Birmingham
GAD-Gadsden
ANI-Anniston
FLO-Florence
MOB-Mobile
TUS-Tuscaloosa
HUN-Huntsville
MON-Montgomery
ALE-Alexandria
LAF-Lafayette
BAT-Baton Rouge
NEW-New Orleans
LAC-Lake Charles
BIL-Biloxi-Gulfport
JAC-Jackson
PAS-Pascagoula-Moss Point
ATL-Atlanta
ALB-Albany
COL-Columbus
AUG-Augusta
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SAV-Savannah
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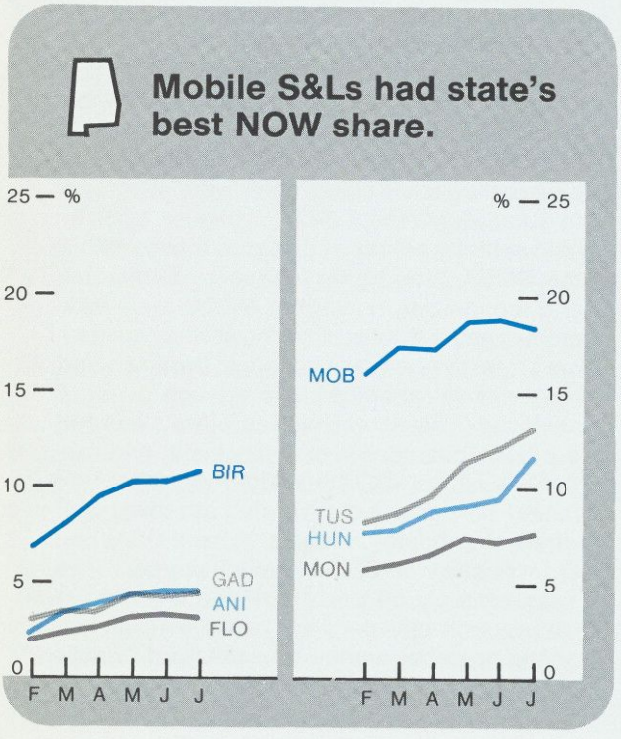
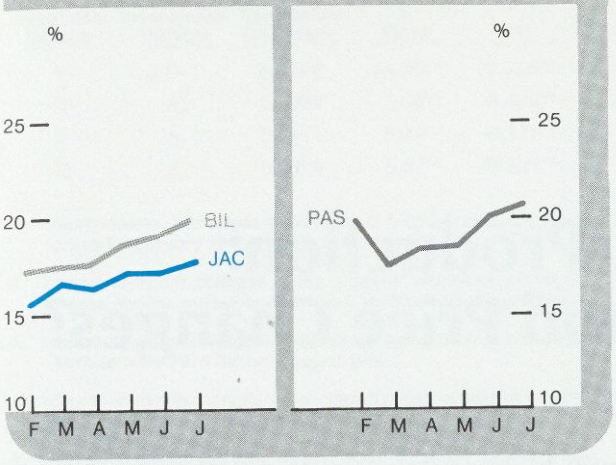
KIN-Kingsport-Bristol
CLA-Clarkesville-Hopkinsville
KNO-Knoxville
NAS-Nashville-Davidson
DAY-Daytona Beach
PAN-Panama City
PEN-Pensacola
JAK-Jacksonville
TAL-Tallahassee
ORL-Orlando
MEL-Melbourne-Titusville-Cocoa
GAI-Gainesville
LAK-Lakeland-Winter Haven-Bartow
FTL-Fort Lauderdale-Hollywood
WPB-West Palm Beach-Boca Raton
MIA-Miami
BRA-Bradenton
TAM-TampaSt. Petersburg
SAR-Sarasota
FTM-Fort Myers

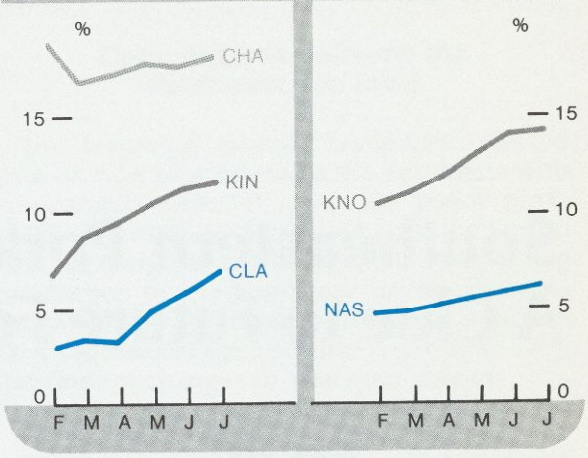
S&L NOW Market Share



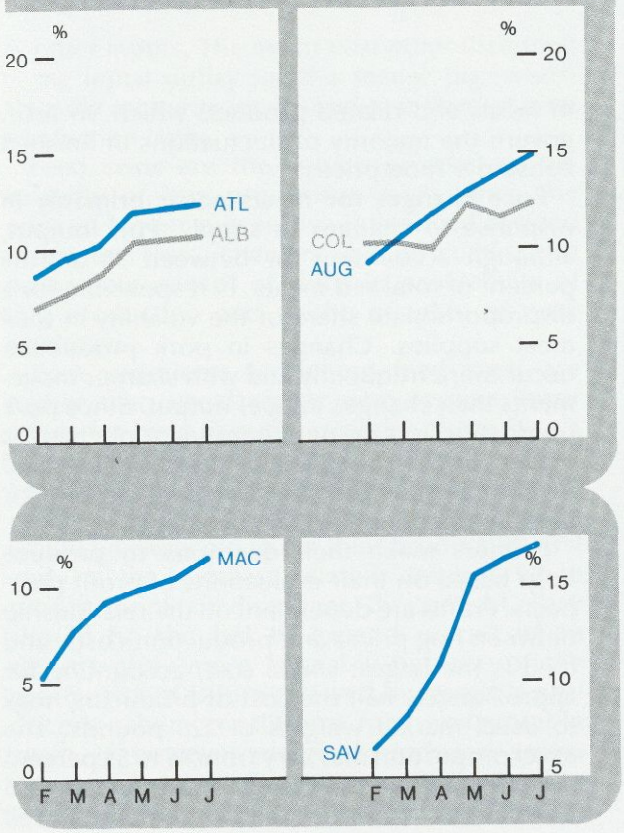
S&Ls in Mississippi picked up pace in second quarter.



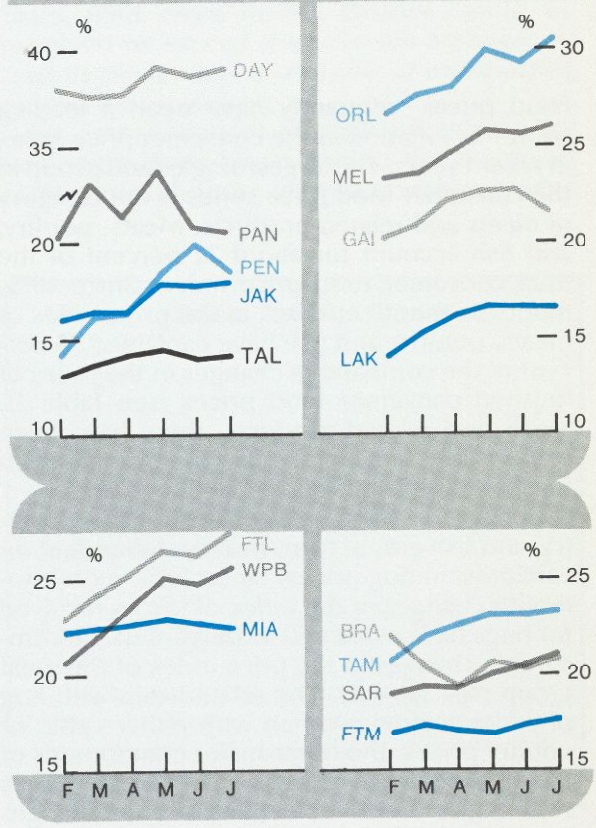
S&L share high in Chattanooga, low in Nashville.



Macon, Savannah S&Ls scored rapid gains.



Daytona S&Ls were Region's leaders in NOW shares.



Southeastern Pork Production: A Clue to Future Food Price Changes?

Feed costs for pork producers are significantly higher in the Southeast than in the Midwest. Historically, the Southeast has not been a major pork producing area, but when losses begin, southeastern producers have tended to cut production earlier than their midwestern counterparts, a characteristic that could provide an early indication of a reduction in national pork output.

Food prices frequently have been a leading source of inflation in the consumer price index in recent years. The largest single food group in the consumer food price series is the category of meats and related products. Meats, poultry, and fish account for about 22 percent of the total consumer food price index. Since 1975, month-to-month changes in the price index of meats, poultry, and fish have explained 75 percent of the comparable changes in the index of finished consumer food prices (see Table 1). Meats and related products, then, have been responsible for a major share of the volatility in finished consumer food prices since 1975.

Changes in wholesale prices of meats, poultry, and fish are, in turn, heavily dependent on variations in hog prices. Since 1975, month-to-month changes in the index of prices received for hogs have explained 43 percent of the comparable changes in the price index of the meat group (see Table 1). The relationship with hog prices was stronger than with either cattle or poultry prices, the other major components of the group. Thus, movements in hog prices should give useful indications of price changes in meats and related products which, in turn, govern the majority of fluctuations in finished consumer food prices.

Price changes for meats occur primarily in response to changes in supply. Pork output, although accounting for between 30 and 40 percent of total red meats, is responsible for a disproportionate share of the volatility in total meat supplies. Changes in pork production occur more frequently and with sharper movements than changes in beef output. Since pork production is a prime determinant of changes in meat prices, prospective hog marketings and inventory numbers are watched closely for clues to upcoming price movements.

Farmers make their decisions to produce hogs based on their evaluations of profit prospects. Profits are dependent on the relationship between hog prices and production costs, and feed is the largest single cost, accounting for approximately half the cost of producing hogs to usual market weights of 220 pounds. The exact proportion may vary from 45 to 55 percent depending upon the system of production and fluctuations in prices of feed ingredients as well

Table 1

Statistical Analysis of Food Price Components

Dependent Variable	Independent Variable	Regression Coefficient	t Value	R^2
Y	B	0.0228	14.29**	0.755**
B	A_2	0.0969	7.04**	0.429**
B	A_1	0.1471	6.32**	0.377**
B	A_3	0.0869	5.67**	0.327**

Y = month-to-month changes in the index of finished consumer food prices for January 1975 through August 1980.

B = month-to-month changes in the index of wholesale prices of meats, poultry, and fish from January 1975 through August 1980.

A_2 = month-to-month changes in the index of prices received for hogs from January 1975 through August 1980.

A_1 = month-to-month changes in the index of prices received for cattle from January 1975 through August 1980.

A_3 = month-to-month changes in the index of prices received for poultry from January 1975 through August 1980.

**Indicates significance at or above the 99-percent level of probability.

as other inputs. The major cost other than feed is the initial outlay for the feeder pig, which typically accounts for around one-third of total production costs.

Feed costs are the source of most of the volatility of hog production costs since the price of feeder pigs is also influenced by feed expenses. Thus, changes in feed costs are a major determinant of shifts in profitability of hog production and of the quantity of pork produced.

Pork producers for whom feed costs are higher than usual and/or who receive lower prices for hogs than the majority of producers would likely be most sensitive to increases in costs of feed or declines in prices of hogs. In other words, the producers at the margin would be expected to cut their production first and by the greatest relative amount when profits shrink or disappear. By contrast, they should be the last to expand output when returns grow more favorable because of the greater risk of failure suffered by marginal producers when conditions turn unfavorable again. If, however, marginal producers assess risk of failure in the same way as all other producers, they would expand hog production in approximately the same pattern as the majority of producers. The major observable difference would be a proportionately greater volatility of supply in areas of marginal profitability.

Comparisions between the Southeast and Iowa

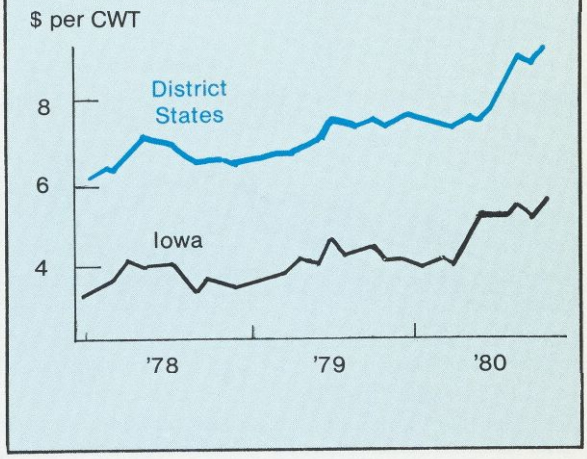
The following analysis compares selected data on hog production in the Southeast with comparable series in Iowa, the major pork-producing state, to determine (1) if the Southeast is a marginal area of production, (2) if hog production in the Southeast follows patterns that would be expected in a marginal area, and (3) if southeastern production is a reliable early indicator of changes in total pork output.

Feed Costs

The southeastern region is an area of deficit production of feed concentrates. Livestock feeders in the states of the Sixth Federal Reserve District must import significant proportions of feed requirements from other regions. Thus, feed costs in the District would be expected to exceed those in the Midwest, at least by the amount of the cost of transporting feed to the Southeast.

An examination of average prices paid for feed ingredients by farmers in the Southeast compared with those in Iowa reveals expected

Chart 1. Prices Paid for Corn Meal



differences (see Table 2 and Charts 1 and 2). Corn meal prices in Sixth District states averaged $2.41 per cwt. higher than prices in Iowa during the six-year period from 1975 through 1980. Soybean meal prices in District states averaged $0.81 per cwt. higher than in Iowa during the same period. The probability that differences this large could occur through chance alone is less than one in one thousand for corn meal and less than two in a hundred for soybean meal. The greater relative difference between prices of corn meal in the two areas would be expected because the Southeast produces a greater proportion of the soybean meal it uses than of the corn meal. On balance, statistical analysis confirms that hog producers in the Southeast pay significantly higher prices for feed ingredients than do producers in Iowa.

