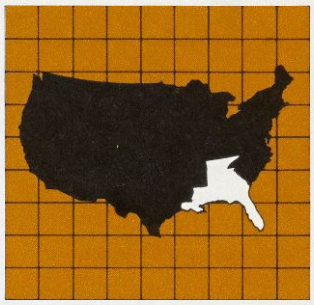
Economic Review



FEDERAL RESERVE BANK OF ATLANTA JUNE 1981

BUDGET How Will Cuts Affect S.E.?

S&Ls Survey of New Services

FREEZE Higher Vegetable Prices?

CHECKS Slower Growth in 70s

WATER Allocation Problems in East

Economic Review

FEDERAL RESERVE BANK OF ATLANTA

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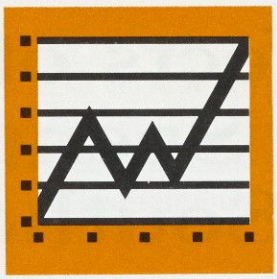
The purpose of the *Economic Review* is to inform the public about Federal Reserve policies and the economic environment and, in particular, to narrow the gap between specialists and concerned laymen.







The Effects of Proposed Federal Spending Cuts on the Southeast

The Reagan Administration is moving forward with a program designed to slow and eventually reverse the share and influence of the federal government in the economy. Spending cutbacks on the order of $44 billion (in fiscal 1982) below the level planned by the previous administration have been proposed. Subsequent reductions through 1986 would bring the total cumulative reductions to $417 billion below the budget submitted earlier by the Carter Administration. Details on the list of proposed cut-backs are fluctuating, of course, as Congress proceeds.

The magnitude of federal dollars flowing into the six-state area* is surprisingly large. The federal government spent $59 billion (12 percent) of its fiscal 1979 budget in the Southeast. This amount was $9.5 billion more than what Washington extracted from the region in terms of federal taxes.[1] Moreover, the $9.5 billion the region received in net inflows from Washington was more than double the $4.5-billion net inflow of federal dollars to the area four years earlier. Tennessee had by far the largest share, receiving close to $3 billion more from Washington than it sent there in 1979. Florida and Mississippi were the next highest among the District states, with $1.9 and $1.8 billion, respectively (see Table 1 for net inflows for other states). Georgia's share (a $985-million net inflow) was small relative to other Sixth District states.

As a first approximation of where the southeastern states stand in terms of federal outlays, we have ranked federal outlays and federal taxes by state on a per capita basis. The state of Tennessee ranked 1st among the Sixth District states and 12th in the country in federal outlays per capita ($2,378), thanks largely to the Tennessee Valley Authority (see Table 2). (Without TVA, Tennessee would have ranked 43rd with only $1,814 in per capita expenditures. This measure, however, overstates the net economic gain to Tennessee that results from TVA. It excludes fees collected by the TVA from the sale of electrical power to residents in the general service area.) On the other hand, lower-than-average incomes placed Tennessee 37th among the 50 states in federal taxes paid per person ($1,711). Moreover, outlays per capita grew 53 percent there from fiscal 1976 to fiscal 1979 — well above the national average increase of 47 percent. Over the same period, per capita federal taxes extracted from Tennesseeans rose 35 percent.

Georgia ranked 34th in terms of federal spending per person ($1,901) but 38th in federal taxes per person ($1,708). Federal taxes collected from Georgia rose slightly less than per capita federal spending, resulting in only a small increase in Georgia's surplus.

Per Capita Spending-Tax Ratios

Another measure of the federal government's fiscal impact in the Southeast is the ratio of per capita federal spending to per capita federal taxes. Spending-tax ratios greater than one mean that a state or region receives more in federal outlays from Washington than it sends to Washington in taxes. In fiscal 1979, spending-tax ratios exceeded unity throughout the District (see Table 1), but varied widely for individual states, from 1.05 in Louisiana to 1.58 in Mississippi. But the contribution of federal spending to economic growth should be analyzed by examining trends in spending-tax ratios. Spending-tax ratios in the region were generally lower in fiscal 1979 than they were in 1976. Spending-tax ratios in Georgia declined from 1.16 in

*Georgia, Alabama, Tennessee, Mississippi, Louisiana, and Florida.

[1]**Geographic Distribution of Federal Funds in Summary,** Fiscal Years 1975-80, compiled for the Executive Office of the President by the Community Services Administration.

The federal government spent $59 billion (12 percent) of its fiscal 1979 budget in the Southeast. The region's participation in certain programs targeted for reduction (food stamps, school lunches) is higher than the national average. Because of lower-than-average incomes, tax cuts may not help the region much, but if inflation is reduced, the benefits of the spending cuts to the Southeast would outweigh the costs.

Table 1. Flow of Federal Funds Shifts Away from Sixth District

State	Fiscal 1979				Fiscal 1975	
	Spending per person	Taxes per person	Spending taxes ratio	Dollar flow (in millions)	Spending taxes ratio	Dollar flow (in millions)
Alabama	1,968	1,595	1.23	1,406	1.34	627
Florida	2,217	1,999	1.11	1,934	1.00	9
Georgia	1,901	1,708	1.11	985	1.16	912
Louisiana	1,866	1,773	1.05	377	1.16	652
Mississippi	2,073	1,314	1.58	1,845	1.76	1,621
Tennessee	2,378	1,711	1.39	2,925	1.13	627
District Average	2,067	1,683	1.23	9,472	1.26	4,448
U.S.	2,101	2,101	1.00	0	1.00	0

Source: Joel Havemann and Rochelle L. Stanfield, " 'Neutral' Federal Policies Are Reducing Frostbelt-Sunbelt Spending Imbalances," **National Journal**, February 7, 1981, p. 234.

1976 to 1.11 in 1979. For the District as a whole, the spending-tax ratio fell from 1.26 in 1976 to 1.23 in 1979. That suggests that, overall, federal spending did not become more important as a source of Southeastern economic growth over the period. (However, since federal income tax collections reduce private consumption as well as private saving, increased federal spending in the District that is matched by higher taxes means a more important influence of the federal government on economic growth. In other words, the effect of equal increases in federal taxes and federal spending is not neutral in terms of aggregate demand.)

Federal Agencies

A closer look at the uses of federal spending in the region can be gained by examining spending by federal agencies and departments. The importance of some federal agencies will not come as a surprise to those familiar with the structure of the Southeastern economy. The Tennessee Valley Authority, the Kennedy Space Center in central Florida, and Lockheed near Atlanta are household words in the area. Table 3 presents a breakdown of federal outlays by major departments. Health and Human Services and National Defense are by far the biggest federal spenders in the region, comprising more than three-fifths of federal outlays in the Sixth District states — about 3 percentage points less than the national share accounted for by these two departments.

Individual states differ widely in the composition of federal outlays. Expenditures by Health and Human Services make up close to half of the federal outlays in Florida but about two-fifths in Mississippi. This higher proportion of federal spending by Health and Human Services for Florida is due to a disproportionately large elderly population there.

Table 2. Per Capita Federal Outlays and Taxes by State, Fiscal 1976 and 1979

State	Per Capita Outlays				Per Capita Taxes			
	Amount		Percent Increase	Rank 1979	Amount		Percent Increase	Rank 1979
	1976	1979			1976	1979		
Alabama	**1,480**	**1,968**	**33.0**	**30**	**1,112**	**1,595**	**43.4**	**47**
Alaska	3,620	4,759	31.5	2	1,920	3,304	72.1	1
Arizona	1,696	2,261	33.3	15	1,383	1,869	35.1	34
Arkansas	1,342	1,815	35.2	42	1,067	1,464	37.2	50
California	1,891	2,315	22.4	14	1,670	2,366	41.7	9
Colorado	1,739	2,240	28.8	17	1,503	2,119	41.0	18
Connecticut	1,638	2,654	62.0	7	1,995	2,598	30.2	3
Delaware	1,204	1,768	46.8	44	1,912	2,384	24.7	7
Florida	**1,524**	**2,217**	**45.5**	**18**	**1,554**	**1,999**	**28.6**	**27**
Georgia	**1,432**	**1,901**	**32.8**	**34**	**1,299**	**1,708**	**31.5**	**38**
Hawaii	2,421	2,906	20.0	4	1,672	2,224	33.0	13
Idaho	1,407	2,031	44.3	28	1,270	1,686	32.8	40
Illinois	1,288	1,851	43.7	40	1,822	2,537	39.2	5
Indiana	1,062	1,469	38.3	50	1,451	2,098	44.6	22
Iowa	1,101	1,602	45.5	47	1,400	2,104	50.3	20
Kansas	1,373	1,997	45.4	29	1,464	2,089	42.7	23
Kentucky	1,483	1,872	26.2	37	1,149	1,678	46.0	41
Louisiana	**1,255**	**1,866**	**48.7**	**38**	**1,161**	**1,773**	**52.7**	**36**
Maine	1,579	2,063	30.7	26	1,227	1,560	27.1	49
Maryland	2,012	2,808	39.6	6	1,745	2,375	36.1	8
Massachusetts	1,626	2,377	46.2	14	1,662	2,100	26.4	21
Michigan	1,071	1,556	45.3	48	1,662	2,346	41.2	11
Minnesota	1,271	1,801	41.7	43	1,432	2,119	48.0	17
Mississippi	**1,690**	**2,073**	**22.7**	**25**	**945**	**1,314**	**39.0**	**51**
Missouri	1,847	2,450	32.6	9	1,388	1,958	41.0	30
Montana	1,588	2,231	40.5	18	1,305	1,883	44.3	32
Nebraska	1,194	2,103	76.1	21	1,433	1,998	39.4	28
Nevada	1,729	2,383	37.8	11	1,795	2,570	43.2	4
New Hampshire	1,466	1,879	28.2	36	1,477	2,034	37.7	26
New Jersey	1,271	1,722	35.5	45	1,886	2,485	31.8	6
New Mexico	2,101	3,138	49.4	3	1,101	1,640	49.0	43
New York	1,510	2,103	39.3	22	1,770	2,201	24.4	14
North Carolina	1,249	1,612	29.1	46	1,244	1,658	33.3	42
North Dakota	1,714	2,405	40.3	10	1,275	1,830	43.5	35
Ohio	1,132	1,545	36.5	49	1,578	2,172	37.6	16
Oklahoma	1,569	2,037	29.8	27	1,227	1,871	52.5	33
Oregon	1,360	1,911	40.5	32	1,486	2,178	46.6	15
Pennsylvania	1,328	1,905	43.4	33	1,535	2,078	35.4	24
Rhode Island	1,494	2,074	38.8	24	1,580	1,991	26.0	29
South Carolina	1,393	1,834	31.7	41	1,164	1,577	35.5	48
South Dakota	1,464	2,249	53.6	16	1,145	1,611	40.7	45
Tennessee	**1,551**	**2,378**	**53.3**	**12**	**1,268**	**1,711**	**35.0**	**37**
Texas	1,396	1,960	40.5	31	1,370	2,116	54.5	19
Utah	1,560	2,084	33.6	23	1,181	1,624	37.5	44
Vermont	1,503	1,862	23.9	39	1,308	1,595	21.9	46
Virginia	2,050	2,901	41.5	5	1,466	2,056	40.3	25
Washington	2,023	2,527	24.9	8	1,602	2,297	43.4	12
West Virginia	1,317	1,887	43.3	35	1,154	1,699	47.2	39
Wisconsin	1,044	1,448	38.7	51	1,454	1,950	34.1	31
Wyoming	1,530	2,119	38.5	20	1,533	2,364	54.2	10
District of Columbia	14,713	23,529	59.9	1	1,938	2,750	41.9	2

Source: " 'Neutral' Federal Policies are Reducing Frostbelt-Sunbelt Spending Imbalances," **National Journal,** February 7, 1981; U.S. Bureau of the Census, **State and Metropolitan Area Data Book, 1979** (A Statistical Abstract Supplement).

Note: States in boldface are the Sixth District states.

Table 3. Geographic Distribution of Federal Funds, Fiscal 1979

(Millions of Dollars)

	Ala.	Fla.	Ga.	La.	Miss.	Tenn.	District	U.S.
Department of Agriculture	367	719	600	533	440	569	3,227	25,059
Department of Commerce	38	64	25	378	32	25	561	3,643
Department of Defense	1,687	4,315	2,591	1,130	1,340	1,010	12,073	108,758
Department of Energy	33	71	17	875	8	1,357	2,361	11,790
Health and Human Services	2,967	9,171	3,491	2,748	1,942	3,306	23,624	181,021
Housing and Urban Development	112	187	141	106	64	125	736	6,749
Department of the Interior	21	75	99	25	45	25	290	5,826
Department of Justice	16	65	42	18	8	17	166	1,704
Department of Labor	224	511	308	222	142	221	1,628	15,178
State Department[1]	—	4	1	—	—	—	6	412
Department of Transportation	217	702	452	221	126	272	1,990	16,632
Treasury Department	135	301	277	191	113	204	1,220	11,685
International Department[1]	2	8	7	—	9	—	28	476
Community Services Administration	10	15	16	16	11	11	78	712
Environmental Protection Administration	55	196	90	70	60	83	553	5,332
General Services Administration	31	25	97	7	9	15	184	3,306
National Aeronautics and Space Administration	212	443	7	133	29	4	829	4,725
Postal Services	172	502	287	195	105	266	1,528	14,852
Railroad Retirement Board	65	195	90	58	40	88	535	4,464
Veterans Administration	415	1,094	563	365	279	483	3,197	21,177
Tennessee Valley Authority	356	8	183	2	44	1,964	2,557	4,339
Personnel Management (Civil Service)	246	928	297	125	106	331	2,033	16,997
TOTAL	7,381	19,596	9,681	7,418	4,953	10,376	59,405	464,836
Taxes collected	5,801	16,819	8,454	6,946	3,068	7,226	48,314	464,836
Net dollar flow	1,580	2,777	1,227	472	1,885	3,150	11,091	0

[1]Less than a million dollars.

Source: Community Services Administration, **Geographic Distribution of Federal Funds in Summary, Fiscal Year 1979.**

Location Quotients

Location quotients are another way of understanding geographic concentration of federal spending. A location quotient measures outlays per capita in an area relative to per capita outlays in the nation. Location quotients greater than one indicate that, on a per person basis, the department or agency is of greater economic importance to the area than nationally. In the Sixth District, the Tennessee Valley Authority had the highest location quotients of the federal agencies (5.6 in the Sixth District and 19.0 in Tennessee). The Veterans Administration had a location quotient well above unity (1.164). The Departments of Agriculture and Health and Human Services were near unity.

Cuts in Programs

For an understanding of how the budget cuts may affect the region, we really need to know how much the Southeast depends financially on Washington to support specific programs. In looking at these programs, we need to remember that a substantial proportion of the cuts will be offset by block grants to states. The block grant plan is intended to

give state and local governments more flexibility in how federal dollars are distributed among various programs.

Although spending cuts have been proposed in numerous areas, few have received as much attention as the social programs — unemployment insurance, food stamps, aid to families with dependent children, school lunch programs, etc. Rather than undertaking a line-by-line synopsis of the proposed cuts, let us examine the importance of the primary spending cuts on the Southeast.

Food Stamps. Perhaps at the top of the list is the Food Stamp Program. The Administration proposal calls for a $1.8-billion cut in 1982 and a $6.4-billion reduction over the next four years. Bear in mind, however, that those proposed cuts are not necessarily reductions from prior spending levels but from what was proposed by the previous administration.

In August 1980, 1.4 million households (over 4 million persons) were receiving food stamps in the Southeast. Charts 1 and 2 show the level of participation as well as the growth of the Food Stamp Program in the Southeast. There were more food stamp participants in the Sixth District states than the entire population of Alabama. One out of four persons in Mississippi received food stamps in August 1980.

In dollar terms, the magnitude of assistance the Southeast receives under the Food Stamp Program is just as significant. During the first 11 months of fiscal 1980 (October 1, 1979-August 30, 1980), $1.5 billion was paid to individuals in the six Southeastern states — 19 percent of the national total. The average value of coupons ranged from $101 per month in Georgia and Tennessee to $109 per month in Mississippi. As Table 4 shows, all six District states had a higher proportion of their residents receiving food stamps than the national average. In Georgia, for instance, 653,384 persons were in the program — 12 percent of its 1980 population. The most populous state — Florida — had the highest number of participants but was the lowest in the District relative to its population — 10 percent.

