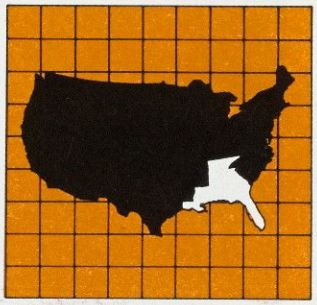
Economic Review



DERAL RESERVE BANK OF ATLANTA SEPTEMBER 1984

HRIFTS Facing the Competitive Challenge

OBOTS Programmed for Productivity

EREGULATION Breaching BHC Defenses

EVELOPMENT Atlanta Workshop

GRICULTURE Better Times Coming?

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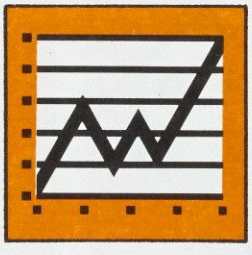


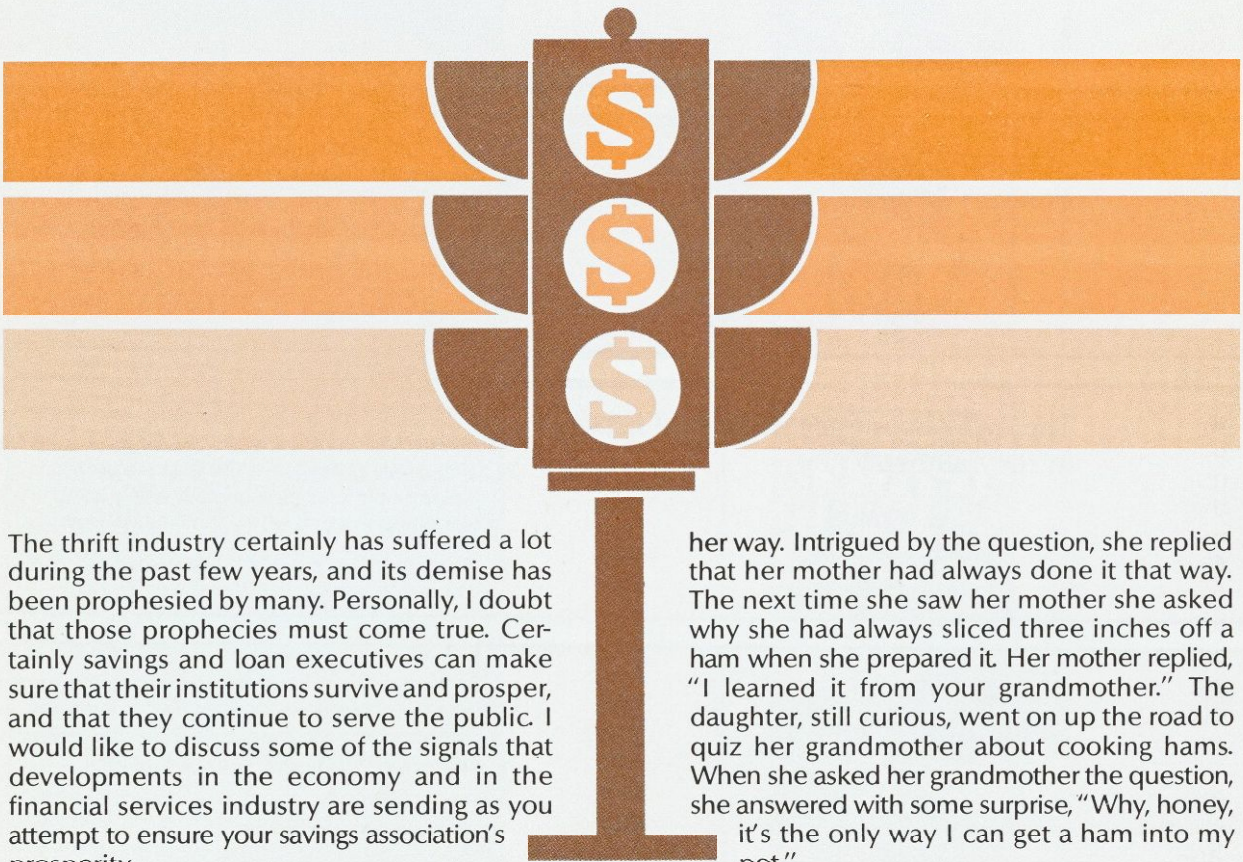
VOLUME LXIX NO. 8

Correction: In the July-August issue of the *Economic Review*, the table on shared networks on page 17 was incorrectly attributed. Information in this table was drawn from the March 1984 issue of *The Nilson Report*, an international newsletter published in Santa Monica, Calif. Our apologies to *The Nilson Report*.

Competitive Forces in Financial Services: Signals for Southeastern Thrifts

Robert P. Forrestal

Despite its recent shakeout, the thrift industry has a chance to prosper in the Southeast, according to the president of the Atlanta Fed. He urges savings and loan executives to seize the opportunities presented by the new competitive environment.



The thrift industry certainly has suffered a lot during the past few years, and its demise has been prophesied by many. Personally, I doubt that those prophecies must come true. Certainly savings and loan executives can make sure that their institutions survive and prosper, and that they continue to serve the public. I would like to discuss some of the signals that developments in the economy and in the financial services industry are sending as you attempt to ensure your savings association's prosperity.

My topic reminds me of a story about the daughter of a rural family who lived just up the road from her relatives. She was in the kitchen one day preparing to cook a ham. As part of her normal procedure she sliced about three inches off the end of the ham, and a visiting friend asked her way. Intrigued by the question, she replied that her mother had always done it that way. The next time she saw her mother she asked why she had always sliced three inches off a ham when she prepared it. Her mother replied, "I learned it from your grandmother." The daughter, still curious, went on up the road to quiz her grandmother about cooking hams. When she asked her grandmother the question, she answered with some surprise, "Why, honey, it's the only way I can get a ham into my pot."

The moral of the story, of course, is that doing things that made sense to our grandparents may cause us to throw away some worthwhile "vittles" if conditions have changed.