Hog Prices

The relatively small number of hogs produced in District states (less than 10 percent of the nation's supply) compared with major producing areas would lead one to expect differences in prices received by farmers in the District as compared with Iowa. To the extent that slaughtering plants are smaller and less specialized in southeastern states, they would not be expected to pay as much for hogs as larger more efficiently operated plants in areas of more concentrated hog production.

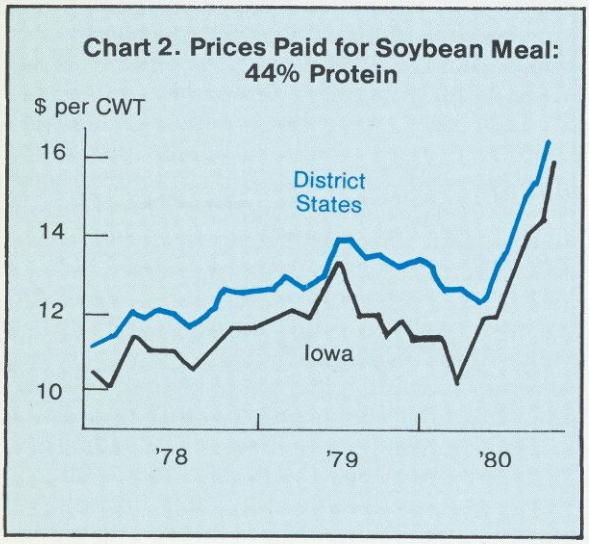
An analysis of average prices for market hogs for the period of 1975 to 1980 reveals a slightly higher average price received by Iowa producers than District producers, but the difference is not statistically significant (see Table 2 and Chart 3). Thus, differences in relative returns to hog producers in District states and in Iowa would be attributable largely to differences in production costs between the two areas rather than in the market prices received.

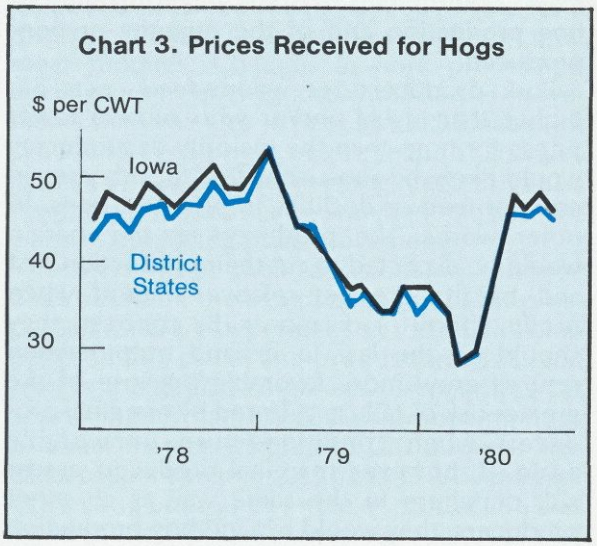
Table 2

Statistical Comparisons of Selected Data on Hog Production

	Average	Standard Deviation	Standard Error of Difference Between Means	Calculated t
Corn Meal Prices *($ per cwt.)*				
District States	$ 7.40	.651		
Iowa	4.99	.632	.107	22.53**
Soybean Meal Prices *($ per cwt.)*				
District States	11.87	2.04		
Iowa	11.06	1.95	.332	2.44**
Hog Prices *($ per cwt.)*				
District States	42.15	6.39		
Iowa	43.01	6.63	1.085	0.793

**Indicates significance at or above the 98 percent level.





$ millions	OCT 1981	SEPT 1981	DEC 1980	ANN. RATE OF CHG.		OCT 1981	SEPT 1981	DEC 1980	ANN. RATE OF CHG.
UNITED STATES									
Commercial Bank Deposits	1,071,259	1,051,211	1,017,230	+ 7	Savings & Loans				
Demand	299,299	287,196	331,626	-13	Total Deposits	513,403	508,821	500,985	+ 3
NOW	47,799	45,311	0		NOW	7,378	6,680	0	
Savings	149,465	150,158	166,274	-13	Savings	92,920	93,635	104,240	-14
Time	605,334	594,907	526,103	+20	Time	414,190	408,249	394,288	+ 7
Credit Union Deposits	38,965	37,554	34,870	+15		AUG	JUL	DEC	
Share Drafts	2,438	2,267	1,641	+63	Mortgages Outstanding	508,812	507,531	494,179	+ 4
Savings & Time	34,429	33,061	30,093	+19	Mortgage Commitments	16,735	17,104	16,021	+ 7
SOUTHEAST									
Commercial Bank Deposits	114,351	112,288	107,549	+ 8	Savings & Loans				
Demand	34,339	33,029	39,157	-16	Total Deposits	75,483	74,937	72,600	+ 5
NOW	6,016	5,749	0		NOW	1,138	1,025	0	
Savings	14,716	14,765	16,578	-15	Savings	11,765	11,765	13,165	-14
Time	63,018	61,662	53,704	+23	Time	62,628	62,035	58,912	+ 8
Credit Union Deposits	3,704	3,534	3,209	+20		AUG	JUL	DEC	
Share Drafts	264	244	192	+49	Mortgages Outstanding	74,256	74,069	71,065	+ 7
Savings & Time	3,204	3,061	2,797	+19	Mortgage Commitments	3,495	3,509	3,652	- 6
ALABAMA									
Commercial Bank Deposits	13,112	12,903	12,280	+ 9	Savings & Loans				
Demand	3,499	3,280	3,972	-16	Total Deposits	4,372	4,339	4,265	+ 3
NOW	529	509	0		NOW	60	53	0	
Savings	1,557	1,565	1,754	-15	Savings	580	595	690	-21
Time	8,008	7,844	6,746	+24	Time	3,761	3,710	3,575	+ 7
Credit Union Deposits	570	551	521	+12		AUG	JUL	DEC	
Share Drafts	53	48	41	+38	Mortgages Outstanding	4,008	4,001	3,947	+ 2
Savings & Time	510	494	479	+ 8	Mortgage Commitments	76	101	136	-66
FLORIDA									
Commercial Bank Deposits	37,589	37,034	36,141	+ 5	Savings & Loans				
Demand	12,394	11,875	14,577	-20	Total Deposits	45,617	45,369	43,996	+ 5
NOW	2,612	2,504	0		NOW	794	718	0	
Savings	6,321	6,332	7,333	-18	Savings	7,860	7,821	8,774	-14
Time	17,349	17,143	14,471	+26	Time	36,872	36,648	34,698	+ 8
Credit Union Deposits	1,684	1,602	1,491	+17		AUG	JUL	DEC	
Share Drafts	145	139	106	+48	Mortgages Outstanding	45,272	45,155	42,742	+ 9
Savings & Time	1,322	1,253	1,177	+16	Mortgage Commitments	2,991	2,933	2,984	+ 0
GEORGIA									
Commercial Bank Deposits	15,730	15,151	14,550	+11	Savings & Loans				
Demand	5,942	5,758	6,793	-16	Total Deposits	9,688	9,563	9,237	+ 6
NOW	882	836	0		NOW	120	107	0	
Savings	1,592	1,585	1,683	- 7	Savings	1,197	1,221	1,398	-19
Time	8,291	7,912	7,011	+24	Time	8,402	8,255	7,835	+ 9
Credit Union Deposits	711	689	543	+40		AUG	JUL	DEC	
Share Drafts	21	19	12	+98	Mortgages Outstanding	9,475	9,476	9,332	+ 2
Savings & Time	673	659	517	+39	Mortgage Commitments	133	140	183	-41
LOUISIANA									
Commercial Bank Deposits	20,594	20,300	18,690	+13	Savings & Loans				
Demand	5,982	5,856	6,461	-10	Total Deposits	7,330	7,215	6,865	+ 9
NOW	808	776	0		NOW	69	62	0	
Savings	2,385	2,395	2,529	- 7	Savings	1,194	1,193	1,257	- 7
Time	12,064	11,755	10,093	+25	Time	6,104	5,973	5,617	+11
Credit Union Deposits	95	95	57	+87		AUG	JUL	DEC	
Share Drafts	7	6	4	+98	Mortgages Outstanding	7,080	7,041	6,777	+ 7
Savings & Time	88	88	52	+90	Mortgage Commitments	201	224	221	-14
MISSISSIPPI									
Commercial Bank Deposits	9,398	9,331	8,759	+10	Savings & Loans				
Demand	2,340	2,240	2,639	-15	Total Deposits	2,375	2,387	2,332	+ 2
NOW	444	426	0		NOW	30	26	0	
Savings	723	733	842	-18	Savings	234	236	262	-14
Time	6,207	6,143	5,451	+18	Time	2,125	2,132	2,067	+ 4
Credit Union Deposits	N.A.	N.A.	N.A.			AUG	JUL	DEC	
Share Drafts	N.A.	N.A.	N.A.		Mortgages Outstanding	2,210	2,205	2,182	+ 2
Savings & Time	N.A.	N.A.	N.A.		Mortgage Commitments	24	34	58	-88
TENNESSEE									
Commercial Bank Deposits	17,928	17,570	17,128	+ 6	Savings & Loans				
Demand	4,182	4,021	4,716	-15	Total Deposits	6,101	6,064	5,904	+ 4
NOW	739	697	0		NOW	65	59	0	
Savings	2,139	2,155	2,437	-16	Savings	699	699	784	-14
Time	11,099	10,865	9,931	+15	Time	5,364	5,317	5,120	+ 6
Credit Union Deposits	644	597	597	+10		AUG	JUL	DEC	
Share Drafts	38	32	29	+40	Mortgages Outstanding	6,211	6,208	6,085	+ 3
Savings & Time	611	567	572	+ 9	Mortgage Commitments	70	77	70	0

Notes: All deposit data are extracted from the Federal Reserve Report of Transaction Accounts, other Deposits and Vault Cash (FR2900), and are reported for the average of the week ending the 1st Wednesday of the month. This data, reported by institutions with over $15 million in deposits as of December 31, 1979, represents 95% of deposits in the six state area. The annual rate of change is based on most recent data over December 31, 1980 base, annualized. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Data. The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total.
N.A. = fewer than four institutions reporting.