School Lunches. A second program receiving widespread attention is the school lunch program. The federal government provides cash, commodities, and special cash assistance to school districts that agree to provide free meals to the low-income students (125 percent of the poverty income) and reduced-price meals to students from families with incomes 125 to 185 percent of the poverty line. (As of April 1981, the poverty level for a family of four was $8,450.)

Under the Reagan proposal, students from four-person families with incomes over $15,630 per year will not continue to receive the subsidy. Consequently, an estimated 14 million students nationally will lose this federal subsidy.

Food Stamp Participation . . . *expanding in Southeast*

	Percent of Population	
	1979	1980
District	11.8	13.3
U.S.	8.6	9.8

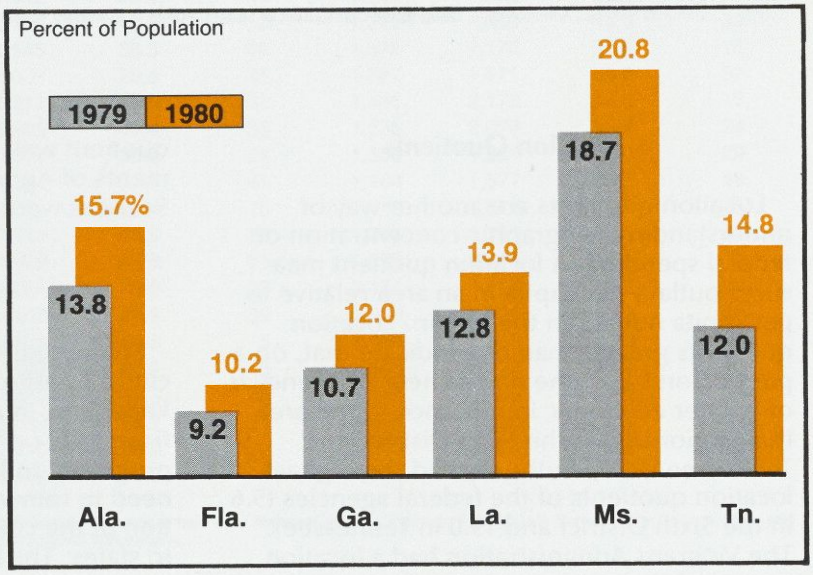


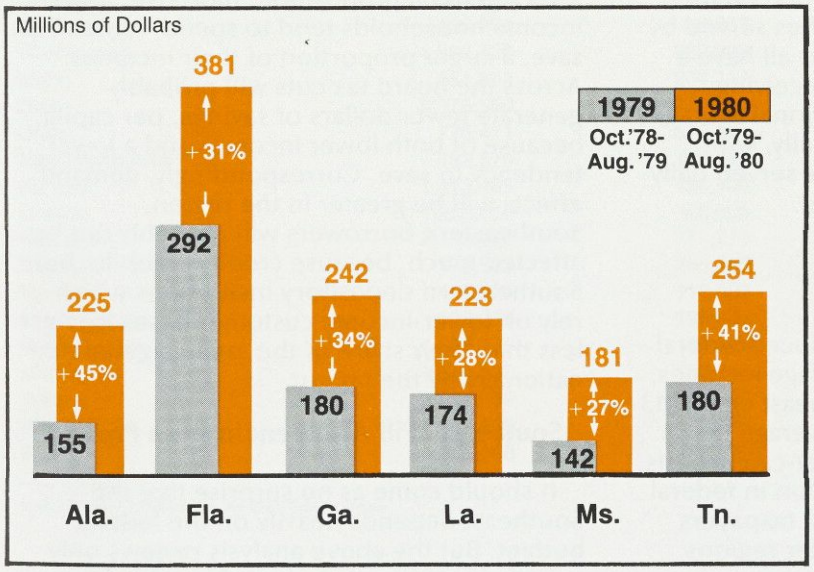
Table 4. Participation in Food Stamp Program by State, 1980

	Food Stamp Participants	Population	Percent of Population
Higher than the National Average, 1980:9.8%			
Puerto Rico	1,859,689	3,186,076	58.4
Mississippi	**524,139**	**2,520,638**	**20.8**
Alabama	**608,867**	**3,890,061**	**15.7**
District of Columbia	99,081	637,651	15.5
New Mexico	194,536	1,299,968	15.0
Tennessee	**677,057**	**4,590,750**	**14.8**
South Carolina	444,719	3,119,208	14.3
Louisiana	**584,255**	**4,203,972**	**13.9**
Kentucky	490,966	3,661,433	13.4
Arkansas	305,602	2,285,513	13.4
Maine	140,924	1,124,660	12.5
Georgia	**653,384**	**5,464,255**	**12.0**
West Virginia	211,707	1,949,644	10.9
Hawaii	104,860	965,000	10.9
New York	1,817,077	17,557,288	10.4
Florida	**997,754**	**9,739,992**	**10.2**
North Carolina	594,484	4,874,429	10.1
Lower than the National Average			
Michigan	895,890	9,258,344	9.7
Rhode Island	91,280	947,154	9.6
Delaware	53,286	595,225	9.0
New Jersey	641,828	7,364,158	8.7
Pennsylvania	1,024,261	11,866,728	8.6
Ohio	910,801	10,797,419	8.4
Texas	1,188,559	14,228,383	8.4
Arizona	226,916	2,717,866	8.4
Oregon	216,966	2,632,663	8.2
Illinois	930,062	11,418,461	8.2
Maryland	337,660	4,216,446	8.0
Vermont	40,639	511,456	8.0
Massachusetts	448,864	5,737,037	7.8
Alaska	31,078	400,481	7.8
Virginia	410,893	5,346,279	7.7
Missouri	360,131	4,917,444	7.3
Indiana	398,781	5,490,179	7.3
Idaho	67,592	943,935	7.2
Oklahoma	215,837	3,025,266	7.1
South Dakota	47,038	690,178	6.8
California	1,588,055	23,668,562	6.7
Washington	261,967	4,130,163	6.3
Colorado	174,474	2,888,834	6.0
Montana	46,187	786,690	5.9
New Hampshire	52,317	920,610	5.7
Connecticut	172,841	3,107,576	5.6
Iowa	156,569	2,913,387	5.4
Wisconsin	236,821	4,705,335	5.0
Nebraska	72,349	1,570,006	4.6
Nevada	36,614	799,184	4.6
Minnesota	185,874	4,077,148	4.6
North Dakota	28,554	652,695	4.4
Kansas	101,981	2,363,208	4.3
Utah	60,584	1,461,037	4.2
Wyoming	15,173	470,816	3.2

Source: Population figures, **U.S. News and World Report,** February 16, 1981; food stamp data, **Statistical Summary of Operations** (August 1980), U.S. Department of Agriculture, Food and Nutrition Service.

Note: States in boldface are the Sixth District states.

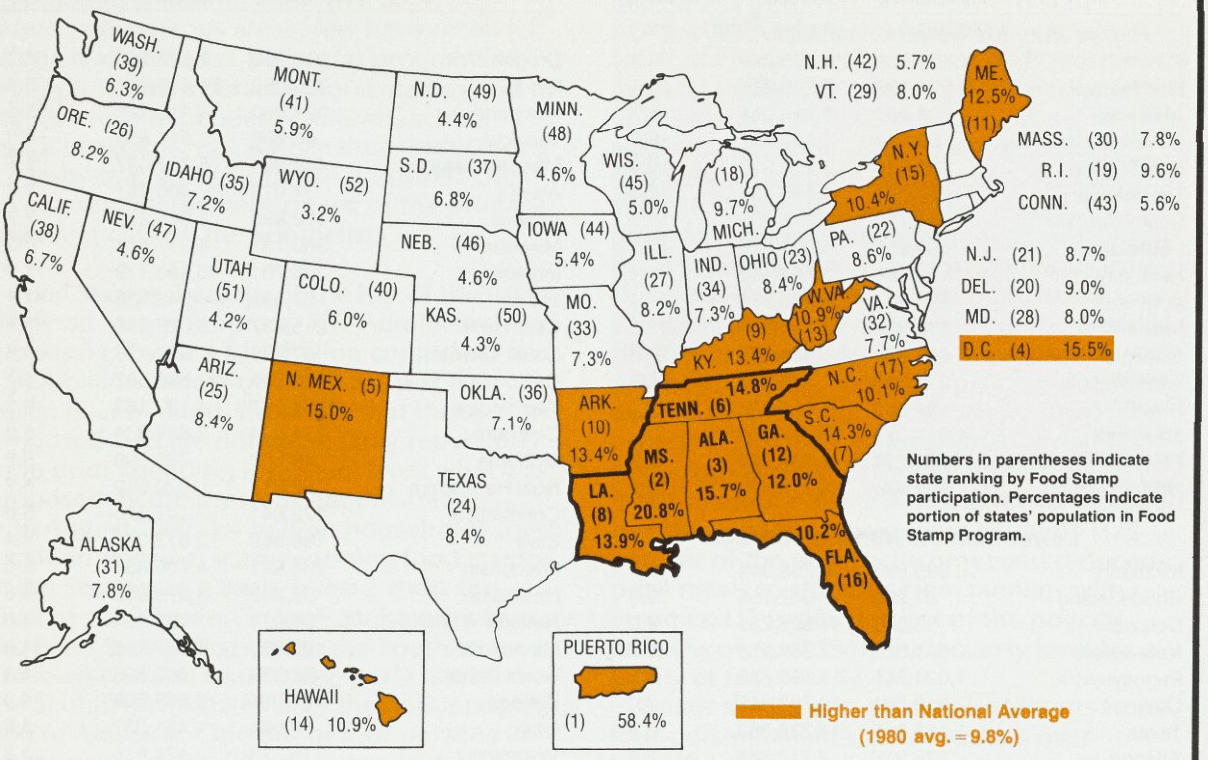
Food Stamp Dollar Value *District growth rate exceeds nation's.*



Millions of Dollars

	Oct. '78-Aug. '79	Oct. '79-Aug. '80
District	1,124	1,506
U.S.	6,573	7,944

Participation in Food Stamp Program, 1980



Source: Population figures, **U.S. News and World Report,** February 16, 1981; food stamp data, **Statistical Summary of Operations** (August 1980), U.S. Department of Agriculture, Food and Nutrition Service.

Table 5 provides a ranking by percent of total free or reduced-price lunches served by state. The six southeastern states all have a higher proportion of students receiving subsidized lunches than the national average. Mississippi ranks second nationally, with almost three out of four lunches served daily either free or at a reduced-price.

Tax Cuts

Tax cuts will help to offset reduced federal spending in the Southeast. Average incomes, however, are lower in the Southeast (about 13 percent less than the national average in 1978). Therefore, on a dollars-per-capita basis, the proposed 10-percent reduction in federal income taxes will tend to benefit taxpayers less in the Southeast than in other regions.

As a general proposition, moreover, lower income households tend to spend, rather than save, a larger proportion of their incomes. Across the board tax cuts will probably generate fewer dollars of savings, per capita, because of both lower incomes and a lower tendency to save. Correspondingly, demand effects will be greater in the region. Southeastern borrowers will probably not be affected much, because credit is mobile, but Southeastern depository institutions which rely on lower-income customer bases may get less than their share of the savings generated nationally by the tax cut.

Southeast Will Also Benefit from Program

It should come as no surprise that the Southeast depends heavily on the federal budget. But the above analysis reviews only

Table 5. Participation in School Lunch Program by State, October 1980

State	Lunches Served			F&R as Percent of Total
	Free (F)	Reduced (R)	Total	
Dist. of Columbia	966,083	62,563	1,222,970	84.1
Mississippi	**5,958,734**	**772,310**	**9,335,364**	**72.1**
New Mexico	1,952,000	381,464	3,620,939	64.4
Rhode Island	735,961	127,581	1,399,074	61.7
Alabama	**6,471,677**	**1,082,661**	**12,283,650**	**61.5**
South Carolina	5,412,621	912,935	10,552,237	59.9
New York	17,527,608	2,037,277	32,744,536	59.8
Texas	17,282,223	3,184,117	37,397,656	54.7
North Carolina	8,518,340	1,681,607	18,858,837	54.1
Arkansas	3,323,623	537,930	7,171,105	53.8
Louisiana	**7,092,120**	**1,041,865**	**15,456,135**	**52.6**
Maine	1,061,109	446,120	2,871,987	52.5
California	11,055,854	1,211,713	23,542,129	52.1
Florida	**8,490,222**	**1,840,798**	**20,543,916**	**50.3**
West Virginia	2,158,630	517,704	5,374,514	49.8
New Jersey	5,999,840	842,606	13,819,305	49.5
Tennessee	**5,243,631**	**850,196**	**12,457,256**	**48.9**
Georgia	**7,989,646**	**1,161,461**	**19,000,965**	**48.2**
Illinois	8,720,397	844,293	20,663,086	46.3
Delaware	501,016	74,372	1,245,555	46.2
Arizona	2,311,445	439,264	6,016,958	45.7
Same or Lower than the National Average: 45.6%				
Kentucky	4,300,600	900,400	11,401,300	45.6
Maryland	2,982,339	711,002	8,520,769	43.3
Vermont	373,106	132,843	1,178,030	42.9
Oklahoma	2,534,122	604,426	7,367,593	42.6
Virginia	5,125,798	955,396	14,437,119	42.1
Alaska	247,686	45,024	709,666	41.2
Connecticut	1,954,124	483,913	6,131,119	39.8
Michigan	5,413,044	932,679	16,033,826	39.6
Missouri	4,188,992	840,062	13,047,431	38.5
Massachusetts	4,151,506	673,682	13,400,132	36.0
Hawaii	901,822	253,065	3,354,801	34.4
Pennsylvania	6,908,043	1,948,422	25,991,885	34.1
Colorado	1,565,713	438,682	5,992,749	33.4
Nevada	400,994	86,057	1,463,605	33.3
Washington	1,826,496	632,200	7,503,667	32.8
Idaho	581,802	204,117	2,437,811	32.2
Ohio	6,373,550	1,274,631	23,880,506	32.0
Utah	776,411	512,431	4,079,632	31.6
New Hampshire	492,579	196,789	2,190,860	31.5
Kansas	1,413,489	490,508	6,294,943	30.2
Oregon	1,250,000	380,000	5,530,000	29.5
Wisconsin	2,143,826	771,710	10,060,305	29.0
Nebraska	772,362	356,283	3,894,308	29.0
Montana	415,919	110,852	1,845,590	28.5
South Dakota	502,070	198,447	2,483,032	28.2
North Dakota	355,436	133,324	1,853,088	26.4
Minnesota	1,570,629	737,747	10,252,395	22.5
Indiana	2,367,639	564,675	13,812,581	21.2
Wyoming	157,939	72,265	1,086,224	21.2
Iowa	1,325,168	486,979	9,213,455	19.7

Note: States in boldface are the Sixth District states.

the *effects* associated with the proposed spending and tax reductions. The objective of the proposed cuts is to reduce inflation and revitalize the economy. People in the Southeast have as much stake in reducing inflation as other regions of the country.

Historically, one of the Sun Belt's major attractions has been its relatively low cost of living. Over the last two years, however, inflation in the Southeast has paralleled or exceeded the nation. Miami consumer prices rose 13.2 percent in 1979 and 11.4 percent in 1980. Atlanta prices rose 14 percent in 1979 and 15.7 percent in 1980. Nationally, consumer prices rose 13.9 percent in 1979 and 11.7 percent in 1980.

Also, the proposed cutbacks in social expenditures may be somewhat offset if the region continues to attract a disproportionate share of defense spending. If so, the effects will not be evenly distributed, since defense spending is more concentrated in particular locations within the region than social expenditures. Some locations will benefit more than others, as might be expected.