Change now pervades the environment in which we operate. The thrift industry must adjust to it or find itself vulnerable to sizable losses. There was a time not long ago when thrift institutions appeared to be gaining advantages on banks through the process of change. In the

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Robert P. Forrestal, president of the Atlanta Fed, delivered this speech to the Georgia League of Savings Associations on June 16 in Asheville, North Carolina.

late 1960s and early 1970s, the regulatory rate differential that favored thrifts in the competition for time and savings deposits became codified and entrenched. In the late 1970s the Federal Home Loan Bank Board ruled that S&Ls could exercise statewide branching powers in all states—even where banks could not. Some of you used these powers to beat your banking brothers in staking a claim to attractive markets. In the early 1980s, Congress allowed you to attack your maturity matching and cyclical earnings problems by becoming more like commercial banks. In 1980, it enabled you to offer NOW accounts, consumer loans, credit cards, second mortgages, and trust services. And finally, in 1982 Congress granted you additional powers to make business loans and accept business deposits.

When your earnings began to turn negative in the early 1980s, capital requirements also were stretched in three ways. The Federal Home Loan Bank Board effectively decreased its capital requirements, allowing you to value at book rather than at market those low-interest, fixed-rate mortgages that plagued your portfolios. Then the Garn-St Germain Act provided you with capital certificates to bolster your capital. (It gave these to banks as well, but few qualified.) These legal and regulatory changes still afford you distinct advantages in markets where you compete against other institutions with higher regulatory or market capital requirements.

All of these changes in law and regulations apparently gave you a leg up in the competition with your commercial banking rivals. You could offer higher rates for insured deposits, move into attractive market areas closed to many of those competitors, bid for their traditional product markets, and operate with less capital. But as the Congress was giving, its legislators, inflation, and your competitors also were taking away. Your apparent advantages made you slow to anticipate and respond to competition and the markets.

The removal of interest ceilings on deposits effectively began with the introduction of six-month money market accounts in 1978, and has continued under congressional mandate. Your advantageous deposit interest differential survives on only a minute proportion of the deposits you hold. Currently, only transactions accounts and passbook savings deposits are subject to interest rate ceilings. Since the end of 1977, savings and loan deposits subject to both interest ceilings and the interest rate differential have declined from 92 percent to 12 percent of total deposits.

Painful effects of the gradual deregulation of deposit ceilings also are evident in disappearing margins between earnings on fixed-rate, long-term mortgage portfolios and short-term, market-related deposits. Many thrift associations face the threat of a financial squeeze similar to that of 1981 and 1982 if interest rates climb further. Even in the relatively prosperous second half of 1983, fully 35 percent of all federally insured savings and loan associations were losing money and the average rate of return on assets for the industry was a scant 0.27 percent (versus 0.67 percent in 1979).

"Your apparent advantages made you slow to anticipate and respond to competition and the markets."

Another important change has been the redressing of geographic disadvantages of banks. They have found a variety of ways to offer services outside their head office county or state. Nonbank activities of bank holding companies, loan production offices, Edge Act corporations and, in some states, grandfathered branches all provide interstate banking vehicles. Through nonbank offices, out-of-state banks operate more than 30 mortgage company offices in Georgia alone. Incidentally, not all bank loan production offices concentrate exclusively on business loans. For example, Chase Manhattan Bank's new Atlanta LPO specializes in loans to individuals. If you are using your new consumer lending powers, Chase is your direct competitor.

Today, at least four southeastern states plan to allow banks to hop over geographic barriers. Georgia, Florida, and the Carolinas already have passed regional, reciprocal interstate banking laws. When banks begin to take advantage of these laws, you may well face larger competitors.

Some of these out-of state competitors will bring lending and deposit-raising skills to Georgia that you have not seen before, since new entrants tend to be innovative.

What we have come to call "nonbank banks" are still on our horizon. Some members of Congress have predicted that the loophole that permits their existence will be closed during this term, but no action has been taken yet. Hearings on nonbank banks in the House of Representatives already have produced a great deal of controversy over whether to close the loophole and how to do it.

If nonbank banks are allowed to continue operating, they will bring our financial system about as close to full interstate deposit-taking by insured banks as we can get without actually being there. Nonbank banks also will provide some strong competition in your traditional thrift markets. These competitors will be seeking consumer deposits just as you are.

The impact of this redressing of competitive imbalances can be seen in changes in shares of commercial banks and thrifts in both national and state deposit and loan markets. At the national level, savings and loans' share of financial assets held by private financial institutions fell by 11 percent between its peak in 1977 and the end of 1983. (Banks' share fell by 6 percent over the same period.) In Georgia, deposits of savings and loan associations and savings banks combined fell from 33.2 percent of total bank and thrift deposits in 1980 to 32.1 percent last year.

In this situation, most savings and loan associations have moved only slowly to use their new powers. These powers were designed to allow thrift associations to manage their interest rate risk more effectively and to diversify away from the inherently cyclical real estate industry. The powers were modeled on those of banks because banks have achieved far better maturity management and much more stable earnings.

The way most S&Ls have moved into these powers can be most charitably described as cautious. Our economists have taken a look at your use of new powers in order to gauge the likelihood of future maturity gap problems in your industry should interest rates continue to rise. For the country as a whole they found that consumer loans made up a little more than 3 percent of S&L assets as of June 1983, up from 1.7 percent when they were authorized three years earlier. Non-real estate commercial loans accounted for just 0.2 percent of total assets in June 1983. In the Southeast, thrift associations have been equally slow to offer new services. Consumer loans inched upward from 2.7 percent to 5 percent of total loans between June 1980 and June 1983. Commercial loans reached only 0.3 percent of assets by June 1983.

"New powers provide flexibility for you to put together institutions that can avoid the cyclical curse of interest rates and real estate."

Your operations continue to be dominated by real estate, which assures you of sharp cyclical earnings swings. As late as March of this year almost 91 percent of Georgia savings and loan associations' nonliquid assets still were related to real estate. This compares with 95 percent at the beginning of 1980.