EMPLOYMENT

	SEPT 1981	AUG (R) 1981	SEPT 1980	ANN. % CHG.		SEPT 1981	AUG (R) 1981	SEPT 1980	ANN. % CHG.
UNITED STATES									
Civilian Labor Force - thous.	105,964	107,771	104,720	+ 1	Nonfarm Employment- thous.	92,026	91,626	90,638	+ 2
Total Employed - thous.	98,277	100,013	97,256	+ 1	Manufacturing	20,665	20,486	20,212	+ 2
Total Unemployed - thous.	7,687	7,758	7,464	+ 3	Construction	4,495	4,575	4,613	- 3
Unemployment Rate - % SA	7.5	7.2	7.4		Trade	20,912	20,820	20,495	+ 2
Insured Unemployment - thous.	N.A.	2,725	3,123		Government	15,426	15,153	15,841	- 3
Insured Unempl. Rate - %	N.A.	3.1	3.6		Services	18,795	18,841	18,087	+ 4
Mfg. Avg. Wkly. Hours	39.3	39.8	39.8	- 1	Fin., Ins., & Real Est.	5,351	5,408	5,201	+ 3
Mfg. Avg. Wkly. Earn. - $	320	319	295	+ 8	Trans. Com. & Pub. Util.	5,215	5,173	5,159	+ 1
SOUTHEAST									
Civilian Labor Force - thous.	13,138	13,977	12,786	+ 3	Nonfarm Employment- thous.	11,471	11,896	11,201	+ 2
Total Employed - thous.	12,100	11,334	11,867	+ 2	Manufacturing	2,317	2,308	2,258	+ 3
Total Unemployed - thous.	1,038	977	918	+13	Construction	720	733	728	- 1
Unemployment Rate - % SA	8.1	7.8	7.5		Trade	2,627	2,628	2,598	+ 1
Insured Unemployment - thous.	N.A.	273	309		Government	2,165	2,082	2,145	+ 1
Insured Unempl. Rate - %	N.A.	2.8	3.2		Services	2,161	2,151	2,049	+ 5
Mfg. Avg. Wkly. Hours	39.9	40.4	40.3	- 1	Fin., Ins., & Real Est.	643	628	612	+ 5
Mfg. Avg. Wkly. Earn. - $	280	282	258	+ 9	Trans. Com. & Pub. Util.	687	688	680	+ 1
ALABAMA									
Civilian Labor Force - thous.	1,626	1,626	1,653	- 2	Nonfarm Employment- thous.	1,348	1,345	1,350	- 0
Total Employed - thous.	1,466	1,473	1,502	- 2	Manufacturing	358	357	354	+ 1
Total Unemployed - thous.	159	152	151	+ 5	Construction	70	70	74	- 5
Unemployment Rate - % SA	9.5	9.4	9.4		Trade	272	272	273	- 0
Insured Unemployment - thous.	N.A.	46	58		Government	292	290	296	- 1
Insured Unempl. Rate - %	N.A.	3.6	4.6		Services	209	208	206	+ 1
Mfg. Avg. Wkly. Hours	40.1	40.3	40.1	0	Fin., Ins., & Real Est.	58	59	59	- 2
Mfg. Avg. Wkly. Earn. - $	289	284	262	+10	Trans. Com. & Pub. Util.	71	72	71	0
FLORIDA									
Civilian Labor Force - thous.	4,135	4,178	3,905	+ 6	Nonfarm Employment- thous.	3,737	3,706	3,558	+ 5
Total Employed - thous.	3,803	3,899	3,632	+ 5	Manufacturing	474	472	456	+ 4
Total Unemployed - thous.	332	278	273	+22	Construction	278	287	278	0
Unemployment Rate - % SA	7.3	6.4	6.5		Trade	970	971	935	+ 4
Insured Unemployment - thous.	N.A.	67	70		Government	634	593	609	+ 4
Insured Unempl. Rate - %	N.A.	1.9	2.1		Services	883	879	811	+ 9
Mfg. Avg. Wkly. Hours	39.7	40.4	41.0	- 3	Fin., Ins., & Real Est.	286	268	255	+12
Mfg. Avg. Wkly. Earn. - $	267	269	252	+ 6	Trans. Com. & Pub. Util.	223	224	217	+ 3
GEORGIA									
Civilian Labor Force - thous.	2,463	2,462	2,405	+ 2	Nonfarm Employment- thous.	2,163	2,156	2,148	+ 1
Total Employed - thous.	2,312	2,315	2,247	+ 3	Manufacturing	524	520	515	+ 2
Total Unemployed - thous.	151	147	158	- 4	Construction	99	100	104	- 5
Unemployment Rate - % SA	6.3	5.7	6.7		Trade	487	488	496	- 2
Insured Unemployment - thous.	N.A.	46	51		Government	429	425	428	+ 0
Insured Unempl. Rate - %	N.A.	2.2	2.5		Services	360	360	346	+ 4
Mfg. Avg. Wkly. Hours	39.5	40.3	40.2	- 2	Fin., Ins., & Real Est.	114	115	113	+ 1
Mfg. Avg. Wkly. Earn. - $	255	257	238	+ 7	Trans. Com. & Pub. Util.	142	142	139	+ 2
LOUISIANA									
Civilian Labor Force - thous.	1,803	1,793	1,759	+ 3	Nonfarm Employment- thous.	1,648	1,635	1,588	+ 4
Total Employed - thous.	1,659	1,644	1,643	+ 1	Manufacturing	217	216	214	+ 1
Total Unemployed - thous.	144	150	116	+24	Construction	159	159	148	+ 7
Unemployment Rate - % SA	8.2	8.5	6.9		Trade	367	365	357	+ 3
Insured Unemployment - thous.	N.A.	38	34		Government	322	310	307	+ 5
Insured Unempl. Rate - %	N.A.	2.5	2.4		Services	285	284	272	+ 5
Mfg. Avg. Wkly. Hours	41.4	41.8	41.0	+ 1	Fin., Ins., & Real Est.	76	76	75	+ 1
Mfg. Avg. Wkly. Earn. - $	358	358	325	+10	Trans. Com. & Pub. Util.	128	129	126	+ 2
MISSISSIPPI									
Civilian Labor Force - thous.	1,019	1,300	1,037	- 2	Nonfarm Employment- thous.	844	811	829	+ 2
Total Employed - thous.	935	920	961	- 3	Manufacturing	220	220	219	+ 0
Total Unemployed - thous.	85	83	77	+10	Construction	42	42	46	- 9
Unemployment Rate - % SA	8.8	8.4	7.8		Trade	167	167	165	+ 1
Insured Unemployment - thous.	N.A.	28	30		Government	189	178	194	- 3
Insured Unempl. Rate - %	N.A.	3.6	3.8		Services	123	120	121	+ 2
Mfg. Avg. Wkly. Hours	39.3	39.5	40.0	- 2	Fin., Ins., & Real Est.	33	33	33	0
Mfg. Avg. Wkly. Earn. - $	239	237	222	+ 8	Trans. Com. & Pub. Util.	41	41	41	0
TENNESSEE									
Civilian Labor Force - thous.	2,092	2,078	2,026	+ 3	Nonfarm Employment- thous.	1,731	1,720	1,727	+ 0
Total Employed - thous.	1,925	1,911	1,882	+ 2	Manufacturing	524	523	500	+ 5
Total Unemployed - thous.	168	167	144	+17	Construction	73	75	78	- 6
Unemployment Rate - % SA	8.7	8.4	7.7		Trade	365	366	373	- 2
Insured Unemployment - thous.	N.A.	48	67		Government	299	287	311	- 4
Insured Unempl. Rate - %	N.A.	2.9	4.0		Services	301	300	292	+ 3
Mfg. Avg. Wkly. Hours	39.6	39.8	39.7	- 0	Fin., Ins., & Real Est.	76	77	78	- 3
Mfg. Avg. Wkly. Earn. - $	272	287	247	+10	Trans. Com. & Pub. Util.	82	81	86	- 5

Notes: All labor force data are from Bureau of Labor Statistics reports supplied by state agencies.
Only the unemployment rate data are seasonally adjusted.
The Southeast data represent the total of the six states.
The annual percent change calculation is based on the most recent data over prior year. R = revised.

N. A. = not available.

CONSTRUCTION

12-Month Cumulative Rate	SEPT 1981	AUG 1981	SEPT 1980	ANN. % CHG.		SEPT 1981	AUG 1981	SEPT 1980	ANN. % CHG.
UNITED STATES									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	152,969	153,394	145,887	+ 5	Value - $ mil.	65,939	67,465	61,168	+ 8
Nonresidential Contracts					Number of Units - Thous.	1,277.2	1,320.6	1,321.6	- 3
Value - $ mil.	58,366	57,608	50,229	+ 16					
Sq. Ft. - mil.	1,203.8	1,208.9	1,208.9	- 0	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	642.5	681.1	709.0	- 9
Value - $ mil.	28,664	28,321	34,419	- 17	Number multi-family	459.6	482.4	470.6	- 2
SOUTHEAST									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	27,065	26,929	25,218	+ 7	Value - $ mil.	13,644	14,013	12,264	+ 11
Nonresidential Contracts					Number of Units - Thous.	299.7	311.6	299.9	- 0
Value - $ mil.	8,551	8,449	7,036	+ 22					
Sq. Ft. - mil.	194.7	196.4	182.6	+ 7	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	139.5	148.5	151.0	- 8
Value - $ mil.	4,870	4,466	5,918	- 18	Number multi-family	118.9	126.6	113.1	+ 5
ALABAMA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	1,778	1,772	1,850	- 4	Value - $ mil.	931	962	810	+ 15
Nonresidential Contracts					Number of Units - Thous.	24.5	25.6	23.0	+ 7
Value - $ mil.	499	507	582	- 14					
Sq. Ft. - mil.	11.9	12.2	14.7	- 19	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	7.1	7.6	8.3	- 14
Value - $ mil.	347	304	458	- 24	Number multi-family	8.0	8.0	6.3	+ 27
FLORIDA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	13,156	13,221	12,464	+ 6	Value - $ mil.	7,776	7,981	6,970	+ 12
Nonresidential Contracts					Number of Units - Thous.	169.7	175.6	168.8	+ 1
Value - $ mil.	3,750	3,675	2,844	+ 32					
Sq. Ft. - mil.	92.4	92.1	79.2	+ 17	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	84.2	89.8	86.9	- 3
Value - $ mil.	1,630	1,564	2,651	- 39	Number multi-family	85.0	89.4	78.4	+ 8
GEORGIA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	4,082	3,874	3,775	+ 8	Value - $ mil.	1,891	1,965	1,694	+ 12
Nonresidential Contracts					Number of Units - Thous.	41.6	44.2	42.6	- 2
Value - $ mil.	1,245	1,272	1,242	+ 0					
Sq. Ft. - mil.	34.5	35.7	35.0	- 1	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	23.8	25.2	26.5	- 10
Value - $ mil.	946	637	839	+ 13	Number multi-family	9.3	9.8	8.1	+ 15
LOUISIANA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	3,647	3,574	3,287	+ 11	Value - $ mil.	1,384	1,373	1,085	+ 28
Nonresidential Contracts					Number of Units - Thous.	27.1	27.6	23.6	+ 15
Value - $ mil.	1,376	1,309	1,107	+ 24					
Sq. Ft. - mil.	24.8	24.3	18.0	+ 38	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	10.9	11.5	11.7	- 7
Value - $ mil.	888	892	1,095	- 19	Number multi-family	9.1	9.1	7.5	+ 21
MISSISSIPPI									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	1,724	1,773	1,161	+ 48	Value - $ mil.	583	617	559	+ 4
Nonresidential Contracts					Number of Units - Thous.	13.5	14.5	14.3	- 6
Value - $ mil.	620	630	303	+105					
Sq. Ft. - mil.	7.6	7.9	9.0	- 16	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	4.1	4.5	4.8	- 15
Value - $ mil.	521	526	299	+ 74	Number multi-family	3.0	3.7	3.9	- 23
TENNESSEE									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	2,678	2,714	2,680	- 0	Value - $ mil.	1,079	1,115	1,146	- 6
Nonresidential Contracts					Number of Units - Thous.	23.3	24.3	27.5	- 15
Value - $ mil.	1,062	1,056	959	+ 11					
Sq. Ft. - mil.	23.6	24.1	26.8	- 12	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	9.3	10.0	12.7	- 27
Value - $ mil.	537	543	575	- 7	Number multi-family	4.5	6.6	8.7	- 48

Notes: Contracts are calculated from the F. W. Dodge Construction Potentials. Permits are calculated from the Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts. The Southeast data represent the total of the six states. The annual percent change calculation is based on the most recent month over prior year.

GENERAL

	SEPT 1981	AUG 1981	SEPT 1980	ANN. % CHG.
UNITED STATES				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	2,340.5	2,292.5	2,088.5	+12
Retail Sales - $ mil.- SA	88.5	88.6	80.6	+10
Plane Passenger Arrivals (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous. bls.)	8,640.2	8,638.7	8,596.4	+ 1
Consumer Price Index				
1967=100	279.3	276.5	251.7	+11
SOUTHEAST				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	272.8	266.8	239.9	+14
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	3,383.3	4,148.5	3,443.4	- 2
Petroleum Prod. (thous. bls.)	1,421.3	1,425.8	1,522.1	- 7
Consumer Price Index				
1967=100	N.A.	N.A.	N.A.	
ALABAMA				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	31.4	31.1	28.3	+11
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	99.9	111.3	112.2	-11
Petroleum Prod. (thous. bls.)	60.5	60.5	55.0	+10
Consumer Price Index				
1967=100	N.A.	N.A.	N.A.	
FLORIDA				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	98.3	95.3	84.7	+16
Taxable Sales - $ mil.	65,301	64,759	56,466	+16
Plane Passenger Arrivals (thous.)	1,425.3	1,889.8	1,451.3	- 2
Petroleum Prod. (thous. bls.)	97.4	98.0	114.6	-15
Consumer Price Index - Miami	SEPT	JUL	SEPT	
Nov. 1977 = 100	150.2	146.1	133.1	+13
GEORGIA				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	47.6	46.8	42.2	+13
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	1,454.2	1,641.5	1,462.0	- 1
Petroleum Prod. (thous. bls.)	N.A.	N.A.	N.A.	
Consumer Price Index - Atlanta	OCT	AUG	OCT	
1967 = 100	281.5	276.1	250.2	+13
LOUISIANA				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	39.1	38.1	34.0	+15
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	237.1	265.3	244.2	- 3
Petroleum Prod. (thous. bls.)	1,168.0	1,172.0	1,254.0	- 7
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	
MISSISSIPPI				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	17.7	17.4	16.0	+11
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	32.1	33.5	34.0	- 6
Petroleum Prod. (thous. bls.)	95.4	95.3	98.5	- 3
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	
TENNESSEE				
Personal Income-$ bil. SAAR				
(Dates: 2Q, 1Q, 2Q)	38.8	38.1	35.0	+11
Taxable Sales - $ mil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	135.6	135.6	139.7	- 3
Petroleum Prod. (thous. bls.)	N.A.	N.A.	N.A.	
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	

	SEPT 1981	AUG 1981	SEPT 1980	ANN. % CHG.
UNITED STATES				
Agriculture				
Prices Rec'd by Farmers				
Index (1977=100)	145.0	145.0	150.0	- 3
Broiler Placements (thous.)	77,721	77,751	73,635	+ 6
Calf Prices ($ per cwt.)	63.30	62.40	75.60	-16
Broiler Prices (¢ per lb.)	26.8	29.2	32.1	-17
Soybean Prices ($ per bu.)	6.29	6.71	7.69	-18
Broiler Feed Cost ($ per ton)	222	225	222	0
SOUTHEAST				
Agriculture				
Prices Rec'd by Farmers				
Index (1977=100)	117.5	125.8	132.0	-11
Broiler Placements (thous.)	30,723	31,579	28,875	+ 6
Calf Prices ($ per cwt.)	58.08	57.37	70.53	-18
Broiler Prices (¢ per lb.)	25.8	28.5	32.8	-21
Soybean Prices ($ per bu.)	6.43	6.92	7.89	-19
Broiler Feed Cost ($ per ton)	219	219	215	+ 2
ALABAMA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	940		868	+ 8
Broiler Placements (thous.)	39,080	48,881	38,383	+ 2
Calf Prices ($ per cwt.)	51.50	54.00	66.20	-22
Broiler Prices (¢ per lb.)	28.5	27.5	31.5	-10
Soybean Prices ($ per bu.)	6.32	6.61	7.92	-20
Broiler Feed Cost ($ per ton)	235	235	235	0
FLORIDA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	2,905		3,007	- 3
Broiler Placements (thous.)	7,201	9,530	6,717	+ 7
Calf Prices ($ per cwt.)	62.30	58.30	75.20	-17
Broiler Prices (¢ per lb.)	25.5	28.5	32.0	-20
Soybean Prices ($ per bu.)	6.32	6.61	7.92	-20
Broiler Feed Cost ($ per ton)	230	240	225	+ 2
GEORGIA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	1,388		1,202	+15
Broiler Placements (thous.)	49,250	60,311	44,409	+11
Calf Prices ($ per cwt.)	56.40	53.20	66.00	-15
Broiler Prices (¢ per lb.)	25.5	28.0	32.5	-22
Soybean Prices ($ per bu.)	6.34	6.80	7.79	-19
Broiler Feed Cost ($ per ton)	210	205	205	+ 2
LOUISIANA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	680		700	- 3
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	60.60	59.00	69.00	-12
Broiler Prices (¢ per lb.)	27.0	30.2	34.0	-21
Soybean Prices ($ per bu.)	6.52	7.14	7.99	-18
Broiler Feed Cost ($ per ton)	245	245	225	+ 9
MISSISSIPPI				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	1,032		986	+ 5
Broiler Placements (thous.)	22,296	28,940	20,940	+ 6
Calf Prices ($ per cwt.)	60.50	64.00	68.70	-12
Broiler Prices (¢ per lb.)	2.75	31.0	36.0	-92
Soybean Prices ($ per bu.)	6.45	7.02	7.84	-18
Broiler Feed Cost ($ per ton)	205	210	199	+ 3
TENNESSEE				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: JUL, JUL)	829		797	+ 4
Broiler Placements (thous.)	5,066	6,962	5,049	+ 0
Calf Prices ($ per cwt.)	57.00	55.00	75.60	-25
Broiler Prices (¢ per lb.)	25.0	27.0	29.0	-14
Soybean Prices ($ per bu.)	6.45	7.02	7.87	-18
Broiler Feed Cost ($ per ton)	195	199	210	- 7