It is obvious that federal spending has been growing sharply over the last decade. Federal outlays have exceeded tax collections in each of the past 11 years. The budget has not been in balance since 1969, prompting the federal government to borrow heavily in short-term and long-term credit markets and thereby placing upward pressure on interest rates and inflation. If the proposed spending reductions can help unwind inflation in the Southeast, the effects of increased real incomes of Southeastern residents could well outstrip the reduced federal spending in the area. ER

—Charlie Carter

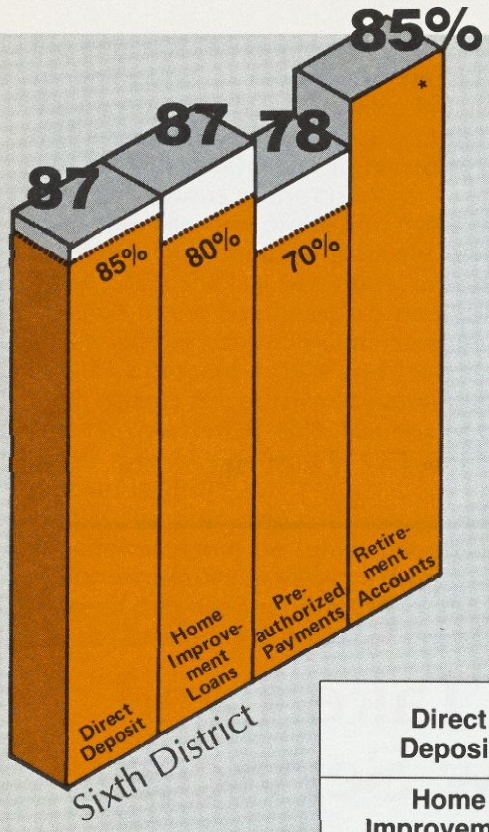
- Auto Loans
- Automatic Teller Machines
- Consumer Installment Loans
- Credit Cards
- Direct Deposit
- Home Improvement Loans
- Overdraft Protection
- Preauthorized Payments
- Safe Deposit Boxes
- Retirement Accounts

Survey: Georgia S&Ls Take Lead In New Services

In the new regulatory environment, many savings and loan associations are considering whether to expand their product lines and to become more like retail commercial banks. NOW accounts filled an important gap in the S&L product line. The prospect of rate-ceiling elimination by the DIDC, the continuing portfolio imbalances and the new competition from money market funds (together with discussion of possible interstate banking) are putting additional pressure on S&Ls to diversify from their traditional savings deposit/mortgage asset business.

Recognizing this, the Federal Reserve Bank of Atlanta called a representative sample of sixty thrift institutions within its boundaries. We asked each association whether or not they were offering each of ten retail financial services, and whether they were planning to offer them "within the next few months."

David Rittiner assisted with the preparation of this survey.



Already offered

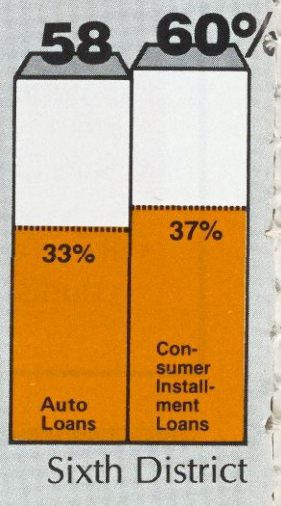
Almost all associations were already offering four of the services: direct deposit of checks, establishment of trust accounts (IRA, Keogh, etc.), home improvement loans and preauthorized payments. Home improvement loans are a new service in many cases, but one where the traditional S&L mortgage involvement with housing collateral provides obvious experience. S&Ls have in many cases been the Southeastern leaders in direct deposit, particularly with regard to social security checks, while preauthorized payments and retirement accounts are allied to the savings function. In these four services, across the Sixth Federal Reserve District, the great majority of associations were already offering them and there is little room for a subsequent increase in competitiveness.

	Ala.	Fla.	Ga.	La.	Ms.	Tn.
Direct Deposit	100% / *	93 / 85	92 / *	70 / *	75 / *	88 / *
Home Improvement Loans	67 / 56	84 / 69	92 / *	100 / *	75 / *	100 / 88
Preauthorized Payments	89 / 78	84 / 61	92 / *	60 / *	62 / *	74 / 62
Retirement Accounts	89 / *	85 / *	75 / *	90 / *	100 / *	88 / 75

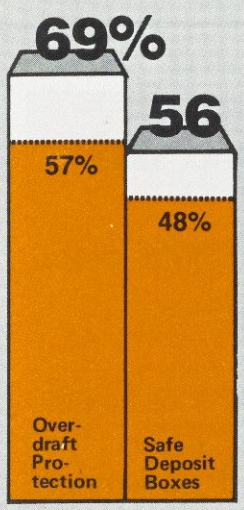
*No change from percent now to percent soon.

Looking for expansion

Where the thrifts are looking for expansion, apparently, is with their new access to consumer installment loans and auto loans. About one-third of the associations sampled have already begun to offer such loans, and that proportion will jump to three-fifths within the near future. Two-thirds of the associations in Alabama and Georgia plan to be offering auto loans in the near future, and interestingly enough, three-quarters of the associations we called in Georgia already offer consumer installment loans of various sorts. Many associations see these loans as a short-maturity asset to balance longer-term mortgages (as well as short-term S&L liabilities).



	Ala.	Fla.	Ga.	La.	Ms.	Tn.
Auto Loans	66% / 33	61 / 23	66 / 58	50 / 30	50 / 38	50 / 12
Consumer Installment Loans	55 / 22	69 / 31	75 / *	50 / 30	50 / 38	50 / 12



Sixth District

Moderate movement

In two other product lines, overdraft protection and safe deposit boxes, S&Ls generally are moving slowly. Three-fifths of the District associations already offer overdraft protection (presumably in conjunction with NOW accounts) and another ten plan to add the service soon. Safe deposit boxes, a traditional customer service, show plans for quiet expansion except in Florida, where many thrifts are adding them.

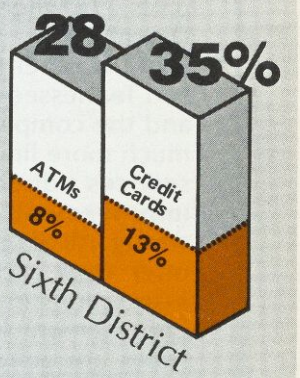
	Ala.	Fla.	Ga.	La.	Ms.	Tn.
Overdraft Protection	78% / 56	62 / 54	91 / 83	50 / 40	50 / *	75 / 50
Safe Deposit Boxes	33 / 22	69 / 31	75 / 67	40 / *	50 / 38	50 / 38

*No change from percent now to percent soon.

Moving slowly

At the end of the spectrum, very few associations offered automatic teller machines, and only about a quarter of the sample associations expected to offer them soon. These were the overall District findings, despite the fact that about a quarter of Florida associations already offer automatic teller machines, and half of the Georgia associations plan to offer them. Elsewhere, automatic teller machines, because of their high cost in an environment where S&L profits are under pressure, are apparently not very popular on the S&L agenda.

Credit cards are also moving slowly. Only one-third of the associations sampled planned to offer credit cards in the near future, and only a third of that group offer them now. The exception, once again, was in Georgia, where virtually sixty percent of the associations plan to offer credit cards soon. Informal comments suggest that some associations are holding back because they wonder if their markets are already saturated and they question whether the cards are really profitable. We made no attempt to distinguish among various types of credit card arrangements some of which involve very little risk (or profit) to participating associations. So it appears that ATMs and credit cards are not the wave of the near future as far as savings and loan associations in the Sixth Federal Reserve District are concerned.



Sixth District

	Ala.	Fla.	Ga.	La.	Ms.	Tn.
Automatic Teller Machines	33 / 0	23 / *	50 / 8	30 / 10	25 / 0	0 / 0
Credit Cards	33 / 0	30 / 15	59 / 17	40 / 30	12 / 0	24 / 12

Note: Sixth District portion only for Louisiana, Mississippi and Tennessee.

Georgia associations, in general, show the highest degree of involvement with the services we asked about. Ninety-two percent of the Georgia thrifts offer pre-authorized payments, home improvement loans and direct deposit services, for example. In virtually every case, the Georgia percentages exceeded the percentages for the Sixth District as a whole.

The Georgia associations are more aggressive than even their Florida counterparts in offering new services. This is somewhat of a surprise since Florida S&Ls are generally much larger than S&Ls in Georgia. Georgia associations were more than twice as likely to offer auto loans and consumer installment loans in late February than were their Florida counterparts. Florida thrifts turned out to be fairly typical of the Southeast. They are already heavily into direct deposit and trust account services, and high on home improvement loans and preauthorized payments and are expanding them somewhat further, but are not expanding their product lines with quite the same enthusiasm as their cousins in Georgia.

The associations in Alabama also appear to be much more interested in new services than those in Florida. All of the thrifts sampled in Alabama already offered direct deposit services, for example, and seventy-eight percent of them offer overdraft protection in conjunction with NOW accounts. This was the highest proportion in any state except Georgia. Alabama associations have more aggressive plans for auto loans and consumer loans than their counterparts elsewhere within the Sixth Federal Reserve District.

In the other three states — Louisiana, Mississippi and Tennessee — where the number of associations and the competition between thrifts and banks are much more limited, the interest in the four primary services (direct deposit, trust accounts, home improvement and preauthorized payments) is strong. All of the associations sampled in Mississippi offer trust accounts, for example, and all of the associations in Louisiana are already offering home improvement loans. But the thrifts in these three states are generally not as interested in the other services: auto loans, consumer installment loans, overdraft protection (except for Tennessee), safe deposit boxes and particularly automatic teller machines. Louisiana thrifts do, however, show some interest in the credit card product, relative to their counterparts in the rest of the District.

Sixth District S&Ls

- Georgia thrifts more aggressive
- Alabama S & Ls expanding plans for auto and consumer loans
- Florida pattern typical of S.E.
- Credit cards attracting activity in Louisiana
- Thrift-bank competition limited in Tennessee and Mississippi

—William N. Cox

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The Impact of Florida's Freeze on Vegetable Prices

Florida, which provides about 40 percent of the U.S. winter vegetable crop, suffered a damaging freeze in January. With supplies of imports and processed vegetables also down, higher food prices appear likely, but changes in prices for specific foods are difficult to predict.

A freeze in Florida's winter vegetable-growing region in January damaged or destroyed a substantial proportion of the growing crops. Items such as sweet corn and peppers were affected more severely than were the more hardy celery, lettuce, and carrot crops. In total, however, vegetable tonnage shipped from the area declined by an estimated one-third during the weeks following the freeze.

With supplies reduced, prices were expected to rise as market forces competed for the smaller quantities available for sale. When a similar freeze occurred in early 1977, prices to growers increased about 40 percent within two months following the freeze (see Figure 1). Fresh vegetable prices at retail continued to advance until three months had passed, reaching about 33 percent above the pre-freeze level (see Figure 2).

Following January's freeze this year, growers' prices had risen about 30 percent by March. If 1981's consumer price increases follow the 1977 pattern, the supply reduction from January's freeze would be expected to cause an eventual price rise of one-third or more. Price increases are probably being tempered somewhat, however, by the rapid price escalation that had already occurred in 1980 as a consequence of drought.

Predicting Food Price Changes

Why is it difficult to predict more accurately price changes for specific foods? Food prices are nearly always highly sensitive to changes in supply. A supply reduction typically results in an increase in food prices. For most food commodities, the price increase will be relatively greater than the drop in supply. This relationship is basically attributable to the nature of human food requirements. Since human physiological requirements are relatively fixed, the total volume of food consumed by a given population within short periods of time (e.g., a few years) does not change much.

This relative stability in demand means that if the quantity of available food changes, the price will also change, but by an even greater proportion and in the opposite direction. If the total food supply were to drop 30 percent,

Chart 1
Price of Commercial Vegetables
(Monthly Index of Prices Received by Farmers)
1967 = 100

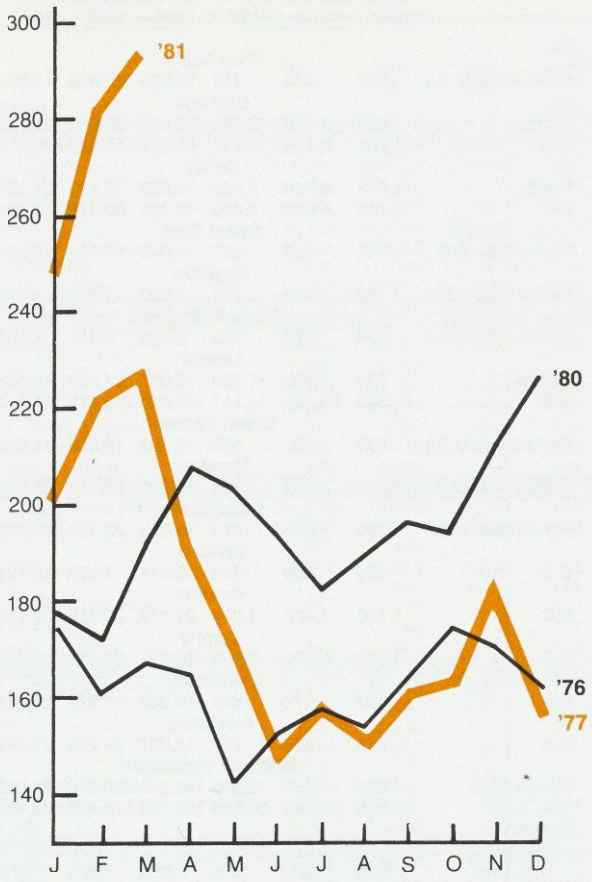
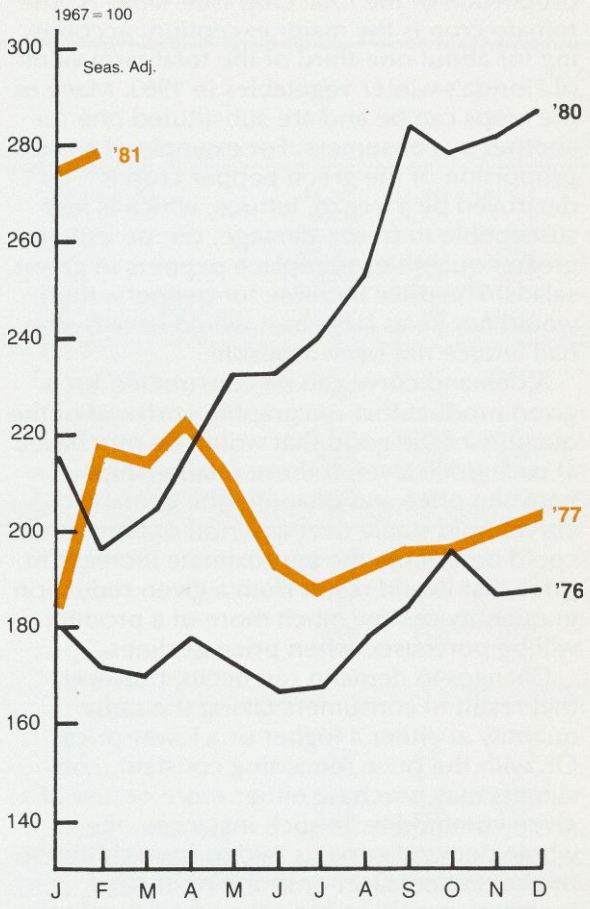


Chart 2
Consumer Price Index for Fresh Vegetables



for example, and the demand remained about the same, prices would rise, probably by more than 100 percent. In economic terms, the total demand for food is *relatively price inelastic* (changes in price are accompanied by relatively small changes in the total quantity of food purchased).[1] An elasticity coefficient of −0.5 means that a one-percent increase in price results in a 0.5-percent decline in food purchased. A coefficient of 1.5 signifies that for each one-percent change in price, quantity changes by 1.5 percent.

Forecasting individual price changes, however, is more complicated than that. The demand for individual food groups or commodities typically has greater price elasticity than total food demand because consumers can substitute one food for another. Thus, if the price of one commodity rises, the quantity purchased can decline, since consumers can switch to other foods. Even so, habits and custom make most consumers reluctant to change their usual diets, so quantity purchased typically changes less than the price for most individual foods as well (when all other variables remain unchanged).

The Case of Florida

Elasticity statistics for a group of winter vegetables are probably more meaningful indicators than are statistics for individual

[1] A number of demand studies have confirmed the relative inelasticity of overall food demand. The most recent comprehensive study determined price elasticities for 49 separate food groups and/or commodities. See P. S. George and G. A. King, **Consumer Demand for Food Commodities in the United States with Projections for 1980**, California Agricultural Experiment Station, Giannini Foundation Monograph No. 26, March 1971. Although coefficients for some individual vegetables appear to differ from the combined group, individual coefficients have not proven stable over varying time periods, geographic locations, and market levels. See Carole F. Nuckton, **Demand Relationships for Vegetables: A Review of Past Studies**, Giannini Foundation Special Report 80-1, California Agricultural Experiment Station, Davis, California.

crops. In Florida, at least, most individual winter vegetables account for a rather small proportion of the total crop (see Table 1). The tomato crop is the major exception, accounting for about one-third of the total farm value of Florida's winter vegetables in 1980. Many of the crops can be and are substituted one for another by consumers. For example, if a large proportion of the green pepper crop is destroyed by a freeze, lettuce, which is less susceptible to freeze damage, can be used in greater quantities to replace peppers in green salads. The price increase for peppers, then, would not be as large as it would have been had lettuce not been available.