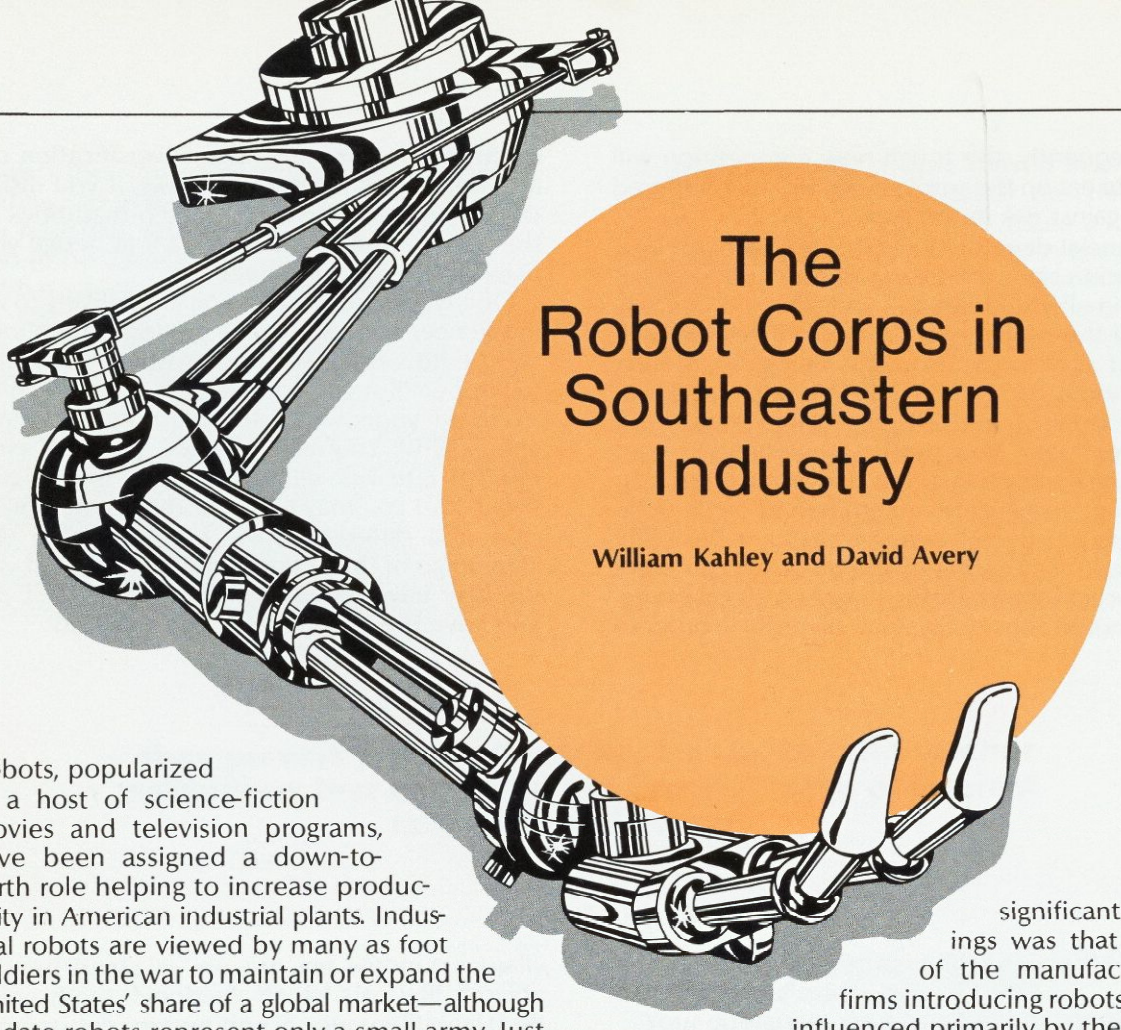
You have made considerable advances in offering variable rate mortgages. These help to shield you from interest rate risks, but they subject you to the same risks of changes in the macro-economy as other real estate operations. And despite your strides in variable rate mortgages, most of you still offer fixed-rate mortgages and they continue to dominate your portfolios.

It is not too surprising, therefore, that your industry faces serious problems now that interest rates have rebounded from early-1983 lows. Thrift associations' own decisions and the short time you have had to improve your position make you vulnerable to your age-old plagues of interest rate risk and real estate cycles. The irony is that, despite such problems, each of your product markets is attractive to new competitors.

Consequently, the tough new competition will tend to eat up the surplus earnings that buffered you against risk in the past.

Financial developments in the Southeast and the nation signal that you will see more competition in all your markets. And since no one has solved the problem of business cycles yet, you should also continue to see swings in interest rates and a cyclical real estate industry. Both of these signals should tell you that you have a hard row to hoe if you persist in combining your traditional activities in the traditional ways. You need not operate just as commercial banks do in order to prosper. New powers provide flexibility for you to put together institutions that can avoid the cyclical curse of interest rates and real estate. You should consider ways to diversify in order to avoid macroeconomic risks. Diversification can also help avoid interest rate risks. If you dislike the idea of diversifying to match maturities on the balance sheet, you may want to hedge your risks off the balance sheet.

One type of real estate you are unlikely to see in the near term is the rose garden. Your hungry competitors and the economy will not allow that to happen. But you now possess a greater ability to control your own destiny than you did even as late as 1980. You may diversify, you may avoid interest rate risk either on or off the balance sheet, and you may use your real estate skills in new and different ways. I urge you to take advantage of these opportunities. You and your industry have long served the public well, and you have the skills to continue to do so.



The Robot Corps in Southeastern Industry

William Kahley and David Avery

Robots, popularized in a host of science-fiction movies and television programs, have been assigned a down-to-earth role helping to increase productivity in American industrial plants. Industrial robots are viewed by many as foot soldiers in the war to maintain or expand the United States' share of a global market—although to date robots represent only a small army. Just what is their potential value to U.S. industry in an international marketplace where such competitors as Japan frequently seem to outperform our own manufacturers?

The Federal Reserve Bank of Atlanta decided to look at the current and expected future use of robots in the American workplace, particularly in the Southeast. Information on the use of robots in southeastern industry has been scarce and we believed that, by surveying users and potential users of industrial robots, we could contribute to the region's knowledge.

Our survey drew a response that was both helpful and at times surprising. One of the most significant findings was that most of the manufacturing firms introducing robots were influenced primarily by the need to reduce labor costs. That seems logical in view of the increasing competition American manufacturers face from low-cost foreign producers of goods ranging from steel and automobiles to textiles and apparel. Industry analysts have been in general agreement that U.S. producers must reduce the labor content of their domestic products. Otherwise, the stiff hand of competition might close markets to our producers permanently or force them to manufacture their goods offshore, relying on less-expensive foreign labor.