Notes:
Personal Income data supplied by U. S. Department of Commerce. Taxable Sales are reported as a 12-month cumulative total. Plane Passenger Arrivals are collected from 26 airports. Petroleum Production data supplied by U. S. Bureau of Mines. Consumer Price Index data supplied by Bureau of Labor Statistics. Agriculture data supplied by U. S. Department of Agriculture. Farm Cash Receipts data are reported as cumulative for the calendar year through the month shown. Broiler placements are an average weekly rate. The Southeast data represent the total of the six states. N.A. = not available. The annual percent change calculation is based on most recent data over prior year.

Net Returns Differ

Differences in feed costs between Sixth District states and the Midwest would account for substantial differences in net returns to producers in the two areas, even though prices received for hogs do not differ appreciably. Because of the higher cost structure and lower net returns in the Southeast, hog producers would be expected to respond more slowly to rising hog prices than their midwestern counterparts. Or, hog prices would need to rise further and continue high for a longer period to induce production expansion in the Southeast. On the other hand, when hog prices fall, southeastern producers would be expected to experience net losses more quickly than midwestern producers and begin reducing production more rapidly as a consequence.

Fluctuations in Hog Slaughter

Although periodic surveys are made of hog producers' intentions, actual production sometimes deviates sharply from reported intentions. Monthly slaughter data are the most solid information available on actual production by state. Although hogs are shipped across state borders for slaughter, on balance, the shipments are assumed to be largely offsetting so that numbers slaughtered are a reasonably reliable indication of production, especially within a relatively broad area such as the six states of the Sixth Federal Reserve District.

From January 1975 through December 1980, monthly slaughter numbers in Sixth District states and in Iowa exhibited three major cycles (see Chart 4). Production declined through 1975 in response to the low livestock prices and high feed costs during late 1974 and early 1975. A trough was reached in November 1975 and slaughter began a sharp upturn in December in Iowa and in January 1976 in the District.

The next building period continued, with a brief interruption in mid-1976, until early 1977. The peak in District states was reached in January with a steep downturn beginning immediately. The peak in Iowa occurred in April, three months later, although slowing growth was evident at the end of 1976. Iowa's production began a sustained upturn in January 1978, but District production did not increase appreciably until January 1979, a full year later. Hog prices had risen from a relatively depressed level in early 1978 which, along with reduced feed prices, eventually provided southeastern producers sufficient incentive to expand production.

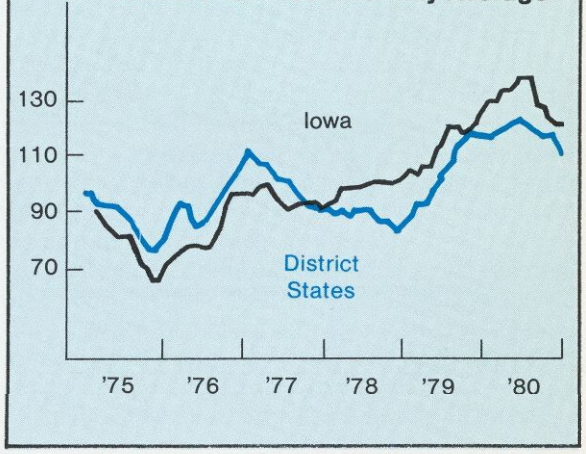
The production expansion phase continued throughout 1979 in both the District and Iowa. Slowing growth was evident in the District, however, by the end of 1979 when hog prices had again dropped abruptly from the levels in the first quarter of 1979. District hog production continued to grow modestly until July 1980 when a downturn began. This drop came one month prior to the downturn in Iowa's production in August 1980.

During the period studied, increases in District pork production lagged behind the increases in Iowa's production from one to 12 months. On the other hand, major downturns in the District's pork production preceded Iowa's downturn by one to three months. Although this behavior fits the general pattern expected, the variation from period to period limits the specific usefulness of indications provided by the District's pork-producing industry. In cases where movements in District hog slaughter lead Iowa's movements by only one month, the period of advance notice is too short to be of practical importance.

Average Slaughter Weights

When hog production turns unprofitable and growers become convinced that improved con-

Chart 4. Commercial Hog Slaughter as a Percent of Six-Year Monthly Average



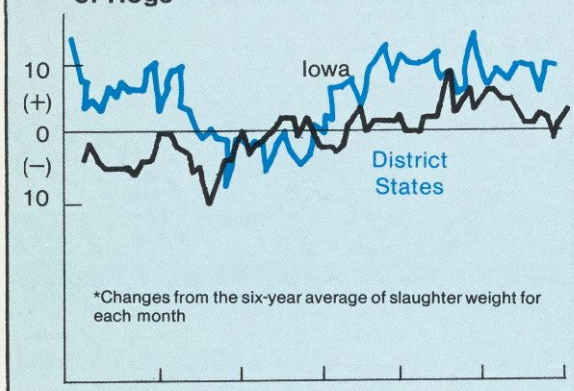
ditions are not foreseeable, they move to curtail their output by marketing their breeding stock. Because increasing numbers of mature sows are included in the volume of marketings, the average weights of animals slaughtered would be expected to increase (since sows are typically 100 pounds or more heavier than the usual market hogs). Data on sows as a proportion of total slaughter numbers are not reported on a local (state) level although weekly proportions of sow slaughter are provided at the national level. However, a rise in average slaughter weights, information that is provided at the state level, could serve to indicate when sow slaughter is increasing and when a reduction in pork output is imminent.

An examination of the deviations in slaughter weights from the average level for each month over a period of six years failed to provide conclusive indications of changes in hog slaughter (see Chart 5). Although fluctuations in average slaughter weights occurred, they do not appear to be particularly related to the fluctuations in hog slaughter shown in Chart 4.

It is apparent that slaughter weights can and do change for reasons unrelated to intentional changes in pork output. Growers sometimes hold market hogs longer than usual waiting for price improvement, so that when slaughter eventually occurs, the weights of market hogs may be several pounds heavier than normal. A reduction in feed costs with hog prices holding steady could stimulate producers to feed animals to heavier weights prior to marketing because the last pounds added, though less efficient than earlier gains, become increasingly profitable as feed costs decline.

Another possible explanation for the absence of the expected relationship is that even though increased sow marketings cause average slaughter weights to rise, it need not necessarily indicate a nearby reduction in hog production. Producers can withhold young females (gilts) from the market at the same time they are selling sows so that breeding stock and production potential is being maintained in spite of an increase in sow marketings. The proportion of gilts in the flow of hogs to market is not reported, so it is not possible to determine when changed withholding rates of gilts may indicate potential changes in future hog production.

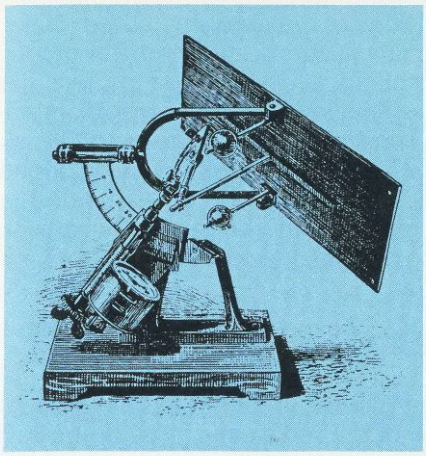
Chart 5. Variations in Slaughter Weight of Hogs*



Summary

The District is a marginal area of pork production because feed costs are significantly higher than the most concentrated area of hog production in the Midwest. When economic incentives change, lower net returns in the Southeast cause producers to tend to expand output later and reduce output earlier than Iowa's producers. Changes in average slaughter weights are not a reliable indicator of imminent changes in southeastern production. The tendency for southeastern producers to cut production early when losses begin is not statistically strong enough to confirm an imminent downturn in national pork output and a consequent upturn in meat prices. But the relationship may be useful when taken together with other indicators.

—Gene D. Sullivan



Economic Forecasting for Southeastern States

Major econometric models exist in all six southeastern states. Despite problems with availability and accuracy of data, these models are capable of producing detailed forecasts for legislatures, state agencies, and private clients. The models' most appropriate application, say forecasters, is in simulating the results of specific economic events or policies.

With the development in the 1960s of computerized models of the national economy, it was only a matter of time before economists built models for regional, state, and substate economies. Public interest in econometric models was stimulated in 1980 when Lawrence R. Klein of the University of Pennsylvania Wharton School won the Nobel Prize for his work in the development of models. And even though blindfolded newspaper reporters throwing darts have been known to do as well as some of the better known national forecasting firms, demand for national forecasts remains strong.[1]

State and substate models, while not as well established, are in a growth stage. Private industry represents the largest potential market for the state models. Utilities, banks, S&Ls, developers, energy firms, and large retail firms are all interested in projections of state income, employment, and economic patterns. The projects at the University of Florida and Georgia State University are among the region's leaders in attracting business from private industry.

At present, however, the largest part of the market for state forecasts comes from the public sector. State legislatures and planning agencies have a continuing need for forecasts of various state tax revenues. The Tennessee model, for example, is mandated by the state legislature to establish the rate of anticipated growth of the state economy. Similarly, the Mississippi project provides estimates of revenue for the state Commission of Budget and Accounting and also maintains a cash-flow model for the state government.

State models are also potentially useful in some states whose constitutions require a balanced budget. In Georgia, for example, state spending is tied to expected tax revenues. Even states not required to balance their budgets need reasonably accurate revenue projections for budgetary purposes--i.e., to determine their credit needs. (For their own reasons, state budget committees may not always use the exact forecast produced by the model, but that is another story.) State planning agencies also use models to forecast highway construction costs, gasoline consumption and tourist expenditures.

Utility companies, important clients of forecasting projects, use the state models to study the

impact of changes in rate structures on employment and income. Substate models (satellites to the state models) have been used to estimate the effects of new industry on employment.

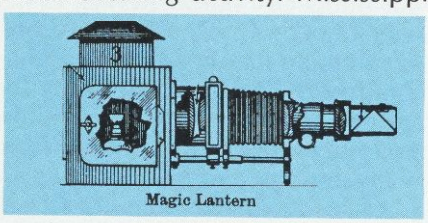
State Forecasting Models in the Southeast

Although econometric models exist for several states and regions in the U. S., modeling efforts in the Southeast are among the most vigorous.[2] State universities are the primary suppliers of state forecasting models in the Sixth Federal Reserve District, but substantial modeling programs are also underway at the Mississippi Research and Development Center (a state agency) and at the Tennessee Valley Authority (Table 1).

TVA's program, the oldest in the region, was developed in response to federal water pollution control needs in 1968. It is currently under the direction of Robert A. Nakosteen, with Juan Gonzalez. Hubert Hinote coordinates forecasting for TVA's office of Planning and Budget. The newest model, at the University of Alabama's Center for Business and Economic Research, issued its first forecast in 1980. The Alabama model is directed by Carl E. Ferguson with David Cheng.

Funding arrangements vary. Many combine university support with grants from state planning agencies. Others, like the University of Georgia's project, are entirely self-supporting through private contracts and memberships or subscriptions. The Georgia Economic Forecasting Project is directed by John B. Legler. Albert W. Niemi is responsible for the estimation of gross state product and output. The Mississippi model, directed by Huntley H. Biggs, is funded completely by the state; TVA supports its model primarily for in-house use.

Models' structural emphases typically reflect the shape of each state's economy and the interests of each project's particular clientele. Thus, TVA's model concentrates on long-term energy demand, while the Mississippi model focuses on manufacturing activity. Mississippi also features forecasts of 12 different state taxes, an unusually large amount for a state model. The Tennessee project, directed by David Hake, emphasizes manufacturing and electrical output. Henry H. Fishkind at the Florida project has pioneered in estimating population growth, migration patterns, construction, and tourism. Louisiana's model, not surprisingly, focuses largely on oil and gas production, but soon will be expanded to full-scale. Loren C. Scott and James Richardson have been the primary developers of the Louisiana model thus far.