A demand curve can be constructed for a given product that is a graphic portrayal of the quantity of the good that would be purchased at each price level. If these relationships between price and quantity (the demand curve) hold stable over a period of time, one could determine the approximate increase in price that would result from a given reduction in quantity or how much more of a product will be purchased when price declines.

Changes in demand can occur, however, that result in consumers taking the same quantity at either a higher or a lower price. Or, with the price remaining constant, consumers may purchase either more or less of a given commodity. In such instances, the whole demand curve is said to have shifted to the left (a decrease) or to the right (an increase), resulting in a new schedule of price and quantity relationships. In the previous case, when price changed, the quantity also changed, but it merely reflected a movement along the same demand schedule, not a shift to a different schedule.

When the relationship between price and quantity (the demand curve) is stable, data on quantity sold and total revenue from a given crop can give us an indication of the actual price elasticity of demand for that product.

If total revenue increases when a larger quantity is marketed (as with sweet corn in 1980), demand is demonstrated to be relatively elastic. If a smaller quantity marketed generates an increase in revenue (as with snap beans in 1980), a relatively inelastic demand is indicated. When production and revenue change in approximately equal proportions (as with eggplant in 1980), a price elasticity of unity is indicated.

Table 1 shows production and crop values for individual winter vegetable crops produced in Florida and in the United States in 1979 and 1980. A comparison of percentage changes in production and revenue, shown in

Table 1. Winter Vegetable Crops for Fresh Market

	Production (000 cwt.)			Total Value ($ 000)		
	1978	1979	1980	1978	1979	1980
			Snap Beans			
Florida (also U.S.)	302	444	419	10,570	12,698	13,534
			Cabbage			
Florida	1,523	2,448	2,280	14,194	35,251	11,172
U.S.	4,701	4,126	4,931	41,621	55,828	26,012
			Celery			
Florida	1,848	2,244	2,325	20,698	25,133	21,297
U.S.	4,149	4,890	4,890	40,995	50,376	40,715
			Sweet Corn			
Florida (also U.S.)	767	833	867	10,048	11,162	12,225
			Eggplant			
Florida (also U.S.)	99	128	126	1,020	1,702	1,676
			Escarole/Endive			
Florida (also U.S.)	325	429	360	6,858	8,451	4,608
			Lettuce			
Florida	779	1,290	1,360	13,087	27,090	16,048
U.S.	14,342	14,231	15,117	135,820	216,512	121,877
			Green Peppers			
Florida (also U.S.)	633	702	572	13,103	16,918	14,643
			Tomatoes			
Florida (also U.S.)	2,240	2,583	3,725	40,320	60,184	65,933
			Strawberries			
Florida (also U.S.)	290	384	475	16,646	22,157	27,930
			Spinach			
U.S.	305	309	416	5,611	7,829	10,794
			Broccoli			
U.S.	1,180	1,422	1,394	21,176	29,419	32,777
			Carrots			
U.S.	4,059	3,552	3,825	28,761	34,991	27,707
			Cauliflower			
U.S.	409	677	640	10,983	17,973	20,925
			Artichokes			
U.S.	525	873	792	14,201	24,220	27,473
			All Winter Vegetables			
Florida Total	8,806	11,485	12,509	146,544	220,746	189,066
U.S. Total	34,326	35,583	38,549	397,733	570,420	448,829
Florida as Percent of U.S. Total	26%	33%	32%	37%	39%	42%

Source: USDA, **Vegetables, 1980 Annual Summary: Acreage, Yield, Production, and Value,** December 1980.

$ millions	MAY 1981	APR 1981	DEC 1980	ANN. RATE OF CHG.
UNITED STATES				
Commercial Bank Deposits	1,015,840	1,010,492	1,023,890	- 2
Demand	301,203	292,103	331,555	-26
NOW	41,384	38,185	0	
Savings	164,080	165,403	173,173	-15
Time	542,010	540,736	525,805	+ 9
Credit Union Deposits	38,276	37,716	35,882	+19
Share Drafts	2,107	1,834	1,631	+83
Savings & Time	34,153	33,705	32,102	+18
SOUTHEAST				
Commercial Bank Deposits	110,028	108,791	104,546	+15
Demand	35,624	34,614	38,707	-23
NOW	5,298	4,853	0	
Savings	15,700	15,805	16,357	-12
Time	56,923	56,300	51,539	+30
Credit Union Deposits	3,311	3,312	3,209	+ 9
Share Drafts	261	210	174	+43
Savings & Time	2,870	2,868	2,345	+64
ALABAMA				
Commercial Bank Deposits	12,678	12,325	12,260	+10
Demand	3,599	3,394	3,955	-26
NOW	477	442	0	
Savings	1,662	1,664	1,745	-14
Time	7,346	7,120	6,751	+25
Credit Union Deposits	544	537	521	+13
Share Drafts	51	46	41	+70
Savings & Time	491	486	479	+ 7
FLORIDA				
Commercial Bank Deposits	36,831	36,466	35,079	+14
Demand	13,217	12,983	14,219	-20
NOW	2,361	2,142	0	
Savings	6,786	6,873	7,100	-13
Time	15,532	15,230	14,000	+31
Credit Union Deposits	1,550	1,530	1,491	+11
Share Drafts	135	116	106	+78
Savings & Time	1,192	1,191	1,177	+ 4
GEORGIA				
Commercial Bank Deposits	14,614	14,442	14,217	+ 8
Demand	6,046	5,953	6,663	-27
NOW	754	686	0	
Savings	1,629	1,620	1,650	- 4
Time	7,194	7,130	6,854	+14
Credit Union Deposits	565	565	543	+12
Share Drafts	18	14	12	+43
Savings & Time	536	537	517	+11
LOUISIANA				
Commercial Bank Deposits	19,467	19,349	18,689	+12
Demand	6,086	5,907	6,541	-20
NOW	687	651	0	
Savings	2,506	2,494	2,539	- 4
Time	10,756	10,754	10,086	+19
Credit Union Deposits	83	79	57	+130
Share Drafts	5	4	4	+71
Savings & Time	78	74	51	+151
MISSISSIPPI				
Commercial Bank Deposits	9,168	8,993	8,662	+17
Demand	2,453	2,302	2,620	-18
NOW	398	362	0	
Savings	811	821	861	-17
Time	5,765	5,702	5,364	+21
Credit Union Deposits	N.A.	N.A.	N.A.	
Share Drafts	N.A.	N.A.	N.A.	
Savings & Time	N.A.	N.A.	N.A.	
TENNESSEE				
Commercial Bank Deposits	17,270	17,216	15,639	+30
Demand	4,223	4,075	4,709	-30
NOW	621	570	0	
Savings	2,306	2,333	2,462	-18
Time	10,330	10,364	8,484	+62
Credit Union Deposits	599	601	597	+ 1
Share Drafts	32	30	29	+30
Savings & Time	573	580	572	+ 1

	MAY 1981	APR 1981	DEC 1980	ANN. RATE OF CHG.
Savings & Loans				
Total Deposits	511,371	513,352	504,630	+ 4
NOW	5,656	4,725	0	
Savings	103,075	105,007	107,765	-12
Time	402,409	402,584	394,296	+ 6
	MAR	FEB	DEC	
Mortgages Outstanding	498,320	496,610	494,179	+ 3
Mortgage Commitments	17,196	16,197	16,021	+29
Savings & Loans				
Total Deposits	80,838	80,957	78,684	+ 8
NOW	890	747	0	
Savings	13,047	12,834	12,852	+ 4
Time	60,578	60,958	59,205	+ 7
	MAR	FEB	DEC	
Mortgages Outstanding	72,314	71,906	71,065	+ 7
Mortgage Commitments	3,825	3,530	3,656	+19
Savings & Loans				
Total Deposits	4,382	4,395	4,262	+ 8
NOW	47	39	0	
Savings	653	664	691	-16
Time	3,697	3,697	3,572	+10
	MAR	FEB	DEC	
Mortgages Outstanding	3,971	3,967	3,947	+ 2
Mortgage Commitments	143	155	140	+ 9
Savings & Loans				
Total Deposits	45,391	45,414	43,967	+ 9
NOW	640	547	0	
Savings	8,780	8,500	8,415	+12
Time	35,736	36,087	35,026	+ 6
	MAR	FEB	DEC	
Mortgages Outstanding	43,791	43,426	42,742	+10
Mortgage Commitments	3,116	2,828	2,984	+18
Savings & Loans				
Total Deposits	9,505	9,540	9,259	+ 8
NOW	86	66	0	
Savings	1,368	1,397	1,434	-13
Time	8,063	8,074	7,817	+ 9
	MAR	FEB	DEC	
Mortgages Outstanding	9,392	9,358	9,332	+ 3
Mortgage Commitments	174	158	183	-20
Savings & Loans				
Total Deposits	7,063	7,081	6,883	+ 7
NOW	47	39	0	
Savings	1,276	1,289	1,287	- 2
Time	5,747	5,757	5,595	+ 8
	MAR	FEB	DEC	
Mortgages Outstanding	6,862	6,835	6,777	+ 5
Mortgage Commitments	257	238	221	+65
Savings & Loans				
Total Deposits	1,819	1,822	1,794	+ 4
NOW	16	13	0	
Savings	195	197	210	-20
Time	1,615	1,615	1,587	+ 5
	MAR	FEB	DEC	
Mortgages Outstanding	2,188	2,188	2,182	+ 1
Mortgage Commitments	57	61	58	- 7
Savings & Loans				
Total Deposits	6,560	6,569	6,431	+ 6
NOW	54	43	0	
Savings	775	787	815	-14
Time	5,720	5,728	5,608	+ 6
	MAR	FEB	DEC	
Mortgages Outstanding	6,110	6,132	6,085	+ 2
Mortgage Commitments	78	90	70	+46

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

	MAR 1981	FEB 1981	MAR 1980	ANN. % CHG.		MAR 1981	FEB 1981	MAR 1980	ANN. % CHG.
UNITED STATES									
Civilian Labor Force - thous.	105,405	104,808	103,351	+ 2	Nonfarm Employment- thous.	90,759	90,236	90,316	+ 1
Total Employed - thous.	97,318	96,383	96,546	+ 1	Manufacturing	20,222	20,147	20,793	- 3
Total Unemployed - thous.	8,087	8,425	6,805	+19	Construction	4,137	3,987	4,150	- 0
Unemployment Rate - % SA	7.3	7.3	6.3		Trade	20,478	20,397	20,226	+ 1
Insured Unemployment - thous.	3,471	3,704	3,492	- 1	Government	16,393	16,368	16,445	- 0
Insured Unempl. Rate - %	4.1	4.3	4.1		Services	18,107	17,953	17,478	+ 4
Mfg. Avg. Wkly. Hours	40.0	39.5	39.8	+ 1	Fin., Ins., & Real Est.	5,247	5,232	5,085	+ 3
Mfg. Avg. Wkly. Earn. - $	312	306	281	+11	Trans. Com. & Pub. Util.	5,096	5,080	5,143	- 1
SOUTHEAST									
Civilian Labor Force - thous.	12,830	12,801	12,590	+ 2	Nonfarm Employment- thous.	11,421	11,380	11,196	+ 2
Total Employed - thous.	11,901	11,848	11,829	+ 1	Manufacturing	2,281	2,280	2,311	- 1
Total Unemployed - thous.	929	954	761	+22	Construction	710	698	689	+ 3
Unemployment Rate - % SA	7.4	7.4	6.3		Trade	2,627	2,619	2,637	- 0
Insured Unemployment - thous.	310	334	293	+ 6	Government	2,226	2,222	2,175	+ 2
Insured Unempl. Rate - %	2.9	3.1	2.8		Services	2,120	2,107	1,988	+ 7
Mfg. Avg. Wkly. Hours	40.1	40.1	40.2	- 0	Fin., Ins., & Real Est.	624	623	591	+ 6
Mfg. Avg. Wkly. Earn. - $	265	262	240	+10	Trans. Com. & Pub. Util.	685	683	671	+ 2
ALABAMA									
Civilian Labor Force - thous.	1,637	1,639	1,623	+ 1	Nonfarm Employment- thous.	1,350	1,353	1,363	- 1
Total Employed - thous.	1,486	1,484	1,493	- 0	Manufacturing	354	356	370	- 4
Total Unemployed - thous.	151	155	130	+16	Construction	71	70	66	+ 8
Unemployment Rate - % SA	8.9	9.1	7.8		Trade	268	268	277	- 3
Insured Unemployment - thous.	55	56	51	+ 8	Government	303	304	301	+ 1
Insured Unempl. Rate - %	4.4	4.5	4.0		Services	208	208	201	+ 3
Mfg. Avg. Wkly. Hours	39.8	39.7	40.3	- 1	Fin., Ins., & Real Est.	59	59	58	+ 2
Mfg. Avg. Wkly. Earn. - $	275	274	256	+ 7	Trans. Com. & Pub. Util.	72	71	72	0
FLORIDA									
Civilian Labor Force - thous.	4,021	4,015	3,898	+ 3	Nonfarm Employment- thous.	3,750	3,735	3,548	+ 6
Total Employed - thous.	3,761	3,763	3,709	+ 1	Manufacturing	472	475	452	+ 4
Total Unemployed - thous.	259	252	189	+37	Construction	282	281	269	+ 5
Unemployment Rate - % SA	7.0	6.7	5.5		Trade	978	977	953	+ 3
Insured Unemployment - thous.	58	63	58	0	Government	640	636	622	+ 3
Insured Unempl. Rate - %	1.7	1.8	1.8		Services	874	866	783	+12
Mfg. Avg. Wkly. Hours	40.6	41.2	40.6	0	Fin., Ins., & Real Est.	267	266	240	+11
Mfg. Avg. Wkly. Earn. - $	256	258	235	+ 9	Trans. Com. & Pub. Util.	227	224	219	+ 4
GEORGIA									
Civilian Labor Force - thous.	2,397	2,396	2,364	+ 1	Nonfarm Employment- thous.	2,163	2,151	2,138	+ 1
Total Employed - thous.	2,260	2,239	2,224	+ 2	Manufacturing	518	513	525	- 1
Total Unemployed - thous.	137	157	139	- 1	Construction	99	98	97	+ 2
Unemployment Rate - % SA	6.0	6.4	6.3		Trade	487	485	501	- 3
Insured Unemployment - thous.	48	57	47	+ 2	Government	445	443	424	+ 5
Insured Unempl. Rate - %	2.4	2.8	2.4		Services	354	352	337	+ 5
Mfg. Avg. Wkly. Hours	40.2	40.1	40.3	- 0	Fin., Ins., & Real Est.	114	113	108	+ 6
Mfg. Avg. Wkly. Earn. - $	250	245	225	+ 11	Trans. Com. & Pub. Util.	139	139	138	+ 1
LOUISIANA									
Civilian Labor Force - thous.	1,766	1,761	1,689	+ 5	Nonfarm Employment- thous.	1,617	1,610	1,521	+ 6
Total Employed - thous.	1,639	1,634	1,583	+ 4	Manufacturing	214	215	208	+ 3
Total Unemployed - thous.	127	126	106	+20	Construction	152	147	128	+19
Unemployment Rate - % SA	7.2	6.9	6.4		Trade	360	358	359	+ 0
Insured Unemployment - thous.	44	48	43	+ 2	Government	320	321	304	+ 5
Insured Unempl. Rate - %	3.0	3.2	3.0		Services	278	277	254	+ 9
Mfg. Avg. Wkly. Hours	41.5	40.8	41.9	- 1	Fin., Ins., & Real Est.	75	76	75	0
Mfg. Avg. Wkly. Earn. - $	351	341	314	+12	Trans. Com. & Pub. Util.	126	126	113	+12
MISSISSIPPI									
Civilian Labor Force - thous.	1,022	1,010	1,011	+ 1	Nonfarm Employment- thous.	826	826	837	- 1
Total Employed - thous.	934	921	946	- 1	Manufacturing	216	218	228	- 5
Total Unemployed - thous.	88	89	66	+33	Construction	40	39	43	- 7
Unemployment Rate - % SA	8.4	8.2	6.6		Trade	165	164	162	+ 2
Insured Unemployment - thous.	34	34	27	+26	Government	197	198	198	- 1
Insured Unempl. Rate - %	4.3	4.4	3.5		Services	123	122	120	+ 3
Mfg. Avg. Wkly. Hours	39.3	39.1	39.3	0	Fin., Ins., & Real Est.	33	33	33	0
Mfg. Avg. Wkly. Earn. - $	235	230	211	+11	Trans. Com. & Pub. Util.	41	41	42	- 2
TENNESSEE									
Civilian Labor Force - thous.	1,986	1,980	2,004	- 1	Nonfarm Employment- thous.	1,715	1,705	1,789	- 4
Total Employed - thous.	1,820	1,806	1,873	- 3	Manufacturing	507	503	528	- 4
Total Unemployed - thous.	167	174	131	+27	Construction	66	64	85	-22
Unemployment Rate - % SA	8.1	7.8	6.3		Trade	370	367	385	- 4
Insured Unemployment - thous.	70	76	67	+ 4	Government	321	321	326	- 2
Insured Unempl. Rate - %	4.2	4.5	4.0		Services	234	283	292	-20
Mfg. Avg. Wkly. Hours	39.7	39.4	39.4	+ 1	Fin., Ins., & Real Est.	76	77	77	- 1
Mfg. Avg. Wkly. Earn. - $	256	255	235	+ 9	Trans. Com. & Pub. Util.	81	81	86	- 6

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.