The predicament of U.S. manufacturers confronting low-wage foreign competition has been summed up by financial writers in the phrase, "emigrate, automate, or evaporate." Some U.S. manufacturers have chosen to pursue automation aggressively, turning to high-technology improvements such as robotics to produce traditional

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The authors are members of the Atlanta Fed's Research Department.

While androids such as R2D2 and C3PO still may be light years away, many U.S. industries already rely on robots to perform difficult or dangerous jobs. Atlanta Fed economists recently conducted a survey to learn how robots are helping America regain a competitive edge in critical industries.

"smokestack" goods in this country at lower cost. Robots are only one element in the array of high-tech improvements being adopted by various industries (see Box 1). Yet the expansion of robotics has been handicapped by several limitations involving both systems and personnel. Judging from our research, U.S. manufacturers need more experience with robotics systems as well as additional technological breakthroughs if the number of robots in operation is to expand as rapidly by the end of this century as some optimistic forecasters expect.

What is the future of robots in the American workplace? How great a role will they play in southeastern industry, and how important are they to manufacturers in the region today? To what extent are robots likely to displace human workers? Responses to these and related questions could, we believe, help us to understand the probable development of the southeastern manufacturing economy. We hope that our survey contributed some of the answers.

What Is a Robot?

R2D2 and C3PO, imaginary androids from the popular *Star Wars* movies, have little in common with the approximately 7,500 industrial robots in use in U.S. manufacturing plants today.[1] (Some firms, however, are producing and developing robots that serve drinks, clean carpets, defuse bombs, patrol for security, and entertain.) According to the Robotic Industries Association, formerly the Robot Institute of America, a robot is any "reprogrammable, multifunctional manipulator designed to move materials, parts, tools, or specialized devices through variable programmed motions for the performance of a variety of tasks."[2] The key terms here are "reprogrammable multifunctional manipulator" and "variety of tasks;" in other words, robots are machines that can use tools to perform different jobs when they are told to do so. An advanced robot typically is composed of the following parts:

—hand, gripper, or sensing device (such as vision or touch)
—an arm or manipulator mounted or supported on a base
—a control computer and software
—a power supply.

The basic process is that the controller tells the arm and hand (or tool) what to do and they perform the task with energy obtained from the power source.

Where Are the Robots?

The first industrial robots were introduced in the United States nearly 25 years ago, but as late as 1972 worldwide sales were only $6 million. Since then sales have climbed more rapidly, reaching $190 million in the United States alone in 1982, or $112 million in 1972 dollars.[3] Historically there has been a 12-to 15-year time lag between the development of a technology and its adoption in the workplace. So far, the case of robots has followed this pattern.[4]

About 50,000 robots were in use worldwide in 1982.[5] Of these, nearly two-thirds were in Japanese establishments, compared with 14 percent in the United States and 7 percent in West Germany. About 60 domestic companies produced and distributed an estimated 2,500 robots in 1983.[6] Another 140 foreign producers sold about 1,000 robots in the U.S. market in 1983.

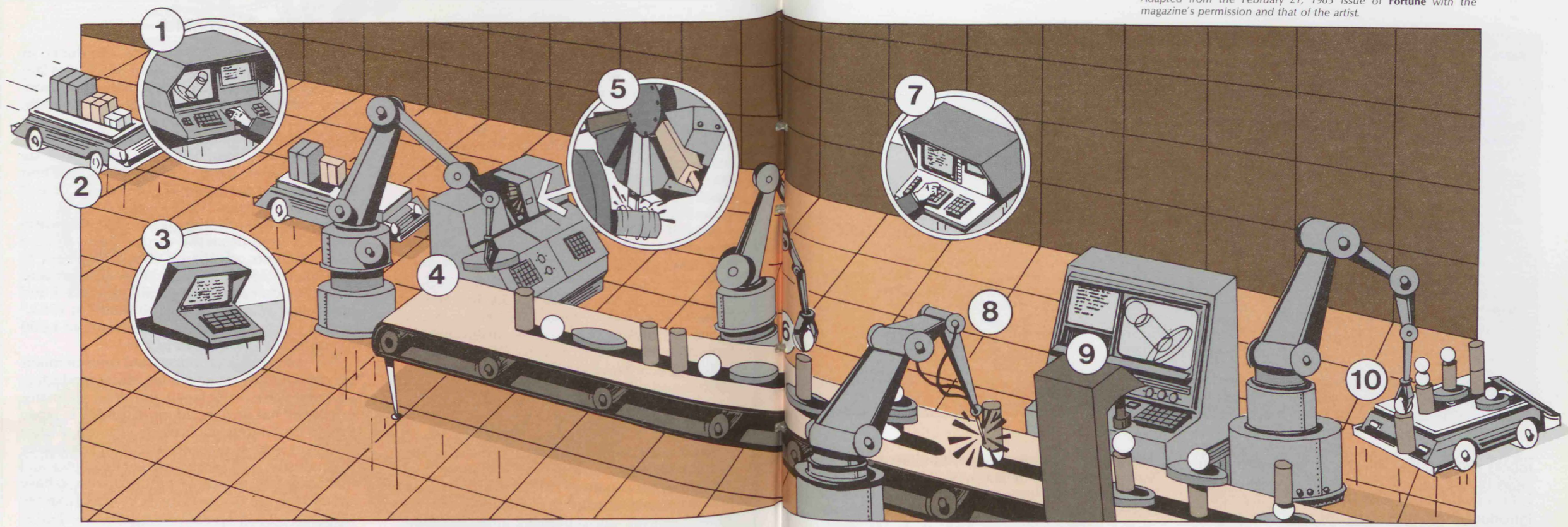
The main foreign producers and users of robots are countries with large motor vehicle production facilities, particularly Japan and West Germany. Robot use has developed more quickly in Japan than in the United States partly because of labor shortages in its strong and fast-growing automobile industry. Japan's government assistance and managements' receptive attitude may also have spurred the use of robots there. In 1982 Japanese sales totaled $480 million for robots classified as such in the United States. West Germany's robot production in that year amounted to $108 million, and other Western European countries lagged substantially behind.

The automobile industry is the largest user of robots in this country as well, accounting for 50-60 percent of the installed robot population. Within the auto industry the dominant applications are for painting, welding, and material handling—the "dull, dirty, dangerous" or "hot, heavy, hazardous" tasks that highlight robots' advantages in the workplace. In other industries that are relatively heavy users of robots, such as the aircraft, appliance, and foundry industries, robots are used for machining, molding, machine loading or unloading, general material handling, and in many assembly operations.