Magic Lantern

Some Theoretical Skepticism

Nobel Prize Winner Sir John Hicks has pointed out that many of the "economic facts" buttressing macroeconomic arguments "are subject to errors and ambiguities...far in excess of those which in most natural sciences would be regarded as tolerable."[3] The precise predictive ability of a science like physics, in other words, is somewhat lacking in economics. Economists can, however, use statistical analysis of historical trends to test the degree of probability of a prediction. In a 1979 study for the American Enterprise Institute, W. Allen Spivey and William J. Wrobleski concluded that "the jury is still out assessing the forecasting performance of econometric models and their use in policy assessment." And if national econometric models have difficulty hitting a large target like aggregate economic growth, can we expect them to have more success with a smaller target? Some economists remain unconvinced. Why?

Most state models assume that a state's economy is similar to the economy of a small nation. Yet states cannot be analyzed exactly as small nations because, among other things, states cannot erect trade barriers, cannot control labor and capital flow across state lines, and cannot control their own money supplies. Economic events outside the state (the "foreign sector," populated by mysterious "exogenous variables"), rapidly and powerfully affect state income and employment.

Harvard's Robert Dorfman describes the model's relation to the real world this way: "A growth model resembles the economy that it purports to portray about the way that a map on a scale of one inch to five hundred miles resembles the United States. Only the broadest outlines and the grossest structural characteristics can be discerned. For some purposes, such a map and

such a portrayal are very useful, but we mustn't take inferences from either of them too literally."[4]

As a result, the most difficult and creative aspect of state modeling ("the biggest can of worms," in the words of one forecaster) is to identify the particular economic characteristics of the state and chart them against expected national and regional developments.

Since each state has a different mix of industries, labor force, and natural and financial resources, state economic cycles can occur earlier or later and be more or less severe than national patterns. "A state model...must be designed to include both national and state factors," say LSU's James A. Richardson and Loren C. Scott, "a task complicated at times by the fact that many state peculiarities are not quantifiable, or, if they are, they are not recorded systematically."[5]

Generally, state models use a national forecast to "drive" equations which contain state data. A simplified example is:

$X_m/X_{us} = f\ (C_m/C_{us})$

X_m = mfg output in Mississippi

X_{us} = mfg output in U. S.

C_m = unit cost in Mississippi

C_{us} = unit cost in U. S.

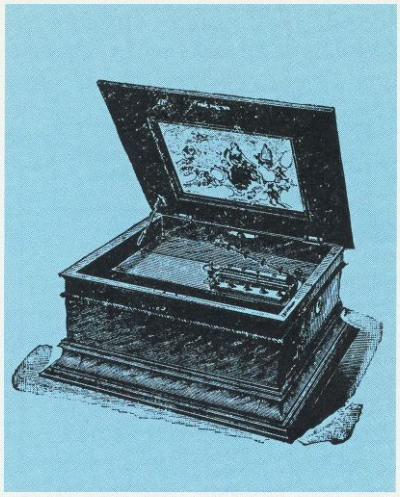
In English, this equation says that the expansion of manufacturing industry in Mississippi (X_m) depends on the predicted growth of the relevant market nationally (X_{us}) and on the competitiveness (unit cost) of production in Mississippi versus the U. S.

Unfortunately, since state data are notoriously incomplete, unavailable, or undisclosed, forecasters must often resort to data "smoothing," "massaging," or "fabricating" to estimate their equations.

Yet, the adjustments which the state forecasters make (based on historical trends and available current data) are often crucial to the model's ultimate success. To see how these adjustments are made, we need to take a closer look at the structure of a state model.

Inside an Econometric Model

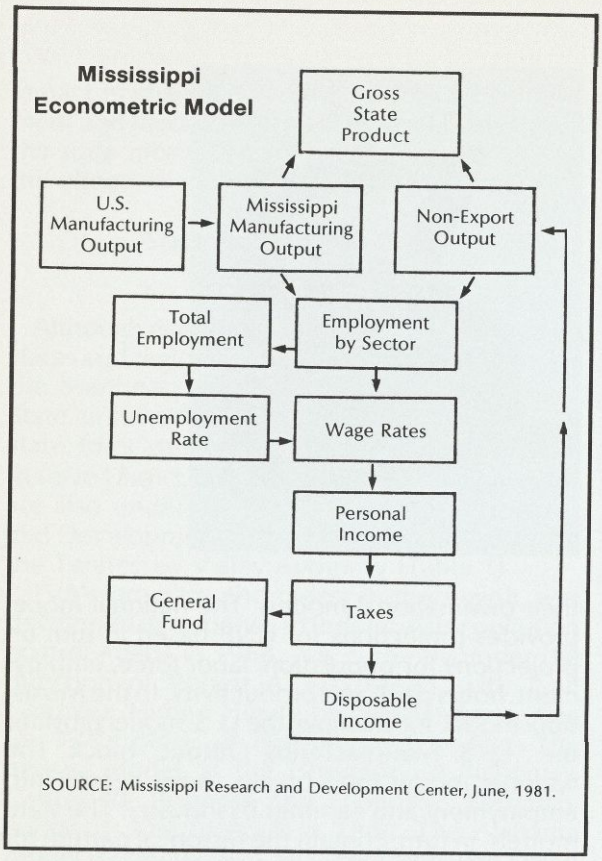
Most state models begin with input from a national model (or "drive"). Many of the southeastern states use the model developed by Wharton Econometric Forecasting Associates (WEFA). Florida and Georgia State have developed



their own national models. The national model provides projections for GNP based in turn on projections for population, labor force, employment, hours paid, and productivity. In the Mississippi model, for example, the U. S. model provides the "U. S. Manufacturing Output" block. The national model then breaks those figures into employment and earnings by industry. The state models, in turn, contain the historical pattern for the state's share of these industries.

The state share of an industry, however, is continually changing. To account for this, the forecaster must adjust his historical trend continually. If national demand in an industry is known, for example, the state market share will depend on how current output prices in the state compare with output prices in the nation. These relative output prices may not be available for some industries. If not, the forecaster may substitute "input prices" (e.g., costs of labor, energy and taxes) with an adjustment for how closely these input prices approximate final prices. The result is a figure for current market share which can be used to adjust the historical market share for the state.

Once the forecaster has determined his state's historical share of a given industry, he is ready to make his projections. Since some industries depend on others, however, he cannot project them all separately. One method of accounting for these dependencies and other differences among industries is to identify "basic" industries and "service" industries. A state's "basic" industries (for example, farming, mining, manufacturing, federal military, and transportation) derive earn-



SOURCE: Mississippi Research and Development Center, June, 1981.

ings from exports to other states. Many state forecasters modify this list to suit the particular characteristics of their states. Huntley Biggs at Mississippi, for instance, includes only manufacturing, farming, and government as "basic" industries, which appear as "Mississippi Manufacturing Output."

A state's "service" industries derive mainly from purchases by businesses and households within the state, e.g., construction, communication, public utilities, trade, finance, real estate, and civilian government. Again, forecasters generally modify these sectors. Hotels, which might be a "service" industry for Carl Ferguson in Alabama, would be a "basic" industry for Henry Fishkind in Florida (where most hotel earnings come from out-of-state consumers). In the Mississippi model, the "service" industries are the "Non-Export Output" block.

A state's relative growth in earnings depends principally on the demand for the output of its "basic" industries, which in turn stimulate the "service" industries in the state.

In a state model, "basic" industry trends are projected by extending into the future the historical trend in the state's share of the national industry. Models typically assume that the factors which affected the share historically will continue to affect it in the future, but less strongly, so the projected change in share decelerates. (Except for special cases like tourism in Florida or oil in Louisiana, most state models assume that, over the long run, states' shares of the national market will move toward equilibrium.)

To arrive at earnings, the model multiplies the projected state share for each "basic" industry by projected earnings in the corresponding industry nationally.

To project earnings in each service industry, the models rely more on internal (state or regional) variables such as personal disposable income (PDI), Gross State Product (GSP), and state population.

The "basic-service" method projects earnings by industry for the state. To project personal income, the state model first determines employment in each industry, again using national data, historical state shares, and current state data.

Projections for population, wage rates and unemployment are then applied to the employment data to project personal income figures for the state. Once personal income is established, the model applies various tax rates to arrive at projected state tax revenues (the "General Fund" block in the Mississippi model).

Problems: The Orange Juice Function

A basic problem plaguing state forecasters is that as national data is broken down into smaller units (regional, state, local), the data's volatility expands dramatically.

In fact, "some of the data," according to Florida's Henry Fishkind, "is bologna." Until recently, for example, Florida tourism figures were based on visits to welcome stations at state borders. Closer analysis revealed that welcome station stops were actually a function of orange juice prices, not tourist traffic. Even today, Fishkind says, the tourism data is not particularly reliable.

A big stumbling block to developing state (and especially substate) models is disclosure problems. In an area dominated by a few businesses, financial data for individual companies might be derived from the disclosure of local statistics. (To reduce the burden of reporting, data is collected from a sample of businesses in each area.) For this reason the Census Bureau and BEA are prohibited from releasing much data on local areas.

According to Georgia State's Donald Ratajczak:

"we don't have good data for consumption, investment, or inventories in the region." In addition, there is little accurate consumer price data that is comparable throughout the region. As an example of the volatility of sub-state data, Ratajczak points to the recent revision of employment growth figures for Atlanta, from 1.6 percent to 9 percent. Labor input for the region, he says, tends to be "sloppily defined."

The Tennessee model has been revised to correct a problem endemic to state models: the calculated elasticities (relative responses to change) relevant at the national level are often inappropriate at the state level. Before this revision, the Tennessee model linked Tennessee wages to national wages in a fixed way, without accounting for growth in Tennessee vis-a-vis the nation. As a result, the earlier model forecast "growing dominance of Tennessee in the nation over a long (20 years or longer) horizon." In some industries, this deficiency caused the model to predict a 1.5 to 2 percent output growth in Tennessee for every one percent growth in U. S. output.

A further difficulty facing southeastern economic forecasters is the uncertainty about whether recent growth rates can be sustained. "Will the Sunbelt growth mystique be maintained for a prolonged period," asks one forecaster, "or will it be short-lived, killed by increasing relative Sunbelt costs?" Tennessee's present model predicts an eventual convergence of southeastern and U. S. economic growth.

How Good Are They?

Despite these theoretical difficulties and data problems, state forecasting models seem to work fairly well. The Mississippi project's forecast for general state revenues, for example, has always been within 3 percent of actual revenues, and its 1980 forecast was within one-half percent of actual revenues. The Alabama model, in its first forecast, came within 1.3 percent for Gross State Product and 5.6 percent for tax revenues. From 1976-1978, the Tennessee model projected changes in personal income within 1.9 percent (on average) and changes in employment within 1.5 percent (on average).

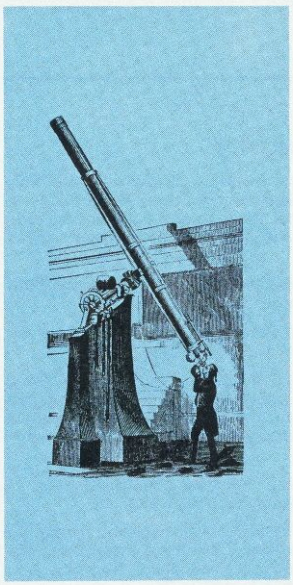
In a recent study, David Hake and Carl Brooking concluded that plus or minus three percent error for a one year forecast for personal income and employment was a reasonable expectation from any regional model.[6] The Hake-Brooking study, one of the few comparative evaluations of state model forecasts published thus far, found that over four years, three southeastern state models had average errors of 2.1 percent for personal income and 2.7 percent for employment. This is significantly better than the plus or minus 3 percent error deemed acceptable, and Hake says "it can be reasonably assumed that the models will do about as well on revenue projections."

The Future of State Forecasting Models

Despite skepticism from peers and competition from large national forecasting firms, the state forecasting projects in the Southeast are producing useful estimates for a variety of purposes and clients. The demand for their products is increasing. Like a small-scale road map, however, the models are best-suited for particular uses.

Econometric models can be used in three basic ways. The first and most widely used is the short-term forecast for a few major economic indicators ("macrovariables"), like tax revenues, personal income, and employment. "Short-term" generally means not much longer than one year. "Long-term" forecasts range from three up to (in the case of TVA's long-range energy projections) 20 years.

Forecasters caution that the models best suit is not long-run forecasts. A ten year forecast for state economic growth, says one District forecaster, is "pretty speculative." In fact, he would prefer to "forget anything over five years." Yet, state legislatures, utilities, and other planning agencies continue to request 10 and 20 year projections.



The third application of state models is simulation studies. These are usually short-term analyses which show a hypothetical scenario for a very specific economic event—the impact of parimutual horse racing on Georgia's tax revenues, for example. To do simulations, a model must be reasonably "disaggregated" (the major economic sectors must be broken down geographically and structurally). The model thus becomes considerably more complex to develop and maintain.

The state models' real strength is in these simulation studies. What effect would a proposed railroad merger have on the Tennessee economy? How will cutbacks in a major shipbuilding plant in Mississippi affect local and state employment and tax revenues? What will be the impact of the federal spending cuts at the state level? Because the state models generally have much more detailed data and equations on state tax structure, state and federal spending in the state, and state employment patterns than do the national models, the state forecasters are in good position to analyze very specific economic events.

For state planners, the state models also offer a way of simulating the results of different policy options. Since all state models derive from a national forecast, these simulations can incorporate the effects of national economic policy decisions.

As mentioned, most but not all of the southeastern state models use the Wharton model for their national input. Unfortunately, definitions of terms, weighting of variables, and methods for calculating state inputs often vary among state models. As a result, no meaningful aggregation of the state forecast data has been possible. Even if such a combined effort were possible, forecasters express doubt about the demand for regional projections, since few official regional agencies have decision-making powers. Regional and national corporations might represent a potential market for such forecasts, but not until a solid track record has been established.