CONSTRUCTION

12-Month Cumulative Rate	MAR 1981	FEB 1981	MAR 1980	ANN. % CHG.		MAR 1981	FEB 1981	MAR 1980	ANN. % CHG.
UNITED STATES									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	149,697	146,849	160,427	- 7	Value - $ mil.	64,730	63,192	71,450	- 9
Nonresidential Contracts					Number of Units - Thous.	1,327.6	1,306.5	1,640.0	-19
Value - $ mil.	53,946	52,769	51,004	+ 6					
Sq. Ft. - mil.	1,192.9	1,184.3	1,359.5	-12	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	706.0	693.9	902.2	-22
Value - $ mil.	31,021	30,888	37,973	-18	Number multi-family	475.5	486.9	546.2	-13
SOUTHEAST									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	26,873	26,158	26,462	+ 2	Value - $ mil.	13,376	13.0	12,615	+ 6
Nonresidential Contracts					Number of Units - Thous.	311.2	306.5	331.6	- 6
Value - $ mil.	7,760	7,668	7,155	+ 8					
Sq. Ft. - mil.	187.2	186.0	199.0	- 6	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	155.0	152.1	167.5	- 7
Value - $ mil.	5,735	5,448	6,692	-14	Number multi-family	127.6	127.2	102.5	+24
ALABAMA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	1,936	1,880	2,352	-18	Value - $ mil.	953	922	886	+ 8
Nonresidential Contracts					Number of Units - Thous.	26.6	25.5	26.4	+ 1
Value - $ mil.	521	511	639	-18					
Sq. Ft. - mil.	13.5	13.3	17.3	-22	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	8.9	8.8	9.5	- 6
Value - $ mil.	461	447	827	-44	Number multi-family	8.1	8.0	6.6	+22
FLORIDA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	13,130	12,785	12,329	+ 6	Value - $ mil.	7,543	7,373	6,958	+ 8
Nonresidential Contracts					Number of Units - Thous.	173.3	171.7	181.9	- 5
Value - $ mil.	3,115	2,963	2,578	+21					
Sq. Ft. - mil.	82.8	80.0	82.6	+ 0	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	89.6	88.3	94.6	- 5
Value - $ mil.	2,471	2,449	2,793	-12	Number multi-family	88.8	88.9	69.3	+28
GEORGIA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	3,859	3,773	3,890	- 1	Value - $ mil.	1,869	1,796	1,761	+ 6
Nonresidential Contracts					Number of Units - Thous.	44.7	43.1	45.9	- 3
Value - $ mil.	1,222	1,319	1,268	- 4					
Sq. Ft. - mil.	34.3	36.4	40.0	-14	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	27.1	26.1	29.8	- 9
Value - $ mil.	768	657	861	-11	Number multi-family	9.7	9.4	8.6	+14
LOUISIANA									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	3,326	3,243	3,442	- 3	Value - $ mil.	1,193	1,165	1,185	+ 1
Nonresidential Contracts					Number of Units - Thous.	24.9	24.6	29.4	-15
Value - $ mil.	1,153	1,135	1,436	-20					
Sq. Ft. - mil.	20.6	19.8	23.8	-13	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	11.6	11.3	13.7	-15
Value - $ mil.	980	943	821	+ 9	Number multi-family	8.2	8.0	7.3	+13
MISSISSIPPI									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	1,672	1,603	1,600	+ 5	Value - $ mil.	626	613	586	+ 7
Nonresidential Contracts					Number of Units - Thous.	15.3	15.3	15.8	- 3
Value - $ mil.	610	614	312	+96					
Sq. Ft. - mil.	8.5	9.0	8.2	+ 3	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	5.3	5.2	5.0	+ 6
Value - $ mil.	436	376	702	-38	Number multi-family	5.1	5.1	3.0	+67
TENNESSEE									
Total Construction Contracts					Residential Contracts				
Value - $ mil.	2,950	2,874	2,849	+ 4	Value - $ mil.	1,192	1,172	1,239	- 4
Nonresidential Contracts					Number of Units - Thous.	26.4	26.4	32.3	-18
Value - $ mil.	1,139	1,126	922	+24					
Sq. Ft. - mil.	27.7	27.5	27.1	+ 2	Residential Permits - Thous.				
Nonbuilding Contracts					Number single-family	12.5	12.4	14.9	-16
Value - $ mil.	619	576	688	-10	Number multi-family	7.6	7.7	7.7	- 1

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

	MAR 1981	FEB 1981	MAR 1980	ANN. % CHG.
UNITED STATES				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	2,228.3	2,155.8	2,010.0	+11
Retail Sales - $ bil.- SA	86.9	86.9	77.6	+12
Plane Passenger Arrivals (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous. bls.)	8,619	8,572	8,694	- 1
Consumer Price Index	APR	MAR	APR	
1967=100	267	265	242	+10
SOUTHEAST				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	258.6	249.2	229.5	+13
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	4,691.3	4,093.9	5,245.1	-11
Petroleum Prod. (thous. bls.)	1442	1439	1551	- 7
Consumer Price Index				
1967=100	N.A.	N.A.	N.A.	
ALABAMA				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	30.3	29.1	27.6	+10
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	102.6	97.0	113.3	- 9
Petroleum Prod. (thous. bls.)	63	63	58	+ 9
Consumer Price Index				
1967=100	N.A.	N.A.	N.A.	
FLORIDA				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	92.2	88.8	79.7	+16
Taxable Sales - $ bil.	59,750	59,334	53,278	+12
Plane Passenger Arrivals (thous.)	2,511.3	2,240.7	2,812.3	-11
Petroleum Prod. (thous. bls.)	117	118	125	- 6
Consumer Price Index - Miami	MAR	JAN	MAR	
Nov. 1977 = 100	140	137	128	+ 9
GEORGIA				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	45.4	43.7	40.8	+11
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	1,618.8	1,341.0	1,812.2	-11
Petroleum Prod. (thous. bls.)	N.A.	N.A.	N.A.	
Consumer Price Index - Atlanta	APR	FEB	APR	
1967 = 100	266	263	235	+13
LOUISIANA				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	36.7	35.3	32.3	+14
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	283.1	253.1	300.3	- 6
Petroleum Prod. (thous. bls.)	1167	1164	1266	- 8
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	
MISSISSIPPI				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	17.0	16.5	15.9	+ 7
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	33.3	29.1	43.0	-23
Petroleum Prod. (thous. bls.)	95	94	102	- 7
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	
TENNESSEE				
Personal Income-$ bil. SAAR				
(Dates: 4Q, 3Q, 4Q)	37.0	35.8	33.2	+11
Taxable Sales - $ bil.	N.A.	N.A.	N.A.	
Plane Passenger Arrivals (thous.)	142.3	133.0	164.1	-13
Petroleum Prod. (thous. bls.)	N.A.	N.A.	N.A.	
Consumer Price Index				
1967 = 100	N.A.	N.A.	N.A.	

	APR 1981	MAR 1981	APR 1980	ANN. % CHG.
UNITED STATES				
Agriculture				
Prices Rec'd by Farmers				
Index (1967=100)	261	262	225	+16
Broiler Placements (thous.)	85,368	85,608	82,281	+4
Calf Prices ($ per cwt.)	71.40	69.80	76.80	-7
Broiler Prices (¢ per lb.)	26.8	29.7	22.5	+19
Soybean Prices ($ per bu.)	7.33	7.59	5.94	+23
Broiler Feed Cost ($ per ton)	234	229	193	+21
SOUTHEAST				
Agriculture				
Prices Rec'd by Farmers				
Index (1967=100)	262	264	226	+16
Broiler Placements (thous.)	33,692	31,062	32,394	+ 4
Calf Prices ($ per cwt.)	67.08	66.59	73.76	- 9
Broiler Prices (¢ per lb.)	25.6	28.6	21.4	+20
Soybean Prices ($ per bu.)	7.50	7.24	5.72	+31
Broiler Feed Cost ($ per ton)	228	222	187	+22
ALABAMA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	283		315	-10
Broiler Placements (thous.)	11,077	11,141	10,821	+ 2
Calf Prices ($ per cwt.)	65.80	66.80	71.80	- 8
Broiler Prices (¢ per lb.)	24.5	27.5	20.5	+20
Soybean Prices ($ per bu.)	7.43	7.10	5.85	+27
Broiler Feed Cost ($ per ton)	245	220	184	+33
FLORIDA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	872		847	+ 3
Broiler Placements (thous.)	1,897	1,772	1,943	- 2
Calf Prices ($ per cwt.)	70.10	69.50	78.00	-10
Broiler Prices (¢ per lb.)	25.5	29.0	20.5	+24
Soybean Prices ($ per bu.)	7.43	7.10	5.85	+27
Broiler Feed Cost ($ per ton)	240	255	215	+12
GEORGIA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	395		375	+ 5
Broiler Placements (thous.)	12,808	10,695	12,119	+ 6
Calf Prices ($ per cwt.)	62.40	64.00	74.50	-16
Broiler Prices (¢ per lb.)	25.5	28.5	21.5	+19
Soybean Prices ($ per bu.)	7.39	7.06	5.76	+28
Broiler Feed Cost ($ per ton)	220	220	185	+19
LOUISIANA				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	258		227	+14
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	69.90	68.00	72.00	- 3
Broiler Prices (¢ per lb.)	26.0	29.5	23.0	+13
Soybean Prices ($ per bu.)	7.65	7.28	5.75	+33
Broiler Feed Cost ($ per ton)	245	250	185	+32
MISSISSIPPI				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	315		319	- 1
Broiler Placements (thous.)	6,292	6,118	6,137	+ 3
Calf Prices ($ per cwt.)	66.80	67.00	73.30	- 9
Broiler Prices (¢ per lb.)	27.5	30.5	23.0	+20
Soybean Prices ($ per bu.)	7.45	7.28	5.68	+31
Broiler Feed Cost ($ per ton)	215	215	189	+14
TENNESSEE				
Agriculture				
Farm Cash Receipts - $ mil.				
(Dates: FEB, FEB)	278		295	- 6
Broiler Placements (thous.)	1,351	1,336	1,374	- 2
Calf Prices ($ per cwt.)	65.00	61.90	75.10	-13
Broiler Prices ($ per lb.)	25.0	27.5	19.5	+28
Soybean Prices ($ per bu.)	7.50	7.28	5.68	+32
Broiler Feed Cost ($ per ton)	215	225	185	+16

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.

Table 2. Changes in Production and Value of Winter Vegetable Crops from Year to Year

	Percentage Change from Year Earlier			
	Production		Total Value	
	1979	1980	1979	1980
		Snap Beans		
Florida (also U.S.)	47	− 6	17	7
		Cabbage		
Florida	60	− 7	148	−68
U.S.	−12	20	34	−53
		Celery		
Florida	21	4	21	−15
U.S.	18	0	23	−19
		Sweet Corn		
Florida (also U.S.)	8	4	11	10
		Eggplant		
Florida (also U.S.)	29	− 2	67	− 2
		Escarole/Endive		
Florida (also U.S.)	32	−16	23	−45
		Lettuce		
Florida	66	5	107	−41
U.S.	− 1	6	59	−44
		Green Peppers		
Florida (also U.S.)	11	−19	29	−13
		Tomatoes		
Florida (also U.S.)	15	44	49	10
		Strawberries		
Florida (also U.S.)	32	24	33	26
		Spinach		
U.S.	1	35	40	38
		Broccoli		
U.S.	21	− 2	39	11
		Carrots		
U.S.	−12	8	22	−21
		Cauliflower		
U.S.	66	− 5	63	16
		Artichokes		
U.S.	66	− 9	71	13
		All Winter Vegetables		
Florida Total	30	9	51	−14
U.S. Total	4	8	43	−21

Source: USDA, **Vegetables, 1980 Annual Summary: Acreage, Yield, Production, and Value**, December 1980.

Table 2, reveals that there is no consistent pattern in those changes for either Florida or the United States. Total crop values increased sometimes when production increased and sometimes when production declined. For the combined total of all winter vegetables, both quantity and revenue increased in 1979, but revenue fell when quantity increased further in 1980.

It would appear that the demand for winter vegetables changed (the curve shifted to the right) especially in 1979, causing consumers to take larger quantities at higher prices. Several major factors could have caused the shift in the total demand curve. Stock of processed vegetables can change, affecting the availability of products that are important substitutes for most fresh vegetables. Imports of vegetables can and do change radically from one year to another, affecting the total supplies available for consumption. Incomes and preferences of consumers can change and cause significant shifts in demand for fresh vegetable items. Unusual weather does not have a uniform impact on all vegetable crops, so that when one crop is severely damaged, a close substitute may have been relatively unscathed. The result would be that a reduction in the quantity of a vegetable would not produce a consistent price response from one period to another.

The exact effect of the reduction in Florida's winter vegetable crops in 1980 remains difficult to predict. Florida's production typically accounts for about 40 percent of the total U.S. supply. If 30 percent of Florida's crops were destroyed, the total U.S. supply would be reduced by 12 to 15 percent. If there were little or no imported vegetables and if stocks of processed vegetables were low, eventual price increases could range between 35 and 45 percent. Preliminary reports indicate that imports are, in fact, down from a year ago and that supplies of processed vegetables are low because of the weather problems in 1980. Although dramatic price increases for vegetables in retail markets had not yet occurred in February, it is highly likely that subsequent reports will reveal additional price increases. ER

—Gene D. Sullivan

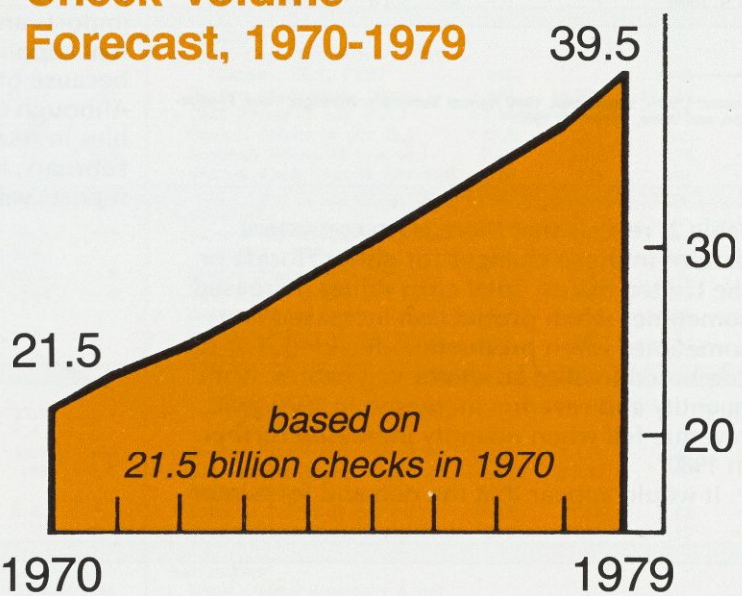
Atlanta Study Finds Check Growth Has Slowed

The Atlanta Federal Reserve Bank, with co-sponsorship of the American Bankers Association, the Bank Administration Institute and the Federal Reserve System, is now completing a major study of the check collection system. The findings are based on a month long survey in June 1979 of 343 commercial banks (both members and nonmembers of the Federal Reserve System) and all 48 Federal Reserve System check processing facilities. As one of its major findings, the study estimates the number of checks written in 1979. This article summarizes some of the study's preliminary findings on checks written, checks processed, volume flow and some major trends in the check collection system during the 70s. Current schedules call for the detailed findings from this research to be available this summer through the American Bankers Association and the Bank Administration Institute. A future *Economic Review* article will apply the study's findings to payments systems trends in the 1980s.