It should be noted that robots vary widely in structure, sophistication, and cost. With a median price of about $60,000, the robot itself ordinarily represents only about one-quarter of its total installation cost. Most robots are not energy intensive, relying on small electric motors or hydraulic systems for movement. In general,

Flexible Manufacturing Systems

Adapted from the February 21, 1983 issue of **Fortune** *with the magazine's permission and that of the artist.*



1 *An unprecedented diversity of operations can be performed by a fully automated flexible manufacturing facility. Work begins with product design on a computer-aided system, an electronic drafting board that conveys information to the central system.*

2 *Directed by the computer, a parts carrier brings raw materials to the line. Loaded automatically at the storage area, carriers usually are guided by low-frequency radio signals transmitted through a wire buried in the floor.*

3 *Remote terminals allow management to keep track of the activity on the unmanned manufacturing line. Without leaving his office a manager can ask the robots what they have done for him today—say, how many products they have turned out.*

4 *A robot unloads raw metal blanks from the carrier cart, places them in a lathe, and then transfers the finished part onto the conveyor. The "pick and place" robots are programmed for their tasks, but new ones under development will be guided by vision or touch.*

5 *A revolving holder supplies the appropriate tools for each part to be machined. Directed by the central controller, the lathe automatically picks the right tool and performs the prescribed cutting operations.*

6 *Continuing the programmed sequence of operations, an assembly robot puts the parts together. Assembly robots are just beginning to come into their own. The joining of complex parts is more difficult to automate than machining.*

7 *An electronic foreman—a computer terminal known as a programmable controller—directs the work. Reprogrammed at its keyboard by a human supervisor, the controller can change the number and type of products being made.*

8 *A welding robot joins the parts, making as many welds as necessary on all sides. Until the advent of flexible automation, such robots usually were stand-alone, single-purpose units installed as replacements for human welders.*

9 *The newly made product is scrutinized by a camera containing a semiconductor chip that can "see" and instantly measure deviations from standards. Automatic inspection is an area where U.S. manufacturers excel.*

10 *A robot places each product in precisely the right spot on an automatic cart that will carry it off to a shipping area. Should something go wrong, red lights will alert human "tenders" who walk through the plant monitoring production.*

The president of an Atlanta-based company that specializes in designing and fabricating turnkey systems utilizing industrial robots likens robots to a screwdriver in a mechanic's tool box. "A well-equipped tool box will certainly include a screwdriver, but a tool box full of nothing but screwdrivers is of limited use. That's the way it is with a robot. It's a tool—one of several in a well-designed flexible manufacturing system."

Flexible manufacturing systems (FMS) integrate the use of computers, robots, machine tools, and automated material and parts handling. Their key feature is that they can readily adapt to change. FMS can be programmed to produce several parts simultaneously and be quickly reprogrammed to incorporate product design changes or to produce new parts. By contrast, traditional "fixed automation systems" follow a prescribed manufacturing sequence designed to churn out identical products in huge volume. Retooling fixed automation systems to produce new or improved items tends to be a long and costly process.

The economic significance of FMS is linked to its advantage over the fixed system in producing manufactured goods in small batches, which are the bulk of manufacturing applications.[7] Whereas FMS can realize scale economies over a wide range, Detroit-style fixed systems achieve their greatest economies only when they mass-produce products and components such as automobiles and tires. Enthusiasts of the futuristic factories even imagine producing custom-designed goods for individual buyers as efficiently as the fixed systems produce a million identical items. As an additional advantage, flexible systems enable manufacturers to respond more quickly to changes in market demand, creating attractive opportunities for manufacturers who can adjust, but serious problems for rivals who fail to employ flexible systems.[8]

How do flexible systems boost productivity to achieve cost savings? Because manufacturing is fully automated, there are reductions in setup and retooling costs, in time delays in the production process, and in material waste caused by human errors. Equipment utilization is thus increased, labor and materials are used more effectively, inventory is lessened, and product quality attains greater consistency.[9]

Systems such as the one described above are not yet fully operational anywhere. But some companies, particularly in Japan, are clearly moving toward the workerless factory. In the United States only about 30 flexible systems are currently operating, with a market value of $250 million. But the U.S. Department of Commerce expects the entire factory automation market to grow to $15 billion by 1988.[10] Increased foreign competition makes the overall sharp upward trend to automation inevitable. Indeed, the future survival of many U.S. firms demands it.

Table 1. Number of Robots by Industry and State
(survey data, April 1984)

Industry	Ala.	Fla.	Ga.	La.	Miss.	N.C.	S.C.	Tenn.	Multi-state	Region	Percent of Total
Furniture/Fixtures					1			4		5	0.3
Chemicals						1	4			5	0.3
Rubber			7							7	0.6
Stone/Clay/Glass								28	1	29	2.3
Primary and Fabricated Metals	24	1	4	4	3	20	2	48	4	110	8.8
Machinery, except Electrical		6				1			20	27	2.2
Electrical/Electronic Machinery	10	115	18	3		80	8	14	60	308	24.6
Transportation Equipment	32	13	60	32		44	7	313	20	521	41.6
Instruments		4				3		10		17	1.4
Miscellaneous Manufacturing	6	35	6			25		31		103	8.2
Educational Services				3		11	2		2	18	1.4
Services			1					11		12	1.0
Other	30	15	13			23	1	9		91	7.3
State/Regional Total	102	189	109	42	4	208	24	468	107	1,253	–

Source: Federal Reserve Bank of Atlanta, April 1984.

robots will function effectively for five to eight years before a major overhaul is required; however, newer, more effective models are being introduced monthly into the marketplace as alternatives to robots already in use.

According to the Bureau of Labor Statistics, "some lesser skilled production occupations (such as operatives) are threatened by the introduction of robots and other automated equipment. But their current introduction is hampered by factors such as the lack of visual capabilities and by their purchase, installation, and maintenance costs.... If the robots' capabilities can be improved and their associated costs can be reduced through mass production, we may see an occupational impact."[11] In spite of current constraints, industrial robots are projected to reduce the growth in employment of welders, production painters, and material-moving occupations. Enlightened managers can ease the transition for these workers through education and retraining.