More consistency among state models might facilitate some comparative studies. Are some states, for example, suffering more than others from outflows of money into money market funds? Are there variations in home financing strategies from state to state and, if so, are they influencing migration patterns?

Since the primary market for the state modeling projects thus far has been state legislatures, agencies, and state-oriented utilities and corporations, the models are likely to remain strongly oriented to the special features of the individual states. Since all the models in the Southeast are still in the early stages of development, they can be expected to become even more detailed and more accurate (especially in simulation studies) than they are now. The new federal block grant program to states should provide more funding from state planning agencies. Data on employment, revenue, retail sales, and energy consumption are becoming increasingly accurate and comprehensive. The "road maps" remain small in scale, but they are being filled with more and more detailed information. All signs point to continuing demand and expansion for the state econometric models in the Southeast.

—**Gary W. Tapp**

FOOTNOTES

1 Victor Zarnowitz, in "How Well Do Economists Forecast Growth, Recession, and Inflation?" **Economic Outlook USA** (AnnArbor: Survey Research Center, University of Michigan), concluded that "at the present time, the predictive value of detailed forecasts reaching out further than a few quarters ahead must be rather heavily discounted."

2 This article is based on a workshop on Forecasting in the Southeast held at the Federal Reserve Bank of Atlanta on June 19, 1981.

3 Cited by Adam Smith (George J.W. Goodman), "Why Not Call Up the Economists?" **Across the Board**, July/August 1981, p. 60.

4 Robert Dorfman, "Comment" on a paper by Edmund S. Phelps, "Some Macroeconomics of Population Levelling," Research Reports from the Commission on Population Growth and the American Future, **Economic Aspects of Population Change**, edited by Elliott R. Morss and Ritchie H. Reed, 1972, p.89.

5 "Income and Employment in a State's Econometric Model: The Case of Louisiana," **The Journal of Economics**, IV, 1978, p. 151.

6 Carl G. Brooking and David A. Hake, "The Impact of the Regional Econometric Model on the Policy Formation Decision Process," **Modeling the Multiregional Economic System**, F. Gerard Adams and Norman J. Glickman, eds., Lexington, Mass: Lexington Books, 1980, pp.223-237.

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State Econometric Modeling Projects in the Southeast

State	Organization	Address	Director
Alabama	Center for Business and Economic Research	Univ. of Alabama Box AK University, AL 35486	Carl E. Ferguson, Jr.
Florida	Bureau of Econ. and Business Research	221 Matherly Hall Univ. of Florida Gainesville, FL 32611	Henry H. Fishkind
Georgia	Georgia Economic Forecasting Project	Division of Research College of Bus. Admin. Univ. of Georgia Athens, GA 30602	John B. Legler
	Georgia State Univ. Economic Forecasting Project	Georgia State Univ. University Plaza Atlanta, GA 30303	Donald Ratajczak
Louisiana	Division of Research	Louisiana State Univ. College of Business Baton Rouge, LA 70803	James Richardson Loren C. Scott
Mississippi	Mississippi Research and Development Center	P.O. Drawer 2470 Jackson, MS 39205	Huntley H. Biggs
Tennessee	Center for Business and Economic Analysis	Suite 100, Glocker Business Building Univ. of Tennessee Knoxville, TN 37916	David Hake
	Tennessee Valley Authority Regional Analysis Staff	321 Summer Place Bldg. Knoxville, TN 37902	Robert A. Nakosteen
U.S. Army	U.S. Army Corps of Engineers	510 Title Building 30 Pryor Street, S.W. Atlanta, GA 30303	Owen D. Belcher

The Impact of State Incentives on Foreign Investors' Site Selections

State development agencies in the Southeast spent over $2 million in 1978 on promoting foreign investment in their states. They are also increasing incentives to foreign firms to locate in their states. Despite this increased activity, evidence suggests that investors place more emphasis on investment climate than on special incentives.

The classic vaudeville line, "now take my wife . . . Please . . .," seems increasingly applicable to state development agencies across the United States in their promotional efforts to attract new investment. From the Snowbelt to the Sunbelt, from the Sierras to the Appalachians, individual states are knocking on doors in far away places with strange sounding names in an effort to arrange marriages between their states and potential suitors (investors) — and, in many cases, offering substantial doweries!

State development agencies in the Southeast spent over $2 million on promotional activities — investment trips, overseas offices, literature, and presentations — in 1978. They also offered an undetermined (but substantial) amount in direct incentives — tax breaks, worker training, road and site improvements, industrial revenue bonds, gifts of land, and the like.

The motive behind this activity is clear: each state desires to gain its share of economic development *vis-a-vis* the nation as a whole and other competing states. If the state is not successful, it will lose people, employment, investment and income to other states. Indeed, large foreign investments are one of the most highly publicized measures of competition between states. Despite the recent explosion in promotional activities, however, current research suggests that foreign investors do not consider incentives as important as the overall investment climate in a state.

[1]For more detail on the foreign investment promotional activities and costs of the southeastern states, see the dissertation by Spero Peppas listed in the references at the end of this article.

Why Do States Seek Foreign Investment?

One answer is that state agencies apparently believe foreign investment offers greater benefits (jobs, incomes, taxes) than domestic investment. These investments are seen as new injections of economic activity with new multiplier effects, rather than diversions of internal activity. Another possibility is that while the initial promotional costs are higher for attracting foreign investors, states find the subsequent costs are lower. A third possibility is that foreign investment is somehow sexier, more interesting, and more newsworthy in the eyes of the state and local officials. After ten years of research experience on foreign investments in the U.S., I believe all three reasons are often at work.

Foreign investment maintains its appeal despite the fact that there are certain costs associated with it — both in real and opportunity terms. First, scarce resources could be better allocated to other areas. Second, additional and/or better investments could be attracted.

In addition under U.S. law it is illegal (in most cases) for a state to discriminate either in favor of or against a foreign investor. Any basic incentive the state offers must be available to all potential investors — in-state, out-of-state, or out of the country. The problem for state agencies, obviously, is that promotional problems and costs are greater in attracting true foreign investment: there is a greater educational effort required (because foreign investors have less knowledge about a particular

state); foreign investors have different needs and often require special assistance (acculturation assistance for their foreign employees and families); and promotion methods are more expensive due to greater distances, maintenance of foreign offices, and adaptation/translation of materials. Nevertheless, states clearly believe the benefits of foreign investment outweigh the costs.

How Do Southeastern States Try to Attract Foreign Investment?

In examining the promotional activities and investment incentives of the southeastern states,[2] one finds few significant differences. Virtually all of the respective state development agencies conduct periodic investment missions (primarily to Europe and the Far East), have overseas offices or representatives (almost all of them in Europe, and many in Japan), have special divisions specifically charged with increasing foreign investment in the state, and offer special promotional packages for new investors. The basic "pitch" used by the southeastern states is also very similar, stressing abundant, low cost, hard working, non-union labor; cheap and abundant land and utilities; low work stoppage rates; low taxes; good transportation; worker training programs; nice climate; conservative, pro-business state government and a nice place to raise a family!

"Any basic incentive the state offers must be available to all potential investors—in-state, out-of-state, or out of the country."

The basic homogeneity in the state's offerings reflects the area's similar characteristics. And while hard-core southerners may adamantly refute the "commonalities" among states in the region, the nuances are far too fine to be understood by foreigners. What foreigners do understand are the basic differences between the southeastern region and the other major regions of the United States.

Even this broad regional distinction however, has only come about fairly recently. Until the mid 1970s, few foreign investors could name any of the southeastern states, and knew virtually nothing of the region except for its colonial heritage or civil rights infamy. But with the Carter Presidency came an increased global awareness of the region and the entire "Sunbelt" phenomenon. Increased foreign awareness led to promotional strategies. As certain nationalities and industries began to cluster in a particular state, states began targeting them more specifically. And somewhere along the line, an intense competition emerged: virtually all states stepped up their promotional activities and increased the range of incentives offered to potential investors. These incentive packages might include tax holidays or exemptions, free worker training, road paving, industrial revenue bonds, special water considerations, and outright gifts of land.

As a first step in constructing the incentive package, state agencies must ascertain whether the investment climate (economic opportunity) is itself strong enough to generate new investment, or whether some special incentives will be necessary either to increase the profitability or lower the risk (cost) for potential investors.

For example, state officials visiting potential foreign investors can help identify and clarify the investors' needs: how much and what kind of land, how many and what kind of workers, how much and what kinds of financial assistance, and so forth. Based on this information, the state can then assess whether or not it possesses what the foreign investor needs. In this process, the state should also demonstrate why its proposals better suit the needs of the investor than those of other competing states.

Finally, the size and particular importance to a state of a specific investment may play a role in the importance and size of the incentives offered. A state that desperately wants a major foreign investment may feel compelled to offer a truly substantial incentive package — much more than typically offered (for example, Pennsylvania with Volkswagen, or Ohio with Honda or Tennessee with Nissan).

What Are the Customers Looking For?

The "customers" of the state development boards are the foreign investors: historically the largest firms in their country's industries,

[2]For this article, the southeastern states include Virginia, the Carolinas, Florida, Georgia, Alabama, Mississippi, Louisiana and Tennessee.

and more recently, also the medium size and even some smaller size firms.

These investors do not need to be sold on the United States. In almost all cases, this decision has already been made. What the state must sell is itself as the particular state for the investment site. The basic "product" it offers is a place: a profitable, safe, and pleasant environment. In general, components of the basic offering include logistical factors (ports, highways, railroads), labor factors (wages, available supply, unionization levels, skill levels, and productivity, absenteeism, turnover and work stoppage rates), utility factors (availability and cost of water, energy, etc.), construction factors (availability and cost of land, construction costs, and so forth.), financial factors (types and levels of taxes, financial assistance packages), and lifestyle factors (climate, recreational and educational facilities, cultural activities, etc.). All but the lifestyle factors will jointly determine the potential profitability of the investment, along with providing some estimate of the risk.

For the customer to "buy" this product, the state's offering must fit the needs of the customer *and* be competitive with the offerings of other competing states. If both conditions are not present, the state is wasting its time, money, and effort in promotion, and could better use them to rectify its weak areas. For example, instead of spending hundreds of thousands of dollars annually on unsuccessful promotion, the state could construct a deep-water port, fund worker training programs for new investors, or offer a tax holiday.

It might also conduct preliminary environmental impact studies for sites providing good potential for heavy industry in order to help speed up local, state, and federal approval once a specific investment proposal is made. This activity might also reveal potential community acceptance problems (resistance to investment) of which the state is unaware, and which might result in stopping the investment from being made (and embarrassing the state development officials).

Another factor state agencies should be aware of is that certain nationalities may have more difficulty than others in getting money out of their home countries to invest in the United States, or bad economic conditions in their home markets may have decreased the parent's ability to fund sufficiently the American venture from internal sources. In such cases, favorable financial incentives from state or local authorities are likely to be perceived as more important. Larger multi-national firms also have greater access to lower cost financing than smaller firms, and as a result, financial incentives such as industrial revenue bonds, gifts of land, free worker training and the like may loom more important for smaller firms.

In addition, capital intensive and utility intensive industries generally require different conditions than labor intensive industries. Special incentives involving water or energy conditions may be more important for the first group than they are for the latter, as would tax incentives related to the use of heavy equipment and machinery.

How Successful Are the State Efforts?

"General wisdom" seems to say that incentives play an important role. However, recent studies on this question suggest that investors do not consider incentives as important as investment climates, and in many cases, do not consider them important at all. Two of the most recent studies of foreign investments in the Southeast were those of Bernard Imbert and G. Lynn Derrick.

Imbert studied the southeastern investments of 16 French companies, and, among other topics, asked for a ranking of the most important factors that influenced the companies to locate in the Southeast and in the particular state. Of the more than 15 factors listed, five were mentioned as being "most important" by two-thirds of the firms. These factors were, in order of ranking: the attitude of the labor force, the quantity and quality of labor, transportation facilities, the life style of the area, and the availability (and cost) of suitable plant sites. Three other factors were cited by more than one-third of the firms as also being extremely important: the availability and cost of water and energy, salary levels, and the proximity and ease of access to markets in the United States.

On the other hand, inducements/incentives of state and local authorities ranked eleventh out of sixteen factors, and were ranked as a "major" factor by only two firms, and an "important" factor by only two other firms. In

the cases of the two French firms who ranked the incentives as "most important," both parents were strapped for financial resources to investment in the U.S., and were offered such favorable conditions that it was almost impossible for them not to be taken into consideration: long term taxation advantages, free or virtually free land, state construction of a road to their plant site, and so forth. However, both cases occurred in the early 1960s, and such inducements by state and local authorities are now seldom as extensive.

In Derrick's study of German investments in South Carolina, he concluded that labor conditions had also been the most important factor in German firms' decisions to locate in South Carolina, along with the abundance of low cost utilities and suitable plant sites. As was the case with French investors, incentives of state and local authorities were not ranked as critical factors.

"Despite the recent explosion in promotional activities,...current research suggests that foreign investors do not consider incentives as important as the overall investment climate in a state."

Other studies have touched in part on the relative importance of incentives: Young and Kedia (for Louisiana), Arpan and Ricks (for the U.S.), and H. C. Tong (for the U.S.). The Young and Kedia study of Louisiana revealed that most of the investments were made via acquisition of existing Louisiana companies, and, as a result, government incentives did not play a major role. For those investments *not* made by acquisition, incentives still played a very minor role compared to investment climate factors. However, their study did show that state incentives were relatively more important in foreign firms' decisions to *expand* in Louisiana once the investment had been made.

Arpan and Ricks' study of foreign investments in the entire U.S. also showed that incentives did not play a major role in the site selection process compared to investment climate factors, and Tong's study of foreign investors' reasons for choosing a particular site consistently showed government incentives to rank in the bottom sixth of factors mentioned (although local tax rates usually ranked near the middle).