The Atlanta study's estimates of checks written and annual growth rates differed significantly from some of the earlier forecasts.

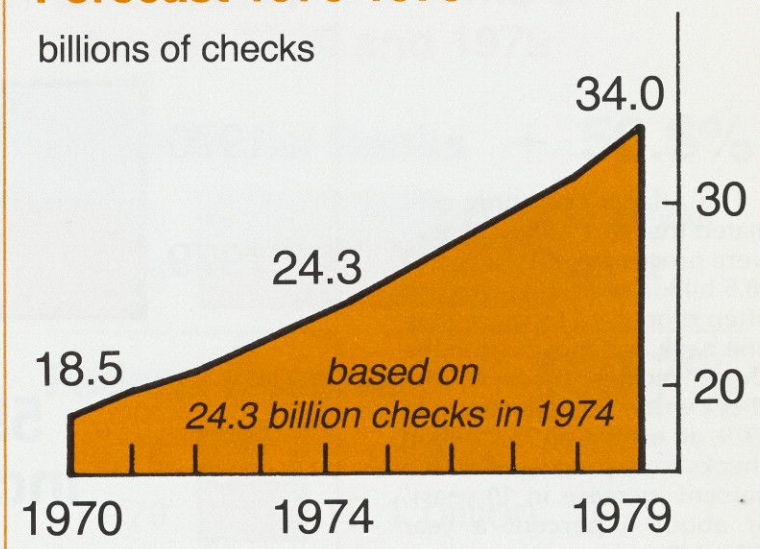
The most widely used projections for check growth during the 1970s were based on a 1970 study by A. D. Little, Inc. The findings estimated that 21.5 billion commercial checks were written in 1970 and projected that 39.5 billion checks would be written in 1979, a 7 percent average annual growth rate (Chart 1).

Chart 1. A. D. Little Check Volume Forecast, 1970-1979



Follow-on surveys in 1971-74 by the Federal Deposit Insurance Corporation (FDIC) confirmed the 7 percent annual growth rate. But the FDIC surveys found that A. D. Little had overestimated the number of checks written in 1970 and thus overprojected the numbers for each year in the decade. The Atlanta staff revised the A. D. Little volume estimate of 21.5 billion checks for 1970 to 18.5 billion (based on an estimate of 24.3 billion for 1974). Assuming a continuing 7 percent growth rate, the Atlanta staff projected a volume of 34 billion checks for 1979 (Chart 2) from the 1974 FDIC estimate.

Chart 2. FDIC Check Volume Forecast 1970-1979



The Atlanta Fed study, based on a nationwide survey in June 1979 of 343 commercial banks, estimated that 32 billion checks were written in 1979 (7.5 billion below A. D. Little's projection and 2 billion below the FDIC projection). Using the modified 1970 estimate, the FDIC estimate for 1974, and the Atlanta estimate for 1979, the Atlanta staff determined that the annual growth rate fell from about 7 to 5 percent in the last half of the decade (Chart 3).

Chart 3. Atlanta Fed Check Volume Estimate, 1970-1979

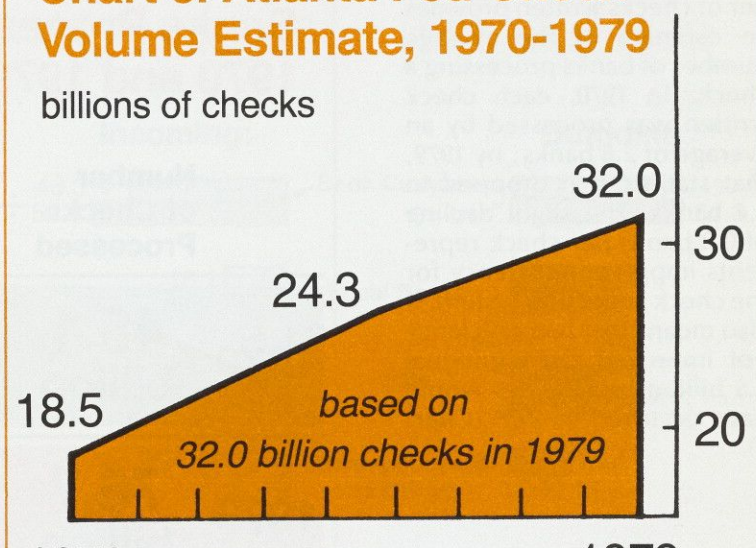
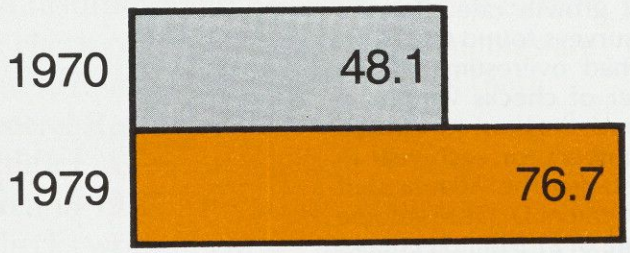


Chart 4. Billions of Checks Processed, 1970 and 1979



59.5% increase

The Atlanta Fed study estimated that 48.1 billion checks were processed in 1970 versus 18.5 billion written (a check is often processed by more than one bank as it moves from the check receiver back to the check writer for collection). In 1979, an estimated 76.7 billion checks were processed, a 59.5 percent increase in 10 years, or about 6 percent a year (Chart 4).

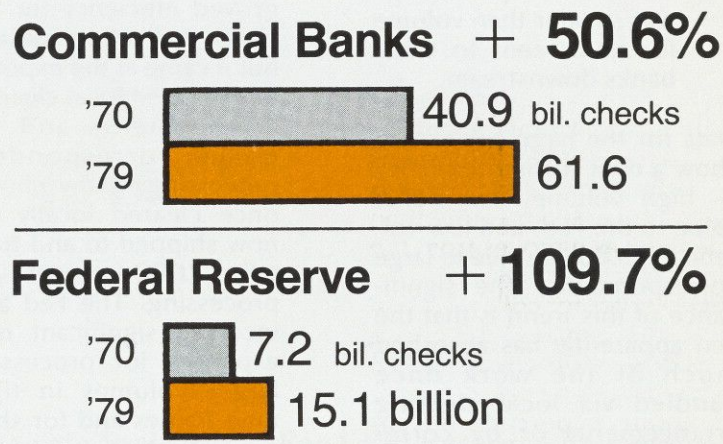
Chart 5. Average Number of Banks Processing a Check, 1970 and 1979

	Number of Checks Processed	÷	Number of Checks Written	=	Number of Banks Processing a Check
1970	48.1 billion		18.5 billion		2.6 banks
1979	76.7 billion		32.0 billion		2.4 banks

Dividing the number of checks processed by the number of checks written provides an estimate of the average number of banks processing a check. In 1970, each check written was processed by an average of 2.6 banks; by 1979, that statistic had dropped to 2.4 banks. The slight decline of 0.2 banks per check represents improved efficiency for the check collection system. It also means that had efficiency not improved, an additional 6.5 billion processings would have occurred in 1979 (Chart 5).

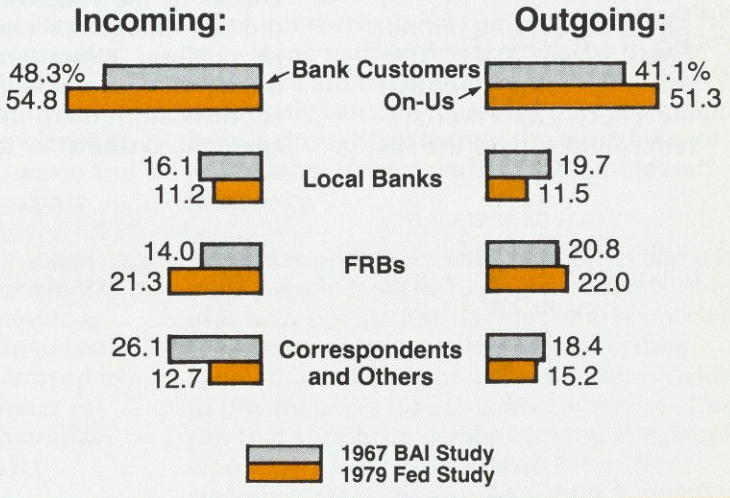
Another significant finding was that the Federal Reserve System picked up a greater share of the check processing work load during the decade. Commercial banks processed 40.9 billion checks in 1970 and 61.6 billion in 1979, a 50.6 percent increase. Federal Reserve Banks processed 7.2 billion checks in 1970 and 15.1 billion in 1979, a 109.7 percent increase. In 1970, the Fed handled 15 percent of the work load; by 1979, the Fed handled 20 percent (Chart 6).

Chart 6. Check Processing Work Load, in Billions of Checks, 1970 and 1979



By 1979, commercial banks were relying less on local clearings and less on correspondents and other banks. The Fed increased its role as a source and disposition point (Chart 7).

Chart 7. Check Volume at Commercial Banks, 1967 and 1979



More detailed data for large banks show two intermingled patterns:

1. Dollar value percentage was larger than volume for items sent to large correspondents in other cities.
2. Dollar value percentage was smaller than volume for items sent to small banks downstream.

Data for the large banks also show a dual sorting tendency — high volume, low dollar value to the Fed, and low volume, high dollar value to large correspondents. The significance of this trend is that the Fed apparently has absorbed much of the work once handled via local clearing arrangements or by correspondent banks.

Summary

- *The annual growth rate of checks written declined during the 70s.* The rapid growth stage of the check as a product is apparently beginning to slow down.

- *Check processing did not break down.* A. D. Little correctly forecasted that the check collection system would survive the 70s without drowning in paper work.

- *The Fed's Regional Check Processing Centers (RCPCs) were a mixed economic blessing.* The decline from 2.6 to 2.4 banks processing each check represents improved efficiency for the check collection system. But it came at the expense of dissolved local clearing arrangements and reduced correspondent processing. Many checks once cleared locally are now shipped to and from a Fed RCPC for overnight processing. The Fed also incurred significant new expenses for processing larger volumes in tight time frames and for shipping checks to and from RCPCs. Thus, a mixed blessing occurred. Only a detailed study would determine whether or not a net benefit accrued.

- *Volume and dollar value flows changed significantly.* Rising costs led many banks to send more checks to the Fed, which did not charge for check processing. Commercial banks developed more sophisticated float management systems to take advantage of high interest rates. Bank customers adoped cash management techniques (e.g. lock boxes) which tended to keep check payments in geographic areas served by a bank and its customers and out of national correspondent networks. Commercial banks also became more restrictive in their check cashing policies, which led to a greater proportion of on-us items in volumes accepted over the counter.

- *The checkless or paperless society did not materialize in the 70s.* A viable check collection system still exists. The growth rate in the number of checks written appears to have slowed down in the last half of the 1970s. If so, the initial indication of a maturing product may have been given. Although the study does not include a forecast for the 1980s, a future article in the ***Economic Review*** will apply the findings, along with other demographic and economic trends, to a payments system forecast. ER

Water Allocation in the East

by Clyde F. Kiker

According to Clyde Kiker, Associate Professor of Food and Resource Economics at the University of Florida, water allocation in the East is not working effectively. After reviewing the evolution of water doctrine in the East, Dr. Kiker proposes an alternative plan which would maintain a water authority's power to manage the overall supply but would also make possible private transactions among water users.

The popular press has recently discovered the importance of water to our economy. Rapid increases are noted in the quantities of water used by communities, industry, agriculture and households. Often, the press paints a picture of impending trouble. In the words of *Newsweek*, for example, "Drought, waste and pollution threaten a water shortage whose impact may rival the energy crisis."[1]

The press is alerting us to a real problem. A resource we have generally taken for granted is in fact very important to our economic activities and is also limited. People are becoming aware of the importance of water used in their homes and of the amount of water required for production of food and manufactured goods. We recognize the impact reduced water quality has on downstream users, on recreational use and on natural habitats. Along with understanding the uses of water, we are becoming aware of the sources and highly variable nature of our water supply. Severe droughts affecting the availability of water seem to be occurring with increased frequency.

What is not discussed in the press and what most people have virtually no understanding of is how our society decides who is entitled to remove water from the natural system. Given that a supply of water is to be provided to private users for economic purposes, how can that supply be divided among the people who desire water? If demand for water is steadily increasing and the supply is relatively fixed, how do we decide who will receive permits to the limited supply and to what quantity of water will the holder be entitled? If a user

[1]Examples of recent articles are: "The Browning of America," **Newsweek**, February 23, 1981, p. 26-37; "Water, Our Most Precious Resource," **National Geographics**, August 1980, p. 144-179; and "There's Trouble in Paradise," **Sports Illustrated**, February 9, 1981, p. 82-96.

wishes to expand his business activity and requires additional water, how will he be able to obtain the necessary entitlements?

For most resources our society assigns private property rights which allow market trading of these resources. For example, mineral rights to coal are recognized and private firms are entitled to remove coal from its natural location and sell it in an open market. Water, on the other hand, has been viewed differently; private entitlements to its use are far from clear. In many cases people who are now using water simply assume they will be able to use it in the future. This may or may not be true. In reality, private entitlements to water are uncertain at this time. Individuals making capital investment decisions involving water should do so cautiously. Their access to water may change in the near future.

What is occuring is that Eastern water allocation institutions are not working effectively.[2] These institutions evolved under conditions of large water supplies, limited withdrawals and minimal conflicts; they cannot resolve the present level of conflict. A new era of changes is upon us. Some states, such as Florida, have encountered problems earlier than other states and have begun developing new ways of resolving allocation conflicts. How successful have these new allocative approaches been in Florida and what are the implications for other states?

Eastern Water Law — Common Law Doctrines

Eastern water doctrines developed from English common law. Water in areas with abundant supplies was considered common property, the property of no one to be shared by everyone. Individual states evolved slightly different doctrines through case law, but all were based on common law precepts.[3]

The legal developments have focused on the source of the water supply. For surface water, the "riparian" doctrine entitled owners of land adjoining a lake or stream (riparian land) to the full natural flow without change in quality or quantity. The public was entitled to use the water for fishing, navigation and other common uses. Taken literally, the doctrine precluded removing water or depositing any foreign substance into the water. The doctrine has been modified through the process of case law in state courts until currently the user may make "reasonable use" of the water. Quantity and quality changes are usually "reasonable" for any purpose unless they interfere with the "reasonable" use of other riparian landowners or public uses. As in all common law, conflicts are settled by civil litigation. Non-riparian landowners have no right to withdraw water.

Rights to the use of groundwater were based on the English common law doctrine which considered the water below an individual's land to be absolutely owned by the landowner. He could extract it or otherwise interfere with its natural movement without accountability to others who might be affected. The right to water was based on a rule of capture, and allocation was based simply on the amount one could pump. This doctrine worked well when there was little demand for groundwater supplies.

Two other doctrines relating to groundwater evolved as greater use (and the resulting competition) developed: the reasonable use doctrine and the correlative rights doctrine. The reasonable use doctrine specified that the landowner could make any reasonable use of the groundwater on the land from which it was removed. Water could not be taken and used on lands other than those from which it was pumped. However, virtually all on-site uses were considered reasonable. Again, the landowner was given a right to develop groundwater and land without regard to the effects imposed on other users. Allocation was accomplished through capture simply by

[2]Although both the Eastern and Western states are experiencing problems and change, this article will concentrate on water entitlements in the Eastern states — those east of and including Minnesota, Iowa, Missouri, Arkansas and Louisiana. The foundations of Western water law and institutions differ greatly from those of the Eastern states. For more information on the Western situation, see Marvan Duncan and Ann Laing, "Western Water Resources: Coming Problems and the Policy Alternatives," **Economic Review,** Federal Reserve Bank of Kansas City, February 1980, pp. 14-22.

[3]Two excellent references for details on Eastern water law and administrative water law are F. E. Maloney, *et al.*, **Water Law and Administration,** University of Florida Press, 1968 and F. E. Maloney *et al.*, **A Model Water Code,** University of Florida Press, 1972.

pumping. The correlative rights doctrine, on the other hand, required landowners to apportion the common groundwater supply. The water rights of an individual were measured in relationship to the rights of other landowners. "Reasonableness," in this case, was the balancing of rights of affected landowners.

Conflict accompanying increased use of both surface and groundwater has exposed the inadequacy of common law doctrines for allocating water. Private water users are in a quandary about the quantity and security of their entitlement. The need for greater certainty has prompted many Eastern states to consider statutory law as a basis for allocating entitlements.[4] In essence, the statutory approach establishes administrative regulation of water withdrawals by a state agency. Florida's administrative water law is a premier example. It establishes an administrative system that many other Eastern states are observing with keen interest.