Robots in the Southeast

Little detailed information is available concerning the use of robots outside the automobile industry, and data on the use of robots in the Southeast are even more scarce. To find out more about robot use in this region, we surveyed subscribers to the Society of Manufacturing Engineers' magazine of automated manufacturing, *Robotics Today*, in Sixth District states plus the Carolinas. The 325 respondents to our April survey questionnaire constitute 22 percent of the subscribers in the Southeast. Their responses provide useful and sometimes surprising information concerning the region's robot profile.

The total number of robots used by responding southeastern firms is 1,253, a conservative estimate of the total robot population in the region and about in line with the national total considering the industry mix.[12] The eight states in the region account for about 18 percent of the country's manufacturing employment, the sector associated with using robots. If manufacturing industries nationally used robots in the same proportion as our survey indicates they are used in the Southeast, an estimated one per 2,711 workers, the U.S. robot population would total nearly 7,100. The actual U.S. International Trade Commission estimate of the robot population nationwide in 1982 was 7,200.

The distribution of robots by industry reflects their advantages in particular applications. Most robots used in the Southeast are found in the transportation equipment, electrical and electronic machinery, and fabricated metals industries (Table 1). They are used principally for

Robotics in the Textile Industry

The textile industry is the largest manufacturing employer in Georgia and the Carolinas. Numerous small communities in these and other states in the region are economically dependent on payrolls generated by textile and apparel firms. New investments to increase productivity, efficiency, and profitability in this mature industry are being made in an attempt to survive intense foreign competition. In 1983 the industry spent $1.3 billion in its revitalization effort, mostly to purchase automated and computerized equipment. The industrial robot is one of the new tools that has been brought into the textile mill.

Most robots in textile mills are used to handle material. Robots' flexibility enables them to stack and pack heavy yarn spools in different locations and patterns—a job that can be highly inefficient and dangerous when performed by factory workers. It is also a dull and tedious job.

Special technical problems inhibit the use of robots in the textile industry. Textile mills tend to be old facilities with narrow aisles between the machines, which makes it difficult to employ robots that require more space. The "pliant nature" of textiles and the numerous product inspections at various intermediate stages of production require robots with relatively sophisticated touch-and-sight capabilities. Forward-thinking managers must design plants with an eye for automation, leaving enough room for the robot to function at various work stations. Furthermore, new technologies that equip robots with vision systems for product inspection and grippers for easy manipulation of textiles will be required.

These "problems" probably will be solved in the not-too-distant future, according to experts.[13] For now, textile facilities such as American Enka's Clemson, South Carolina plant and Burlington Industries' Erwin, North Carolina plant use robots principally as part of a sophisticated material handling system. Other applications in the industry are sure to emerge as producers find ways to tap the productivity enhancing potential of robotics.

welding and painting operations; materials handling, including loading and unloading of machine tools and molds; and in assembling of products, such as printed circuit boards and other industrial and consumer goods.

Within the region, the use of robots by state may seem somewhat surprising (Table 2). Tennessee and Florida account for a relatively large share of the robot population compared with these states' manufacturing employment. The concentration of robots in Florida reflects, in part, its status as a fast-growing center of high-technology employment. The state is home to major robot manufacturer-users such as IBM, and is a center for the mushrooming electric and electronic machinery industry, which increasingly uses robots in assembly.

The manufacturing sector's share of nonfarm employment in Tennessee is higher than in any other regional state except North Carolina. Tennessee's manufacturing employment is concentrated in auto and housing-related durable goods industries, which use robots heavily. Nissan's truck assembly plant in Smyrna alone uses 240 robots. Auto assembly likewise accounts for much of Georgia's robot use: GM and Ford employ dozens of robots to assemble cars in Atlanta. In Alabama, where robot use is about proportionate to the state's share of the regional blue-collar work force, robots are used in smokestack industries, chiefly primary and fabricated metals, transportation equipment, and aerospace and defense.

North Carolina's firms account for a large portion of the region's robot population, but not in proportion to its share of regional manufacturing employment. Manufacturing employment in the state is largely concentrated in textiles, an industry that has difficulty adapting mills for robot use (see Box 2). The use of robots per manufacturing employee is similarly constrained in Georgia, South Carolina and, to a lesser extent, Alabama.

Louisiana and Mississippi apparently use few robots. In Louisiana, manufacturing is heavily concentrated in industries related to oil and gas extraction and petrochemicals. Robot applications in these capital-intensive industries are extremely limited compared with manufacturing industries that employ many blue-collar production-line workers. In Mississippi, where the work force is largely non-unionized, labor is still relatively abundant at moderate cost.

Differences in the characteristics of robot-using and non-using firms in our survey are revealing. Roughly 60 percent of those responding to our survey were robot users. Across the region, firms that use robots tend to be large,

Table 2. Number of Robots and Shares of Southeast's Robots and Manufacturing Employment, by State (survey data, April 1984)

State	Number of Robots	Share of Robots	Share of Manufacturing Employment
Alabama	102	8.1	10.2
Florida	189	15.1	14.2
Georgia	109	8.7	15.4
Louisiana	42	3.4	5.3
Mississippi	4	0.3	6.2
North Carolina	208	16.6	23.4
South Carolina	24	1.9	10.9
Tennessee	468	37.4	14.4
Multi-state*	107	8.5	–
Southeast Total	1,253	100.0	100.0

*Multi-state refers to respondent reports covering aggregate robot use in more than one state in the region. The distribution of these robots by state cannot be determined, but the distribution of the respondents' mailing addresses is similar to the distribution of robots by state.

Source: Federal Reserve Bank of Atlanta, April 1984.

with two-thirds of the plants employing over 500 workers. Extremely large plants, those with more than 2,500 workers, account for 30 percent of the region's users. Among users, well-established firms predominate: two-fifths of the users in our survey were founded before World War II. By contrast, one-fourth of the non-users employ fewer than 50 workers and only one-third were founded before the war.

The robot user profile, by firm size and age as well as by type of industry and robot application, suggests that enhancing productivity is crucial to the manufacture of new and mature products. But information from our survey of user-respondents suggests that using robots is a recent development to improve productivity. Over 50 percent of the users adopted robots within the past three years.

Why Use Robots?

The demand for robots is linked to the productivity gains they bring to the workplace that reduce costs and improve quality. In addition, robots can enhance workers' safety and tighten control over the entire manufacturing process. All of these benefits add to the "bottom-line" incentives for employing robots.