Thus, it is difficult to reconcile the apparent differences in importance placed on government incentives by investors and government authories. Government authorities apparently perceive such incentives to be important to potential investors, while the admittedly scant empirical evidence suggests that the incentives are not that important.

Yet, it can still be argued that from an individual state perspective, or even possibly a regional perspective, such competition is necessary. So long as a competitive state offers such incentives, there is considerable pressure for the other states to offer comparable packages. In other words, all things being equal in terms of investment climate and possibly even life style, a special incentive may make a difference. And from an individual state's perspective, it clearly does make a difference whether the firm involved makes the investment in their state rather than in another state.

The real key issue, however, appears to be the significantly higher importance placed by firms on the investment climate, rather than on special incentives. Investment is a long term, profit-oriented decision, and virtually no amount of special incentives (particularly those which are short term in nature) is likely to attract and keep a firm in an area in which the long term profitability criteria are not present. This suggests that state and local authorities should examine more carefully their investment climate before going overboard on incentives. If the state doesn't already possess them, it would be advised in the long run to spend its time, money, and effort on developing these preferred investment climate factors rather than on special incentives. And, in terms of special incentives, the state should determine scientifically which ones are most likely to result in increased investment, rather than simply matching the overall offerings of competing states.

Foreign Investment in the Southeast

As of year end 1979, FDI (Foreign Direct Investment) in the United States totaled $52.3 billion, up 23 percent from 1978 (in which a similar percentage increase had taken place). This increase was more than twice the average annual percentage increase from 1975 to 1977, and nearly three times larger than from 1968 to 1972.

The gross book value of all FDI in the Sixth District at the end of 1977 was over $8.5 billion, an increase of 46 percent from 1974. Louisiana had by far the largest single amount (36 percent of the total), followed by Georgia (16 percent), Tennessee (15 percent), Alabama and Florida (14 percent each) and Mississippi (5 percent).

Because of growth rates in excess of 140 percent for four of the six states in the district, and a 31 percent disinvestment in Louisiana, Louisiana's rank in the district in manufacturing FDI fell from an overwhelmingly dominant first position (41 percent) to a third place tie with Georgia (19 percent each), while Tennessee moved from second place into first (25 percent). In terms of nationalities, the British dominate with nearly 120 companies (31 percent of all), followed by the Canadians and West Germans (17 percent each), the French and the Dutch (9 percent each), and the Japanese (six percent).*

Within the manufacturing sector, FDI in the chemical industry led by a wide margin in terms of both employment and gross book value of property, plant and equipment. These chemical investments were heavily concentrated in Louisiana, Alabama, and Tennessee.

What these numbers suggest is that foreign investment in the Sixth District increased dramatically from 1974 to 1977 and is heavily concentrated in British hands. However, different states received different types of investment. FDI in Louisiana and Mississippi was primarily in the petroleum sector; in Tennessee, Alabama, and Georgia in the manufacturing sector, and in Florida in the real estate sector, followed by the manufacturing sector. Thus there appeared to be an East-West split within the Sixth District, based largely on state comparative advantage. The comparative labor advantages of Tennessee, Alabama, Georgia, and Florida attracted foreign investment in manufacturing, while the oil advantages of Louisiana and Mississippi attracted foreign investment in the petroleum sector.

Direct Employment of FDI in 6th District, by State: 1977

	Total Number of Employees (thousands)	Total Number of Employees in Manufacturing (thousands)
Alabama	14	10
Florida	26	12
Georgia	29	18
Lousiana	18	7
Mississippi	5	3
Tennessee	25	21
6th District Total	117	71

Source: **Survey of Current Business,** July 1980, p. 39, and Office of Foreign Investment in the US, US Department of Commerce.

*Japanese investment in the region has increased since the cut-off date (1979) for data in this article.

Gross Book Value of Property, Plant, and Equipment in 6th District by State: 1974 & 1977

(millions of dollars)

	All FDI			*Manufacturing & Industrial FDI*		
	1974	1977	% increase 1974-1977	1974	1977	% increase 1974-1977
Alabama	645	1214	88%	328	889	171%
Florida	904	1163	29%	188	502	167%
Georgia	639	1373	114%	358	731	104%
Louisiana	2616	3032	16%	1059	732	(-31%)
Mississippi	330	473	43%	30	72+	140%
Tennessee	736	1283	74%	644	980+	152%
Total	5870	8538	46%	2607	3896+	50%

Source: For 1974 data, US Department of Commerce, **Foreign Direct Investment in the United States** (Washington, DC, GPO, 1976).
For 1977 data, **Survey of Current Business,** July 1980, p. 36.

FDI in 6th District's Manufacturing & Petroleum Sectors, 1977

Number of Employees (thousands)

	Alabama	Florida	Georgia	Louisiana	Mississippi	Tennessee
All Manufacturing	10	12	18	7	3	21
Food	1	1	2	1	1	(+)
Paper	2	(+)	(+)	(+)	(+)	1
Chemicals	3	5	3	3	1	7
Metals	(+)	1	1	1	1	3
Machinery	1	3	2	(+)	1	8
Other	3	2	9	1	(+)	2
Petroleum	(+)	1	1	4	(+)	1

Gross Book Value of Plant & Equipment ($ millions)

	Alabama	Florida	Georgia	Louisiana	Mississippi	Tennessee
All Manufacturing	850	362	693	700	72	980
Food	3	9	(D)	33	(D)	4
Paper	(D)	2	(D)	(D)	(D)	(D)
Chemicals	438	(D)	(D)	538	(D)	426
Metals	4	26	50	(D)	13	281
Machinery	(D)	20	19	(D)	7	(D)
Other	198	(D)	178	39	4	12
Petroleum	(D)	71	129	1920	236	980

Source: Office of Foreign Investment in US, US Department of Commerce.

D = data suppressed for disclosure reasons
+ = less than one thousand

Number of Foreign Owned Manufacturing/Petroleum Firms in 6th District, by State and Nationality of Owner: 1979

	Belgium	Canada	France	Japan	Nether-lands	Sweden	Switzer-land	United Kingdom	W. Germany	Other	1979 Total	1974 Total
Alabama		8	5	2	1	4	3	11	6	1	41	7
Florida	1	15	8	5	8	5	5	26	20	4	97	10
Georgia	5	18	17	15	5	1	1	38	12	8	120	36
Louisiana	5	7	6	0	10	1	4	23	9	9	74	25
Mississippi	0	5	0	0	0	0	0	1	3	1	9	4
Tennessee	1	9	1	3	7	2	6	18	14	7	68	17
	62	12	37	25	31	13	18	117	64	30	409	99

Source: Jeffrey Arpan and David Ricks, "Directory of Foreign Owned Manufacturers in the United States (Atlanta, Georgia: Business Publishing Division, College of Business Administration, Georgia State University; 1st edition, 1974, and 2nd edition, 1979.)

—Jeffrey S. Arpan

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How Big Is the Federal Government?

The number of Federal employees per 1,000 of population declined from 1959 to 1978. Standard measures of government employment and spending, however, do not account for a substantial shift toward "invisible workers," consultants, white collar workers, and higher grade levels. Future financial liabilities and regulatory costs also should be added to the "hidden burden" of the federal sector.

In recent years, public opinion surveys have revealed a strong and growing dissatisfaction with government in general and with the federal government in particular. Respondents often express a feeling that the public sector is too large, wasteful, inefficient and unresponsive to the needs of citizens.[1] This widespread attitude contributed to the election victory of President Reagan, who campaigned on a platform of cutting federal taxes and spending and reducing the size and scope of federal activity. Although there may be a generally accepted attitude that the federal government has become "too big" in recent years, there is much less understanding of the federal establishment's actual size and growth.[2]

Measuring the Size and Growth of the Federal Sector

Measuring the federal public sector's size and growth rate is a very complex problem, for the primary issue is how to assess the burden which the federal government places on the private sector. Federal employment and expenditures give some indication of this burden—as the number of federal employees and the level of federal spending increase, resources are clearly diverted from the private to the public sector—but the total impact of the federal government is far greater.

Data on the number of employees do not reflect the qualitative changes that occur over time in the federal work force. For example, the economic effects of hiring an additional 50 workers to maintain a federal building are vastly different from hiring 50 additional professionals to develop regulations. Data on expenditures capture only the federal government's current outlays, yet many spending commitments are made which involve taxes and outlays that extend far into the future. Moreover, many of the costs which the federal government imposes on the private sector do not appear explicitly in the federal accounting system.

With but one exception, all studies of federal government growth have examined only the direct or quantitative aspects of public sector expansion.[3] Indirect or qualitative changes in the size of government are much more difficult to measure and are generally not reported in widely used publications; nevertheless, they are a significant component of recent increases in the federal government.

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[1] The expansion of the federal public sector has been the subject of intensive study by scholars for decades, and the conclusions that government has grown too rapidly and become too intrusive are hardly new. For example, Henry West concluded in his book **Federal Power: Its Growth and Necessity,** published in 1918, that "we have, without protest and even with satisfaction, accorded the government a control over corporate and individual existence which infinitely transcends the wildest dreams of those who advocate centralized authority." Based on statistical evidence of the expansion in federal expenditures between 1894 and 1918, West warned of the "dangers of drifting into socialism" because "the growth of federal power will be unchecked." For a summary of typical surveys, see Seymour Martin Lipset and William Schneider, "Lower Taxes and More Welfare: A Reply to Arthur Seldon," **Journal of Contemporary Studies** (Spring 1981), pp. 89-94.

[2] Henry Litchfield West, **Federal Power: Its Growth and Necessity** (New York: George H. Doran Company, 1918), pp. vii-ix and pp. 101-102.

[3] For a survey of studies of federal government growth, see James T. Bennett and Manuel H. Johnson, **The Political Economy of Federal Government Growth: 1959- 1979** (College Station, Texas: Texas A&M University, 1980), pp. 7-26.

Table 1. Federal Full-Time Civilian Employment, Total Labor Force, and Population by Year, 1959-1978 with Average Annual Compound Rates of Growth, R

Year	Employees (E)	Labor Force[b] (LF)'000s	Population (POP)'000s	E 1,000LF	E 1,000POP
1959	2,230,097	70,921	177,830	31.57	12.59
1960	2,237,338	72,142	180,671	31.01	12.38
1961	2,291,001	73,031	183,691	31.37	12.47
1962	2,371,589	73,442	186,538	32.29	12.71
1963	2,387,021	74,571	189,242	32.01	12.61
1964	2,370,437	75,830	191,889	31.26	12.35
1965	2,398,033	77,178	194,303	31.07	12.34
1966	2,574,257	78,893	196,560	32.63	13.10
1967	2,784,087	80,793	198,712	34.46	14.01
1968	2,867,365	82,272	200,706	34.85	14.29
1969	2,879,483	84,240	202,677	34.18	14.21
1970	2,806,469	85,903	204,878	32.67	13.70
1971	2,766,099	86,929	207,053	31.82	13.36
1972	2,682,000	88,991	208,846	30.14	12.84
1973	2,537,976	91,040	210,410	27.88	12.06
1974	2,547,129	93,240	211,901	27.32	12.02
1975	2,581,870	94,793	213,559	27.24	12.09
1976	2,556,753	96,917	215,142	26.38	11.88
1977	2,502,020	99,534	216,820	25.14	11.54
1978	2,„483,273	102,537	218,500	24.22	11.36
R,%	0.69	1.96	1.06	-1.25	-0.37

Source: [a]U.S. Civil Service Commission, **Federal Civilian Manpower Statistics: Pay Structure of the Federal Civil Service,** various years.
[b]U.S. Department of Commerce, **Survey of Current Business,** various years.

Conventional (Quantitative) Measures

Employment. Consider the data on federal full-time civilian employment shown for the period 1959-1978 in Table I. Both the size of the labor force and population grew far more rapidly than did federal employment. In 1959, there were 31.57 federal employees for each 1,000 in the labor force; the comparable figure in 1978 was only 24.22, a decline of 22.6 percent. The number of federal employees per 1,000 population fell from 12.59 in 1959 to 11.36 in 1978. Though it runs counter to conventional wisdom, the conclusion is inescapable: When measured by employment, the relative size of the federal government has declined and its absolute size has increased very modestly.

Expenditures. As Table 2 shows, for the years 1959-1978, federal spending fluctuated between 18.0 and 22.7 percent of GNP. Total output grew very rapidly, though not as rapidly as federal expenditures, but the average annual growth rate of 1.71 percent in federal spending as a percent of GNP can be described as quite modest. On a per capita basis, federal spending in current dollars was almost four times as much in 1978 as in 1959; when price changes are taken into account, however, per capita spending in 1978 was less than twice as much as it was 20 years earlier. The average annual growth rate of real per capita federal spending is only 3.56 percent.