Administrative Water Law

The expected result from the statutory approach is that all water users will benefit by having greater assurance of the water supplies they need. The administrative system retains the concept that water is common property to be shared by all, but now interprets this to mean that the state's waters are to be held in trust by the state for the benefit of its citizens. In the words of the Florida Water Resources Act of 1972, ". . . all waters in the state are subject to regulation . . ."[5]

Under most administrative water law systems, regulation is handled by an administrative agency within state government, generally a department of natural resources or environmental regulation. The heart of regulation is a permitting system administered by the agency or geographically defined water authorities. Private water users are required to have permits to modify any aspect of the natural water system and to remove water from a natural source. The authority is responsible for balancing public and private interests in water and for resolving, if not preventing, conflicts among water users.

To date, the general principles under which the water authorities operate the administrative system have been upheld in the courts and it is likely that the system will continue to be used. Increasing problems with the system, however, have heightened interest in alternative allocation approaches.

Alternative Allocation Approaches

Under the administrative systems, private users are granted permits to withdraw water for a specific time period. In Florida, this is up to 20 years but could be less. The quantity of water a user can withdraw under his permit is established by the water authority. The interesting question here is how does the authority decide who receives permits and how much water can be withdrawn?

Technical Approach

The criterion most often used is based on technical information and is referred to here as "the technical approach." For example, the quantity of crop irrigation water allowed to be withdrawn is based on the difference between the quantity of water a crop specialist says is needed and the water available from precipitation; the quantity of domestic water supply is based on some per capita use estimate; and the quantity of industrial water is based on some estimates of production needs. This leads to situations in which lower valued uses may be allocated more water than higher valued uses. For example, in Florida, pasture irrigation may be allocated twice as much water per acre as citrus even though the returns to citrus far exceed those of pasture.[6]

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[4]Presently most Eastern states use common law doctrines as the basis for private water entitlements.

[5]Florida Water Resources Act of 1972, Florida Statutes 373.013 *et. seq.*

[6]For more specific examples of the rules and regulations used under a technical approach, see, **Permit Information Manual — District Rules, Regulations, and Legislation,** Volume II, South Florida Water Management District, West Palm Beach, Florida.

As in the common law approaches, these inconsistencies create few problems when water is not scarce. But what happens where there is not sufficient water to meet all needs? A water shortage plan is put into effect. But how does the water authority decide how much water each permit holder will be allowed to withdraw? This is not clear. What is clear is that problems are created for private users because they are not sure just how they will fare in this allocation. Again, uncertainty pervades their decision making.

Limited Economic Information Approach

I have suggested a modification to the technical approach.[7] Termed the "limited economic information approach," this method maintains the water agency's authority to grant permits while basing the decision on the water's economic value. This approach recognizes that water has greater value in some uses than others and that the supply is limited. To apply the approach, the water authority must estimate economic values for various water uses. Water is allocated to the various uses so that the economic value of the last unit of water used in an activity is equal to that used in every other activity. In economic jargon, the "marginal value" of water is equal in all uses. As in the technical approach, the permits are granted for a multiple year period.

A problem can occur under both the technical and limited information approaches. When rapid economic growth is occurring in an area, new, possibly higher valued uses may be precluded from obtaining water. Since permits to the expected supply are granted for multiple year periods, there may not be sufficient water to meet the previously granted entitlements and new ones too. If the entire expected supply were allocated to users, and permits continued to be granted to new uses, water shortages would become continuous and all allocations would be made under a shortage plan. Water users would again be uncertain as to what quantities of water they would receive in the future, and investment decisions would be increasingly difficult. There are areas in Florida where withdrawals from the aquifer exceed the recharge. Every day, new economic activities begin and uncertainty among users increases.[8] The questions the water authority faces are: Should it continue to give permits? What if a request is made for a permit in which the new use has a substantially higher economic value than some present uses in the basin? Which uses should receive permits and for what quantity? If we cannot find a solution to the dynamic aspects of entitlement allocation, we may face substantial economic inefficiency in water use.

Quasi-Market Approach

I have offered an alternative approach that has potential for dealing with the questions relating to economic value in use and increasing demand through time. The approach, called the "quasi-market approach," deviates substantially from traditional allocation methods used in the East but is still consistent with Eastern water law.[9] The public water authority continues to play the dominant role, but private transactions among water users become possible. The intent is to maintain the water authority's discretion to manage the overall water supply, especially the decision between public and private uses, but to remove its authority to decide what quantity of water every private use receives.

Under the approach, the administrative authority allows sale of transferable "water certificates." Each certificate represents an entitlement to a specific flow of water that can be withdrawn from a particular water basin. The certificates apply only to a specific time period. During this time the certificates could be transferred between water users within

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[7]For more details see, C. F. Kiker and G. D. Lynne, "Water Allocations Under Administrative Regulations: Some Economic Considerations," **Southern Journal of Agricultural Economics** 8(2), December 1976, pp. 57-73.

[8]An example is an area in the Southwest Florida Water Management District which includes Polk, Hardy, and Manatee counties. There are periods when withdrawals from the Floridan aquifer exceed recharge and salt water intrusion may result.

[9]For more details see reference cited in footnote 7.

bounds specified by the administrative authority. The bounds would be based on hydrologic and physical features of the water basin. At the end of the period, the certificates would revert back to the authority. If the authority deems that the total supply of water being used by individuals does not interfere with the public uses, the certificates would be released back into the market. If too great a quantity of water was being withdrawn, the authority could reduce the number of water certificates released back into the market. Similarly, a larger number could be released if the expected supply would be sufficient to meet expected demand.

Initially, the water authority could either sell the certificates for a fixed amount or sell them at auction. Following the initial sale, individuals would be free to buy and/or lease certificates from other individuals at any price they could negotiate. Water users would deal with water in much the same way they deal with other factors of production. The going market price would reflect the initial price, the increased opportunity costs for the water over time and the remaining life of the certificates. The water authority, through observation of market transaction, would obtain information on the opportunity value of water. This information would be useful in the authority's overall planning process.

There are, of course, problems with this quasi-market approach. Selecting the time duration for certificates is especially difficult. The optimum life for certificates will depend on the types of use and the capital investment problems associated with these uses. Defining the available supply in a particular area is also a problem, but one with which all allocative systems must deal. There is also the problem of individuals attempting to control large quantities of certificates and manipulate the market to their advantage. This could be minimized by requiring the water authority to monitor certificate transfer.

Recent research in Florida provides insights into potential outcomes when different water allocation approaches are used.[10] We studied a central Florida river basin where water is used by households, businesses and agriculture. By hypothetically imposing the technical and quasi-market approaches on the area, we were able to calculate the quantities of water and net benefits that would have occurred had the two approaches been used. During both relatively high and low rainfall years the quasi-market provided higher net benefits: four percent higher in wet years and nine percent higher in dry years. Commercial businesses and households fared better under the "technical approach" now used in the basin, while agriculture, in this case citrus, fared better under the quasi-market. Growth is occurring in the basin, and as growth continues there will be increased water shortage. Under the present technical rules, commercial businesses and households will fare better than agriculture. Under a market oriented approach, citrus growers could bid for supplies and compete successfully.

Conclusions

The failure of common law doctrines to resolve conflicts among water users has caused many Eastern states to explore other options. Typically, states have considered administrative systems which use some form of regulation to manage water resources. Private water users are skeptical and doubt that increased regulation will help them. But the user who is being hurt by competition for the limited supply or is uncertain about his future supply will welcome some degree of government involvement. Water users are likely to accept administrative regulation if they believe there is a way for them to participate in the allocation process. It is incumbent upon those desiring change to make the likely outcomes clear. For as with most changes in resource entitlements, not everyone will benefit. ER

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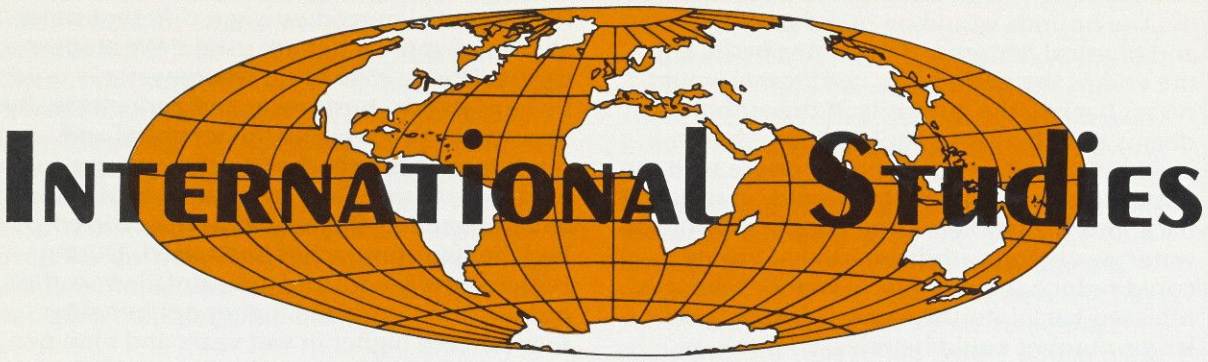
[10]See Keri H. Taylor and Clyde F. Kiker, "Economic Benefits of Alternative Water Allocation Approaches," Paper No. 80-2514, 1980, American Society of Agricultural Engineers, St. Joseph, Michigan.



Assessing Economic Country Risk

In June 1980, outstanding U.S. bank loans to non-oil exporting developing countries totaled about $70 billion. As a result, banks have heightened their efforts to evaluate the special risk (country risk) involved in international lending. Good country risk analysis requires, in effect, a projection of a country's future economy, including non-economic factors.

International lending by western industrialized countries' commercial banks has expanded dramatically in recent years. Net loans outstanding rose almost fivefold from $172 billion in 1973 to $810 billion in 1980. A significant portion of this lending ($195 billion at year-end 1980) is to the non-OPEC developing economies.[1]

U.S. banks are very active lenders to developing economies. Over the period December 1977 to June 1980, U.S. bank claims on the non-oil exporting developing countries increased by $18 billion, to total about $70 billion; this increase represents a healthy 13.6 percent annual average growth.[2]

The availability of these funds is of increasing importance to the non-oil exporting developing economies. In fact, external public and publicly guaranteed debt of these developing economies (as reported to the World Bank) made available from private financial institutions increased more than sevenfold from 1973 to 1979, rising to $124 billion in 1979. As a share of total public external debt, borrowing from private financial institutions increased from 16 percent in 1973 to 36 percent in 1979 (Table 1).

Defining "Country Risk"

The expanded international lending by commercial banks has been accompanied by an increase in the share of interest payments and payment of principal going to private financial institutions (Tables 2 and 3). In turn, banks have increased their analysis of borrowing countries. (The largest U.S. banks may have large staffs engaged in this effort.) The reason why banks analyze countries is that international lending, in contrast to domestic

[1]These data are from the Bank of International Settlements (BIS) quarterly reports titled **International Banking Developments** and refer to the dollar value of the gross external assets of banks in the BIS reporting area (the Group of Ten countries and Switzerland, Austria, Denmark, Ireland) and the branches of U.S. banks in the principal offshore centers in the Caribbean and Far East.

[2]These data refer to U.S. bank claims on foreigners by country of guarantor for 130 U.S. banking organizations with sizable foreign banking operations. Since 1977, the Federal Reserve Board, the Federal Deposit Insurance Corporation, and the Comptroller of the Currency have been conducting a semiannual activity survey of such banks' foreign lending. Survey results are made available to the public by the Board of Governors of the Federal Reserve System as a Federal Reserve press release, **Country Exposure Lending Survey**.

Table 1
EXTERNAL PUBLIC AND PUBLICLY GUARANTEED DEBT OUTSTANDING
($ billions)

	1973			1979		
	Total	PFI*	Percent PFI	Total	PFI	Percent PFI
97 developing countries	86.7	16.4	18.9	297.6	123.6	41.5
80 non-oil exporting countries	62.9	9.9	15.7	194.0	70.3	36.2
Latin America and Caribbean	27.4	10.1	36.9	111.3	70.8	63.6

*Private Financial Institutions

Source: World Bank, **World Debt Tables**, Volume I.

Table 2
DEBT SERVICE ON EXTERNAL PUBLIC AND PUBLICLY GUARANTEED
($ billions)

	1973			1979		
	Total	PFI*	Percent PFI	Total	PFI	Percent PFI
97 developing countries	10.8	3.1	28.7	48.6	28.8	59.3
80 non-oil exporting countries	7.3	1.8	24.7	26.4	13.2	50.0
Latin America and Caribbean	4.3	1.9	44.2	25.8	18.9	73.3

*Private Financial Institutions

Source: World Bank, **World Debt Tables**, Volume I.

Table 3
INTEREST PAYMENTS ON EXTERNAL PUBLIC AND PUBLICLY GUARANTEED DEBT
($ billions)

	1973			1979		
	Total	PFI*	Percent PFI	Total	PFI	Percent PFI
97 developing countries	3.4	.9	26.5	18.3	10.6	57.9
80 non-oil exporting countries	2.5	.6	24.0	11.1	5.8	52.2
Latin America and Caribbean	1.4	.6	42.9	9.2	6.5	70.6

*Private Financial Institutions

Source: World Bank, **World Debt Tables**, Volume I.

bank lending, entails assuming risk apart from the quality of the commerical or credit risk of the borrower. This additional, unique risk of lending internationally is called "country risk."

Country risk includes economic, political, or social factors which might make borrowers either unwilling or unable to repay their debts to foreign lenders in a timely manner. Nationalization of foreign companies, repudiation of debt by a government, wars, and revolutions are examples of country risk. Other examples would be inability to obtain the needed amount of a foreign currency to service debt or government controls on foreign exchange transactions and capital movements.

Insufficient or controlled access to foreign exchange, often precipitated by a balance of payments goods and services deficit, or by capital flight, is often associated with "economic" rather than "political" or "social" risk; in fact, these different risks are often interrelated.[3]

The economic element of country risk is of obvious concern to lenders. It is, however, also a concern to the borrowing developing economies which need to maintain a flow of resources from abroad in order to achieve economic development objectives. Increased economic risk spells a slowdown in the net flow of external capital to sustain or increase that growth.

Countries may, of course, borrow for reasons other than to fill a domestic savings-investment gap. They may, for example, borrow in order to finance current consumption. Or, they may borrow to correct a temporary weakness in the balance of trade due to bad weather, an unexpected increase in import prices, or a world recession.

As a general principle, the return on the borrowed funds must exceed the cost. In other words, borrowing should cause national income to grow. In addition, the stream of returns must also generate export revenues (or reduced import spending) which will provide the foreign currency needed to pay back the loan during the life of the loan agreement.[4]

[3]It is not clear which of these risk categories is most important. On the one hand, the recent growth of literature on political risk suggests increasing concern with the international environment. On the other hand, experience suggests that countries are unlikely to repudiate debt and thus cut themselves off from international credit markets.

[4]There are exceptions to these guidelines. For example, countries may want to smooth out their consumption stream over time (borrow more now in anticipation of future revenues) or they may want to and may be able to roll over debt principal.

Assessing Economic Risk

Assessing economic country risk is not easy. Examining a variety of cost and maturity profiles and the associated returns over time from investment projects requires, in effect, a projection of the future economy. The problem is further compounded because the degree of debt-servicing difficulty is related to the availability of future capital inflows from abroad, which is not solely determined by economic variables.[5]

Country risk assessors typically examine the current and past economic structure, just as a physician compiles a medical history and takes measurements when examining a patient. Country risk analysts look at the background of the country — its quantity and quality of physical and human resources. They look also at its technological base to see how and why the country has come to its current level of development — at how it has been "nurtured." Economic country risk analysis also entails the assessment of internal factors as well as external developments which affect the domestic economy.

Internal Factors

General indicators of current development include:

- level and rate of economic growth — GDP, real GDP/capita[6]
- social characteristics — education level, infant mortality rate, fertility, literacy, income distribution
- government's economic policies — spending, taxes, deficits; money growth, credit policies, inflation; environmental controls, tariffs, quotas

The basic rationale for examining these internal indicators is that high and growing levels of economic and social achievement today — in terms of real GDP per capita and education, for example — are correlated with past success in managing resources: the country has the skilled people necessary for future economic growth.