The particularly widespread use of robots in automobile production is attributable to their clear technological, economic, and environmental advantages. In welding, painting, and gluing applications, robots' precision lowers production costs by conserving materials. Where they take over dangerous jobs, robots reduce worker injuries and accompanying compensation claims. Robots can also work in unhealthy environments that otherwise would require expensive equipment to comply with environmental regulations for worker protection.

Product quality often improves with the use of robots in manufacturing. Welds, for example, can be made more precisely and with greater consistency when a robot replaces a worker, who is subject to fatigue and boredom. The improved quality of welding translates into increased profitability through reduced scrap and in-process inventory (because less reworking is required), and fewer returned goods and service calls.

Saving on direct labor costs has been a crucial incentive for robot use in the U.S. automotive sector, where workers are the highest

paid in the industry worldwide.[14] To regain competitiveness with foreign car manufacturers, U.S. companies have bought robots whose cost per hour, including depreciation, maintenance, and capital charges is only one-fourth the approximately $23-an-hour compensation for labor.

Robots bring other benefits to machine-tooling processes. For example, robots can perform deburring, grinding, and routing operations without using templates, thereby lowering production costs. In hot and heavy jobs, like foundry work, robots save time and money by reducing material transfer and work environment costs. In these and other industries, robots can increase the utilization of other capital equipment employed in the manufacturing process.

The flexibility that robots permit is a major benefit to producers. With reprogrammable robots, a single system can replace several production lines for multi-product small batch and mixed-flow-line production and this saves on capital equipment and plant size. Enhanced production-control flexibility and quick feedback also allow rapid adjustments that improve quality and reduce waste and inventory. The reprogrammability feature of robots is especially helpful in shortening producers' response time as market demand develops for new products.

We asked robot users in the Southeast to rank, in order of importance, the reasons they first introduced robots into their plants. Fifty-five percent indicated that they aimed primarily to reduce costs, 16 percent wanted to increase their output, 10 percent hoped to improve product quality, and 8 percent wanted to eliminate dangerous jobs. Their results seem encouraging. Only 2 percent of the user-respondents reported that robots failed to help them achieve their objectives.

Why Aren't More Robots Used?

Available figures for the actual number of robots produced and sold by American robot manufacturers are imprecise. But sales in recent years clearly have lagged behind the expectations of many forecasters. Some of the slower-than-expected growth may be attributable to the economic recession nationally, but other forces also are limiting growth.

Leaders in the robotics industry say managers of many U.S. companies remain unaware of what robots and automated systems can do for them. Their observation is consistent with general studies concerning the diffusion of technology. Robot use is still in its infancy, and a major requirement for faster growth is more widespread information and awareness about robots.

Today's early developmental stages of robot technology may also be impeding use. Current robot vision and touch capabilities are limited; in fact, fewer than 10 percent of today's robots possess any vision at all. Research is underway into basic components such as sensors, control systems, and computer program languages to accelerate growth in robot use. Another possible factor inhibiting growth may be a shortage of engineers and other technicians who are expert in the application of robots in a total manufacturing system.

The economics of introducing a robot into the workplace has an obvious limiting effect on the spread of robots in manufacturing. To optimize robot capabilities, work spaces often have to be rearranged and other machinery or parts redesigned. Typically, total installation costs run from 150 to 500 percent of the initial cost of the robot, which ranges from $45,000 to $240,000 depending on sophistication.

Robot usage also has been constrained by the complexity of robot systems and by sunken costs in existing plants and equipment. Furthermore some critics of U.S. management argue that an overemphasis on short-term profitability derails many robot projects and that the scarcity of needed information makes managers cautious about investing in robots. For example, it is often difficult to estimate in advance the cost of software required to integrate a robot into a particular plant's operation. Consequently, companies are more inclined to approve capital projects that replace conventional tools with improved models than more efficient but dramatically innovative manufacturing processes that use robots.

Some industry observers claim that actual and potential opposition from blue-collar workers is another factor curbing the adoption of industrial robots. A number of union contracts include provisions that restrict or impede the introduction of new technologies into the workplace. But there is evidence that management can introduce robots successfully when workers are involved in the process and informed about job security and pay issues.[15]

Respondents to our survey cited cost considerations and technology unsuitable for their operations as the primary factors inhibiting robot use in the region. Nearly three-quarters of the non-users, however, expect eventually to use robots in their firms. Almost half of the non-users anticipate robot use before 1990. Two promising areas for growth are materials handling, including loading and unloading operations, and assembly. Potential users in our survey listed these categories as the most likely robotic applications. Most of the non-users who expect to use robots in the future operate plants in the oldest age category (1940s and before), mostly with 100 to 1,000 employees. Only among the smallest of firms (less than 50 employees) did a majority respond that they are unlikely ever to use robots.

What's Ahead for the Robot Industry?

Projections concerning the number of industrial robots that will be used in this country by 1990 vary widely; estimates for later years vary even more. The Bureau of Labor Statistics, in its most recent projections, estimates that 100,000 robots will be used in 1995. But some experts in the robotics area forecast dramatically higher robot usage, ranging up to 2 million by the end of this century.

The divided opinion about future robot usage is reflected in our survey responses. One-fourth of the participants declined to respond to our question about the expected robot population in 1995. The second most frequent response, by 16 percent of the participants, predicted a robot population of between 50,000 and 100,000 in 1995; however, 15 percent of the participants forecast 500,000 or more robots by that year. Firms that already have robots in place seem to be more certain and optimistic concerning the growth of robot use. Relatively more users responded to our question about future robot use, and they tended to expect a larger robot population in 1995.

Despite the lack of a consensus regarding the future number of robots, general agreement exists that robot use will grow rapidly. Nearly all forecasters expect an annual compound growth rate in the 25-35 percent range in the remaining years of this decade. Even from a low base, this fast growth would develop robot production into a $2 billion industry by 1990. Robot sales totaled $220 million in 1982 and the Bureau of Industrial Economics expects sales to rise to $265 million this year.

The speed and extent of diffusion of robots in the workplace depends on a complex of changes in future market prices for final products and in the resources used to produce them. From a technical perspective, robots can already perform numerous tasks in most industries. But individual companies will decide whether to adopt robots based on a comparison of the relative costs of labor and robots.