Overall, the quantitative statistics on federal government size and growth are startling, not so much because they show that the federal public sector has grown in recent years, but because they indicate it has not expanded very rapidly. After all, since 1959, four major cabinet-level departments have been formed (Housing and Urban Development, Transportation, Energy, and Education) and an enormous increase has oc-

Table 2. Federal Government Expenditures and Gross National Product and Consumer Price Index by Year 1959-1978 with Average Annual Compound Rates of Growth, R

Year	Expenditures (G) $ bil.	GNP $ bil.	CPI	(G/GNP) %	(G/POP) $	Real G $ bil.	Real G Per Capita,$
1959	91.0	486.5	87.3	18.7	511	104.2	586
1960	93.1	506.0	88.7	18.4	515	105.0	581
1961	101.9	523.3	89.6	19.5	555	113.7	619
1962	110.4	563.8	90.6	19.6	592	121.9	653
1963	114.2	594.7	91.7	19.2	603	124.5	658
1964	118.2	635.7	92.9	18.6	616	127.2	663
1965	123.8	688.1	94.5	18.0	637	131.0	674
1966	143.6	753.0	97.2	19.1	731	147.7	751
1967	163.7	796.3	100.0	20.6	824	163.7	824
1968	180.6	868.5	104.2	20.8	900	173.3	863
1969	188.4	935.5	109.8	20.1	929	171.6	847
1970	204.2	982.4	116.3	20.8	997	175.6	857
1971	220.6	1,063.4	121.3	20.7	1,065	181.9	879
1972	244.7	1,171.1	125.3	20.9	l,172	195.3	935
1973	265.0	1,306.6	133.1	20.3	1,259	199.1	946
1974	299.3	1,412.9	147.7	21.2	1,412	202.6	956
1975	357.1	1,528.8	161.2	23.2	1,672	221.5	1,037
1976	386.3	1,706.5	170.5	22.7	1,796	226.6	1,053
1977	423.5	1,889.6	181.5	22.4	1,953	233.3	1,076
1978	461.3	2,107.6	195.4	21.9	2,111	236.1	1,080
R,%	**9.22**	**8.06**	**4.35**	**1.71**	**8.07**	**4.67**	**3.56**

Source: U.S. Department of Commerce, Survey of Current Business, various years.

curred in the regulatory powers of the federal government to deal with such issues as environmental protection, occupational health and safety, drug abuse, equal employment opportunity and affirmative action, mine safety, consumer product safety, and so on. Social programs to provide food stamps, law enforcement assistance, Medicare/Medicaid benefits, student loans, school lunches, black lung benefits and supplemental security income have proliferated as well. Given the marked expansion in the scope of federal government activities, one would expect a much larger increase in its size than the employment and expenditure data indicate. Why do these increases not show up in the data?

The answer is that federal government outlays and employment provide only a partial picture of the true changes in the dimensions of the federal sector burden over time. Important shifts have occurred in the qualitative aspects of employment and expenditure as well.

Qualitative Factors

Employment: The White Collar Explosion and "Invisible" Workers. The data on full-time civilian employment do not account for four important qualitative changes in the work force:

(1) composition of the federal work force has shifted from blue-collar to white-collar employees;
(2) grade levels have increased rapidly within the white-collar ranks;
(3) many full-time workers are counted as part-time to avoid employment ceilings; and,
(4) a vast number of contractors and consultants are employed indirectly by the federal government, even though they are not counted as such in official statistics.

As an illustration of these concepts, consider the classification of employees over time in

Table 3. The Distribution of Federal Full-Time Civilian Employment by Category and the Number Employed in Washington, D.C., by Year 1959-1978

March 31	General Schedule	Wage Systems	Postal	Other Systems	Working in D.C.
1959	969,529	687,403	474,688	107,477	221,671
1960	973,242	666,727	483,265	114,104	225,971
1961	1,008,040	662,099	504,020	116,841	231,391
1962	1,057,729	675,903	517,006	120,951	241,902
1963	1,083,707	658,818	520,370	124,125	250,637
1964	1,090,401	625,795	523,866	130,374	253,636
1965	1,112,687	621,091	534,761	131,892	263,783
1966	1,189,306	682,178	568,911	133,861	280,594
1967	1,252,839	757,271	604,147	169,829	297,897
1968	1,298,647	745,786	656,522	178,527	305,225
1969	1,288,169	673,552	673,552	171,194	305,905
1970	1,286,948	674,250	673,482	171,789	304,885
1971	1,297,300	630,670	663,863	171,498	309,803
1972	1,281,996	603,450	665,136	131,418	303,066
1973	1,301,557	547,440	549,739	139,240	282,991
1974	1,322,313	535,929	552,667	136,220	297,759
1975	1,349,104	528,080	556,149	138,537	303,071
1976	1,358,491	514,543	548,144	135,575	307,774
1977	1,390,494	470,175	527,992	113,359	312,411
1978	1,396,265	461,726	522,094	103,188	312,829

Source: U.S.Civil Service Commission, **Federal Civilian Work Force Statistics: Pay Structure of the Federal Civil Service,** various years.

Table 3. General Schedule (GS) workers are white-collar employees within the federal establishment. Wage system federal workers perform blue-collar jobs. Over the entire 20-year span, with only minor exceptions, there has been a steady increase in white-collar workers and a steady decline in blue-collar employees. GS employees increased by 44 percent between 1959 and 1978, while wage system workers declined by 33 percent. Although the total number of employees changed very little over time, a significant change occurred in the *type* of work performed. Moreover, federal government activities became increasingly concentrated in the nation's capital.

Employees in executive grades GS-13 to 18 increased by 134,049—the number in 1978 was three times as large as the 1959 figure—while those in the lower grades fell by almost 90,000. Thus, policymakers and regulators gained rapidly in employment at the expense of lower level employees: A massive shift in grade structure occurred which is not apparent in the statistics on total employment. From a private sector perspective,there are critical differences between a government clerk and a policymaker who promulgates regulations. A clerical worker's principal cost to the public is the payment of salary and fringe benefits. A regulator, on the other hand, may impose costs on the private sector far in excess of salary and perquisites.

The Office of Management and Budget places employment ceilings on every executive agency, but the constraints apply only to full-time employees. Each March 31, agencies report their employment statistics and, on this date, thousands of workers are switched from full-time to part-time status. So pervasive is this practice that these full-time/part-time bureaucrats are known as "25-and-ones," a term descriptive of the fact

Table 4. Federal Government Liabilities and Commitments by Category at the End of each Fiscal Year for the Period 1967-1977, with Compound Average Annual Growth Rates

Year	Federal Government Commitments (millions of $)				
	Liabilities Orders (I)	Undelivered Contracts (II)	Long-Term of Annuity (III)	Deficiency Contingencies Programs	Total (IV)
1967	$378,128	$ 77,320	$ 2,759	$ 234,076	$ 912,261
1968	405,933	77,197	8,086	311,041	1,002,432
1969	407,960	74,106	8,436	222,536	970,041
1970	423,325	70,010	7,905	496,438	1,298,435
1971	452,373	74,843	8,356	550,439	1,483,572
1972	486,973	88,265	8,397	251,551	1,380,907
1973	520,697	102,095	8,916	578,035	1,964,542
1974	544,325	105,618	9,727	1,717,861	2,954,706
1975	613,022	130,007	12,838	2,593,248	4,301,987
1976	726,193	266,281	13,002	4,638,727	6,511,647
1977	789,030	322,109	15,126	5,394,847	7,381,103
R,%	**7.45**	**14.51**	**11.68**	**39.22**	**24.76**

Source: U.S. Department of the Treasury, Fiscal Service, Bureau of Government Financial Operations, **Statement of Liabilities and Other Financial Operations, Statement of Liabilities and Other Financial Commitments of the United States Government** various years.

that for 25 of the 26 federal pay periods each year, the workers are classified as full-time, but in the one pay period in which the headcount is taken, these workers are officially placed on part-time or "invisible" status to evade hiring constraints. Estimates vary as to the extent of this practice. A 1977 Comptroller General Report (which was not a full-scale investigation) discovered several thousand instances. Without doubt, then, current figures understate total federal employment.[4]

The issue of accurately counting federal employees raises an even more fundamental question: What, in fact, *is* a federal employee? If consultants, contractors, and state and local government workers whose pay comes directly from the Treasury were included, then reported employment represents only the tip of the bureaucratic iceberg. As secretary of HEW, Joseph Califano testified in 1979 that his department was paying the salaries of 980,217 persons in think tanks, universities, and other units of government. The Department of Defense pays an additional 2.05 million workers through contractors and subcontractors.[5] One estimate has placed this "indirect" federal employment at about eight million workers.[6] To the extent that the federal government has increasingly relied on workers not counted in reported employment data, the size and growth of the federal establishment have been greatly understated.

Expenditures: Delayed Repercussions and Uncounted Liabilities. As is the case with employment, federal expenditure statistics do not accurately reflect the spending patterns and financial commitments of the federal sector. Expenditures consist primarily of outlays in a given year; they do not include future financial liabilities and commitments. A useful, but somewhat simplistic, analogy would be for an individual to count his dollar outlays in a given year as the total of his financial commitments and liabilities without including future spending dictated by loans, mortgages, installment payments, and goods and services on order. For the federal government, as shown in Table 4, liabilities and other financial

4"Personnel Ceilings—A Barrier to Effective Manpower Management," A Report to the Congress by the Comptroller General of the U. S., June 2, 1977, pp. 4- 10.

5Donald Lambro, "In and Out at HEW: Doing Well by Doing Good Through Consulting," **Policy Review** (3Winter 1979), p. 109.

6Barbara Blumenthal, "Uncle Sam's Army of Invisible Employees," **National Journal** (May 5, 1979), p. 732.

commitments are reported for four categories:

(1) Liabilities: Public Debt, Checks Outstanding, Accrued Interest, and Accounts Payable;
(2) Undelivered Orders: Obligations incurred under law against appropriations and funds for goods and services not yet received;
(3) Long-Term Contracts: Subject to future modification or cancellation in advance of delivery of goods or services; and
(4) Contingencies: Government Guarantees (insuring private lenders against losses), Insurance Commitments, Actuarial Status of Annuity Programs, Unadjudicated Claims, and International Commitments.

The data in Table 4 must be interpreted with caution, for in a strict sense, some of the aggregates shown in each category are not additive because the data were computed on different bases. Further, the data indicate the *maximum* potential liability of the federal government, not the most probable amounts that will be expended in the future. For instance, guaranteed loans will be paid only if the lender defaults. Nevertheless, the growth rates at the bottom of the table reveal that the financial commitments and liabilities of the federal government have increased far more rapidly than expenditures. In only the 11 years between 1967 and 1977, total contingencies rose from $912 billion to $7.38 trillion dollars—an eight-fold increase.

The Actuarial Deficiency of Annuity Programs was presented separately to show the increase in financial commitments due to social security payments, civil service pensions, and retirement pay for military personnel. The actuarial deficiency is the amount by which expected future payments exceeds anticipated contributions—a sum in excess of $5 trillion. Federal contingencies for this item doubled, on the average, about every two years. Such a growth rate cannot long be sustained without either substantially increasing taxes or reducing benefit payments. Government decisions, therefore, have long-term tax and expenditure implications—not adequately reflected in annual data on current federal expenditures. If one considers these future federal liabilities and contingencies, a much higher rate of growth is indicated than shown by expenditures alone, regardless of whether price and population increases are taken into account. It is also apparent that many of the financial repercussions of federal activities are not felt immediately, but are delayed.

Regulations and Red Tape

Even after adjustment for the qualitative changes in federal employment and financial operations, these two traditional measures still grossly understate the federal sector's impact on the private economy. The government's actions, primarily through regulations and red tape, impose enormous costs on the private sector that are not included in either employment or finance statistics. Because government bears only a small portion of the regulatory costs, they may be regarded as "hidden taxes" borne by the private sector.

In the five-year period 1974-1978, Congress adopted no fewer than 25 major pieces of regulatory legislation including the Energy Policy and Conservation Act, the Fair Debt Collection Practices Act, the Employment Retirement Income Security Act, and the Real Estate Settlement Procedures Act. The costs of such regulations have grown rapidly. According to Murray Weidenbaum, chairman of the Council of Economic Advisers, the total cost of federal regulation exceeded $66 billion in 1976 (in excess of $300 per capita) and had grown to more than $102 billion in 1979, an increase of 55 percent in only three years.[7] The administrative costs of these actions, the only costs reported in federal expenditures, represent only about 5 percent of the total; the remaining 95 percent is borne by the private sector as hidden taxes.

In 1977, the Commission on Federal Paperwork estimated that, although difficult to calculate precisely, the total cost of processing federal paperwork (including that associated with regulation) was approximately $100 billion each year. Of this amount, the federal government spent $42 billion. The Internal Revenue Service alone employs some 13,200 different forms and form letters. About 613 million man-hours were expended by individuals and businesses in 1978 just completing this paperwork.

As of June 1972, the Office of Management and Budget (OMB) reported that federal government agencies (excluding IRS) used 5,567 forms that generated more than 418 million responses from the private sector. As staggering as such statistics appear, they apparently underestimate the burden greatly. Many forms used are not even known to OMB; single-use forms such as those used in one-time surveys are not included, and many regulatory agencies noted for their

[7] Murray L. Weidenbaum, **The Future of Business Regulation** (New York: Amacom Books, Inc., 1979), pp. 15-23.

burdensome paperwork are exempted from reporting paperwork to OMB. By almost any standard of comparison, the nation is awash in a sea of federal forms.[8]

The total social costs of government are enormous when the hidden burden of the federal sector is taken into account.

Conclusions

The federal government's growth in recent years is widely recognized and, apparently, often resented by the American taxpayer. The current debate over a Constitutional amendment to balance the budget indicates that the voter wishes to restrain government expansion if not decrease its absolute size. The statistics that have been used to measure the size and growth rate of government employment and expenditures do not adequately capture all the dimensions of the public sector.

Substantial qualitative shifts have occurred in the composition and structure of the federal labor force, many individuals who work for the federal sector are not counted, the indirect costs of regulation and paperwork do not appear in reported expenditures and current outlays do not incorporate the large and rapidly growing future liabilities and financial commitments which portend an increasing tax burden in the future.

No conclusive answer can be given to the question, "How big is the federal government?" One can, however, confidently assert that it is much larger than the reported data indicate, that it has grown very rapidly in the recent past, and that the Reagan administration faces a massive problem in shrinking or even slowing the growth of the federal leviathan.

—James T. Bennett

[8] For a more complete discussion of federal paperwork, see James T. Bennett and Manuel H. Johnson, "Paperwork and Bureaucracy," **Economic Inquiry** (July 1979) pp. 435-451.

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