If the economy also is well-endowed with natural resources, a solid technological base, and developed financial markets, the potential for continued expansion is evident. However, in order for this potential to be realized, the government's management policies must be appropriate. The question is whether the government is encouraging efficiency, investment growth, and other desirable goals or whether it is impeding them; its answer has critically important implications for the country's growth prospects.

External Factors

Having examined the internal structure of the economy, the economic risk assessor turns to the external features. Ultimately, he will begin to formulate judgments about the ability of an economy to carry additional debt.

Because of the frequent concern with an economy's ability to generate foreign exchange to repay debt, economic risk analysts have tended to evaluate very carefully a country's external position. They first analyze the balance of payments situation — the trade balance, the current account balance, and capital flows.[7] They also carefully analyze the country's foreign debt and its relationship to the balance of payments. Finally, country risk analysts examine the level of international reserves and the availability of external credits. Their analysis emphasizes the following:

- exports and imports — absolute level and rate of growth; diversity of exports; ability to reduce imports
- tourism and transportation service receipts, investment income, and transfer credits and debits
- direct foreign investment and short-term capital flows
- external debt — public and private, long and short-term, size, composition and

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[5]The availability of capital will also depend on the political and social risk factors (and upon profitability conditions in other countries) which combine with economic risk to encompass "country risk." The requirements for assessing country risk are naturally even more complex than the assessment of economic risk. As Ingo Walter has written in an unpublished 1980 paper: "Given the nature of the problem, effective country risk assessment requires a true "renaissance man" (or woman), exceedingly intelligent, holder of multiple doctorates from respectable institutions in economics, political science, sociology, psychology and perhaps a few other fields as well, totally objective, with a great deal of common sense. In addition to being exceedingly well-traveled, he or she should be up-to-the-minute on developments in all countries of interest to the bank (and in other countries that might affect them), and be personally acquainted with key policymakers in each of them. Such individuals are not too easy to find." Paper presented at a conference on "Internationalization of Financial Markets and National economic Policy," Graduate School of Business Administration, New York University, April 10-11, 1980.

[6]GDP, or gross domestic product, refers to the sum of the values of goods and services produced within a nation's borders.

[7]The trade balance comprises merchandise import and export transactions while current account comprises transactions in goods, services, and unrequited transfers; the current account thus excludes transactions in financial assets and liabilities. The capital account covers the net acquisition of financial assets, some of which may be used to finance current or other capital account transactions.

growth; debt-service, size, growth, and repayment schedule
- international reserves

The trade balance is examined to see if exports are growing in a healthy fashion and whether the country is dependent upon, say, a principal commodity export or has diversified exports. An important aspect of imports will be the composition and growth of inelastic components like energy and food. Other components of the current account — tourist service receipts, investment dividends and interest, and private and public transfers are examined for their growth, stability, and impact on the current transactions balance.

The analyst examines the capital account as it covers the net acquisition of financial assets. The capital account can serve as an indicator of investor confidence (if foreign direct investment growth is healthy) or concern with government policies (if capital is being pulled out).

Debt and debt-service growth will typically be examined in connection with balance of payments developments along with changes in reserves; the basic rationale of this procedure reflects the fact that one pays for past or current resource use which is in excess of current income out of savings, by borrowing, or from outsider investment.

Ratios and Country Risk Assessment

Country risk analysts have developed a set of summary indicators to predict short run debt-servicing difficulties in advance. Analysts have tended to focus on ratios of variables associated with the external side of the economy — exports, imports, debt, debt service and its amortization and interest components, international reserves, International Monetary Fund credit available, the current account balance (currently or cumulatively), and so on. A list of some of these external indicators and what they attempt to summarize is given in Table 4. The heavy reliance on ratios reflects a carry-over of financial analysis techniques used to assess the creditworthiness of commercial borrowers. Ratios also are usually more informative than variables discussed in absolute size.

When measuring long term debt repayment capacity, on the other hand, analysts tend to look more at other economic variables; in particular, they focus on the growth of internal variables such as gross domestic fixed investment, the marginal capital-output ratio as a productivity measure, and such other ratios as capital imports to domestic investment, domestic saving to GDP, investment to GDP, government expenditures to GDP, and so on (Table 4).

Ratios, used singly or in combination in a checklist system, have met with limited success. Extreme caution must be used in interpretation, because a given ratio value may be high or low, depending upon such factors as the size, economic structure, and level of development of a country.

The debt-service ratio, for example, is defined as amortization plus interest (generally on public and publicly guaranteed debt for simplification purposes) as a ratio of exports of goods and services. It serves as a measure of a country's burden of debt in terms of foreign exchange earnings and thus reduced import capacity.

Illustrative of difficulties with ratios, however, there are a variety of problems associated with the debt-service ratio which make it unadvisable to rely on it solely as a risk indicator. A country's reported debt-service ratio could rise when debt-management is improving or fall when there is no improvement due to changes in available information. It ignores other forms of foreign liabilities such as profits on foreign investment. In inflationary times, rising nominal export prices and floating, volatile interest rates make interpretation of the ratio difficult. Because of bunching of repayments, fluctuating exports and other factors, the ratio also is often volatile, rising and falling sharply even from year to year. Other ratios have similar idiosyncracies and require similar cautious interpretation.

Conclusion

International bank lending has grown dramatically since the oil-price increases of 1973-1974. The growth of such lending, particularly to the developing economies, has caused country risk to be an issue which lenders, borrowers, and regulators in the U.S. and other western economies take seriously. Analysts of the economic dimension of country risk (in simplified terms, the ability to repay foreign debt), take a holistic approach in evaluating a country's economic strength.

Table 4
Indicators and Ratios Frequently Used in Economic Risk Assessment

INTERNAL

Gross Domestic Product (GDP) — measure of the size of the economy

GDP Composition — indicator of the overall structure of the economy

Population — measure of the potential size of the market

GDP/Population — measure of the level of economic development

Savings/GDP — indicator of growth prospects attributable to domestic savings

Investment/GDP — indicator of current commitment to future economic growth and productivity

Capital/Output — marginal capital-output ratio measures productivity of new investment

Government Spending/GDP — indicator of government involvement in the economy

Public Sector Deficit/GDP — indicator of the financial management capabilities of the public sector

External Public Debt/GDP — indicator of over all exposure to the international economy and long-term debt burden

Money Supply Growth — measure of economic activity and stability of the currency

Consumer Price index and/or Wholesale Price Index — measures of domestic inflation rate

Unemployment Rate — measure of labor slack in the economy

EXTERNAL

Imports and/or Exports/GDP — measure of the openness of an economy

Export Volume — indicator of growth of the external sector of the economy

Exports/Imports — called the "coverage ratio"; indicator of economy's rate of growth

Export Composition — indicator of vulnerability of foreign exchange earnings to price fluctuations

Manufacturing Exports/Total Exports — indicator of diversity and stability of exports

Oil Imports/Main Export — crude measure of the terms of trade of an economy

Current Account Deficit/Exports — short term measure of possible balance of payments difficulties

Total External Debt/Exports — long term indicator of country's liquidty

Interest Payments/Exports — indicator of debt burden; reflects carrying costs of the external debt

Total Service Payments/Exports — measure of external debt burden

Amortization Payments/External Debt — measure of liquidity and (reciprocal) indicator of average maturity of debt

Interest Payments/International Reserves — short-term measure of ability to meet debt servicing requirements

International Reserves/Imports — measure of short-term liquidity

International Monetary Fund (IMF) Credit Usage/IMF Fund Quota — measure of short-term liquidity

Their methodology is not unlike the physician's who assesses the healthiness of his patients by peering into the patient's background and environment in addition to taking various measurements of health. The objective in country economic risk evaluation is to assess the collective impact of a country's evolving domestic and international economic relationships on the economy's ability to carry a heavier debt burden. Identification of potential debt-servicing problem situations and assessment of economic risk requires a thorough understanding of the internal and external workings of an economy. ER

—William J. Kahley

Sources of Information for Country Risk Analysis

Bankers evaluating country risk require *up-to-date* information sources on countries in which they have or are considering having exposure. For such purposes, consistent data series with very current data are required; bankers will not be satisfied with secondary, dated sources. Typically, banks update their country risk analysis annually, although countries undergoing significant change require reappraisals more frequently. Information needs include data on population, national income, inflation, unemployment, domestic monetary and fiscal conditions, exports and imports and other balance of payments accounts as well as extensive information on the country's external debt. On top of this, information on political and social factors is required. Such political and social information is often supplemented through recurrent travel to the country in question by lending officers as well as through information obtained from representative offices or branches and subsidiaries which the bank may maintain abroad.

In order to fill the requirements of banking and financial entities in country risk analysis, a limited select group of current information sources is required. The sources of such data are primarily the International Monetary Fund, the United Nations, the World Bank, the Bank for International Settlements, the U.S. Treasury and the Board of Governors of the Federal Reserve System. For written assessments on individual economies, the U.S. Departments of Commerce and State, the Inter-American Development Bank, individual newsletters published by banks or publishing houses and country risk rankings published by **Euromoney** and the **Institutional Investor** are also used. That's about it for the essential core. For banks, however, wanting to supplement such sources with data from the individual countries themselves, the monthly, quarterly and annual recurrent publications of the individual country's central bank, monetary authority and the superintendent of banks are recommended. The following is an annotated listing of basic information sources for country risk analysis.

Data Sources on International Lending and Developing Economies' External Debt

1. The World Bank, **World Debt Tables,** External Public Debt of Developing Countries, Washington, D.C., annual, with recurrent supplements. This is the primary source of external public debt and debt servicing.

2. Bank for International Settlements, **Maturity Distribution of International Bank Lending,** semiannual, and **The External Position of Banks in Group of Ten Countries and Switzerland,** quarterly, Basle, Switzerland. This is the primary source for data on industrial economies' commercial bank international claims and liabilities by country.

3. Comptroller of the Currency, Federal Deposit Insurance Corporation, Federal Reserve Board, **Joint News Release, Country Exposure Lending Survey,** Washington, D.C., semiannual. This is the primary source of data on consolidated U.S. bank lending internationally. The report consolidates parent, branch and Edge Act corporations of U.S. banks in regard to cross border and non-local currency claims. In a separate table, claims are reallocated to reflect claims guaranteed by residents of another country.

4. U.S. Treasury Department, **Treasury Bulletin,** Washington, D.C., monthly. This publication presents in great detail the foreign activity of banks and Edge Act corporations operating in the U.S. Branch and foreign subsidiary activity, however, is excluded.

5. Board of Governors of the Federal Reserve System, **Federal Reserve Statistical Release**, "Geographical Distribution of Assets and Liabilities of Major Foreign Branches of U.S. Banks," (E11), Washington, D.C. quarterly. This statistical release details asset and

liability positions by country of customer of the major foreign branches of U.S. banks.

6. World Bank, **Borrowing in International Capital Markets,** Foreign **and International Bond Issues, Publicized Eurocurrency Credits,** Washington, D.C., semiannually. This publication provides comprehensive information on publicized Eurocurrency credits and foreign and international bonds. Data are presented by country and individual credit or bond issue and include the interest rate, the term, the various fees and the lead and co-manager banks.

7. **Euromoney,** London, monthly. Each month, **Euromoney** publishes a section on currently publicized syndicated loans, by borrowing entity. The amount of the credit, the interest rate, the term and the lead management group are included.

Data Sources on Exchange Rates, International Reserves, Monetary and Fiscal Conditions, International Trade, Balance of Payments, National Income Accounts, Population and Unemployment

1. International Monetary Fund (IMF), **International Financial Statistics,** Washington, D.C., monthly. This source is indispensable for country risk analysis. Updated monthly, the **International Financial Statistics** (IFS) presents current and historical data in printed and tape form on individual IMF member countries. Data include series on exchange rates, international reserves, monetary aggregates, government finance, major and total exports, imports, balance of payments aggregates and national income accounts.

2. International Monetary Fund, **Direction of Trade Yearbook,** Washington, D.C., annual, updated monthly. This source, produced in written and tape form, provides current and historical data on the origin and destination of exports and imports of IMF member countries.

3. International Monetary Fund, **Balance of Payments Yearbook,** Washington, D.C., annual, with updates. The **Balance of Payments Yearbook** presents in printed and tape form the most detailed, consistent series available of balance of payments data on IMF member countries. Details on the service account (which includes tourism inflows and outflows) as well as short-term and long-term capital movements are presented in historical series.

4. International Monetary Fund, **Government Finance Statistics Yearbook,** Washington, D.C., annual. The IMF also publishes this highly specialized yearbook which presents details on government tax and other revenues as well as government expenditures.

5. **World Bank Atlas** and **World Development Report,** Washington, D.C., annual. The **World Bank Atlas,** in pamphlet form, contains estimates of population, Gross National Product (GNP) and per capita GNP in current U.S. dollars for most countries of the world. Growth rates for population and per capita GNP (in real terms) are shown. Data are shown graphically in map format with companion tables. A total of 185 countries and territories is listed, including many countries not listed in the IMF publications. The **World Development Report** is a more thorough source but covers fewer countries.

6. United Nations (U.N.), **Monthly Bulletin of Statistics**, New York, monthly. The U.N. publishes annually the **Statistical Yearbook**, which contains detailed tables with country economic data. Many of these tables are updated in the **Monthly Bulletin of Statistics**, such that this monthly source becomes more valuable for country risk analysis purposes. The tables on national income accounts present more detail on GNP composition than those available from the IMF.

7. International Labour Office, **Yearbook of Labour Statistics,** Geneva, Switzerland, annual. Data on employment and unemployment of developing economies are difficult to obtain. Even data found should not be used readily for intercountry comparisons. **The Yearbook of Labour Statistics** does present unemployment data that may prove useful.

Some Descriptive Sources Useful in Country Risk Analysis

1. U.S. Department of State, Bureau of Public Affairs, **Background Notes on Countries of**

the World, updated periodically. This is a series of short, authoritative pamphlets on the countries and territories of the world written by officers of the U.S. Department of State's geographic bureaus. Each **Background Note** includes information on the country's land, people, history, government, political conditions, economy and foreign relations. Also included are maps, brief travel notes, lists of government officials and a bibliography. These pamphlets provide a brief, general introduction to conditions in a particular country.

2. U.S. Department of Commerce, Industry & Trade Administration, **Foreign Economic Trends and Their Implications for the United States,** updated annually. This is a continuing series of brief reports on 130 countries covering their current economic conditions and future trends as well as potential effects of these on U.S. business. Each report is prepared on the scene by U.S. foreign service officers, who pinpoint the economic and financial condition of the country and the marketing prospects for U.S. products. Included in each report is a table of key economic indicators.

3. U.S. Department of Commerce, Industry & Trade Administration, **Overseas Business Reports** (about 50 reports published per year). This is a useful series of reports covering about 100 countries. Titles vary, such as "Marketing in (name of country)," "Doing Business in . . . ," "World Trade Outlook for . . . ," etc. Country information often includes industry trends, trade regulations, information on the tariff system, taxes, direct foreign investment, etc.

4. Inter-American Development Bank (IDB), **Economic and Social Progress in Latin America,** Washington, D.C., annual. The IDB each year does country assessments of member countries. The analysis is well done but becomes quickly dated; the latest (1979) report details 1979 developments; it came out in fall 1980.

5. Business International Corporation, **Business Latin America**, New York, weekly. This publication carries up-to-date business and economic information useful to businessmen involved in Latin America. Periodically, "Business Outlooks" are prepared which assess a particular economy's performance the past year and project descriptively performance in the current year.

6. Barclays Bank Group, **ABECOR Country Report**, London, irregular. In two pages, this series provides an assessment of an analyzed country's economic and social condition; while not in depth, the country reports do provide a brief perspective.

7. **International Currency Review**, London, bimonthly. This publication assesses the stability of exchange rates and evaluates the strengths of currencies throughout the world. Within its assessments, the journal evaluates government policies and current and anticipated economic and financial conditions.

Country Risk Listings

1. **Euromoney**, London, monthly. Twice each year, **Euromoney** publishes country risk tables that are based on ranking the interest rate spreads and maturities of syndicated Euromarket loans to public sector borrowers. The tables include the number and value of Euromarket syndicated loans during the period analyzed and the Euromoney ranking. This country risk ranking depends on market perceptions of the country in question as evidenced by the terms of syndicated credits extended.

2. **Institutional Investor**, New York, monthly. **Institutional Investor** also publishes twice each year country risk tables. The rankings are based on input obtained from about 75 banks active in international lending, with greater weights placed on those banks with the largest worldwide lending and the more sophisticated country risk analysis. Each banker is asked to rate the creditworthiness of each country on a 0 to 100 scale. ER

—Donald E. Baer

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