The difficulty of foreseeing developments in product and resource markets and their combined impact on the robotics industry limits our vision of the future use of robots. A chicken-and-egg type problem further clouds the future: buyers will not invest in robots until there is reliable equipment and programming, and manufacturers are reluctant to develop low-cost hardware and complete programming until there are enough buyers.

Seen from a historical perspective, opportunities always exist for the innovative and creative use of new and existing technologies. Even without an extensive search for new applications, many companies could employ robots profitably. Applications are most likely in plants where machines are underutilized, the amount of work in progress is high, workers toil in an unhealthy environment, and quality is uneven or poor.

Robot producers are faced with numerous opportunities for marketing their products more effectively. Some industry analysts say robot manufacturers could expand sales rapidly if they would standardize products and terminology to reduce buyer confusion, and if they would target sales presentations to a prospective customer's executive management rather than to engineers and plant managers. In short, they say, robot manufacturers should employ marketing techniques common in the computer industry, selling systems and solutions rather than hardware.[16]

Robots of the future undoubtedly will become more intelligent, flexible, and inexpensive. Improved software that integrates computer-aided development and manufacturing of products will facilitate robot producers' market expansion. Better vision and touch sensors also will help markets grow, and will greatly improve the value of robots for product assembly, in particular.

Our survey supports the optimistic view that adequate training programs will be available to prepare workers to program, operate, and maintain industrial robots in the next ten years. Nearly three-fourths of our respondents expect that robotic training programs will meet the needs of industry. According to Robotics International, 27 domestic institutions of higher education listed robotics degrees or options in their programs as of mid-1982, and 74 more offered robotics courses. However, formal education and industry instruction will have to meet an escalating demand as technological advances (such as vision and touch) are applied more widely.

Conclusions

Industrial robot use is likely to grow rapidly in the years ahead, benefiting individual workers and firms and the entire economy. Workers' standards of living should be boosted by the productivity gains that robots bring to the workplace, and they will profit from the elimination of dull, dirty, and dangerous jobs. By increasing productivity, robots may enable U.S. manufacturers to compete better with low-cost foreign producers, and might help make the national economy less inflation-prone. A reduction in the inventory required in manufacturing might even lessen cyclical fluctuations in GNP by dampening inventory swings.

But these gains will not be costless. The elimination of unskilled and semi-skilled jobs will impose adjustment burdens on displaced workers. Some business firms that are too slow to adopt robots will find their markets dwindling and may be forced to close their doors. Local and national policymakers are likely to come under increased pressures to develop programs to help these workers and firms adjust.

(Special thanks to Lester Ottinger and Harlan Grasier of Robot Systems, Inc., Richard Standring of the Society of Manufacturing Engineers, and Lori Manion of the Federal Reserve Bank of Atlanta.)

NOTES

[1]The word robot comes from the Czech word "robota," meaning servitude or drudgery. It came into the English language in the early 1920s via Karel Capek's play *Rossum's Universal Robots*.

[2]The name change reflects the association's desire to represent a broader base of robotic technology, including robot mobility, automation systems, and sensors.

[3]Estimate from U.S. Department of Commerce, Bureau of Industrial Economics, *U.S. Industrial Outlook, 1984*.

[4]Experts agree that the number of robots used in industry is likely to grow well into the 21st century. For example, representatives of the National Aeronautics and Space Administration and National Bureau of Standards have testified before Congress that robot technology is only in its infancy: "... this technology will probably not mature for 50 or 100 or maybe 200 years and ... these effects, dramatic though they may be in the next 10 or 20 years, will continue throughout the next century." (Testimony by Dr. James S. Albus, *Robotics Hearings*, Committee on Science and Technology, June 23, 1982.) Joseph F. Engelberger, the "father of robotics," thinks that "it's still an embryo industry." (See the Conference Board magazine *Across the Board*, June 1984, p. 22.)

[5]Data in this section are from U.S. International Trade Commission, *Competitive Position of U.S. Producers of Robotics in Domestic and World Markets*, USITC Publication 1475, December 1983.

[6]The Southeast is headquarters for a few major domestic producers. All of IBM's robot manufacturing and sales operations are located in Boca Raton, Florida, and General Electric's robotics systems service center is in Orlando. Cincinnati Milacron, another major domestic robot producer, makes robots in Greenwood, South Carolina.

[7]Office of Technology Assessment, *Automation and the Workplace* (March 1983.)

[8]See Gene Bylinsky, "The Race to the Automated Factory," *Fortune*, February 21, 1983, for a good nontechnical discussion of FMS.

[9]The initial investment for fully integrated systems, however, is often greater that that for fixed automation systems. See J. D. Goldhas and M. Jelinek, "Plan for Economies of Scope," *Harvard Business Review*, 61 (November/December 1983), for a discussion of the managerial opportunities and problems posed by FMS's.

[10]*U.S. Industrial Outlook, 1984*.

[11]G. T. Silvestri et al., "Occupational Employment Projections Through 1995," *Monthly Labor Review*, vol. 106 (November 1983), p. 97.

[12]There are two principal sources of measurement error in this estimate of the total robot population in the region. First, the actual number of robots is underestimated to the extent that some robot-using firms did not respond to our survey. However, we believe that our count of the number of robots for extensive users is virtually a population count for major users, and that the number of robots used by other non-responding firms is unlikely to be more than 5-10 percent of the total estimate we report. Second, our estimate overstates the number of robots to the extent that respondents reported their robot use on the basis of the broader Japan Industrial Robot Association definition of industrial robots. (The Japanese definition includes as robots some machines that are operated manually by a worker as well as "robots" such as machine tools or a drill punch or press whose time sequences of positions and operations are predetermined and almost fixed.) This source of measurement error should be small since all of the respondents to our survey subscribe to RIA trade publications and thus can be expected to use RIA's definition of a robot.

[13]See D. Underwood, "Robotics in Textiles," *Textile Industries*, 148 (March 1984).

[14]The cost of labor is a main component of the cost of manufactured goods. Thus, unit labor costs (which reflect changes both in worker productivity and compensation) play a major role along with currency exchange rates in determining relative prices for identical goods produced in different countries for sale in world markets. Expressed in U.S. dollars, unit labor cost for U.S. workers was comparatively low in the late 1970s as a result of the weak foreign exchange value of the dollar and faster growing wages for foreign workers. However, the relative cost of U.S. labor has increased in recent years as the dollar has strengthened against other currencies.

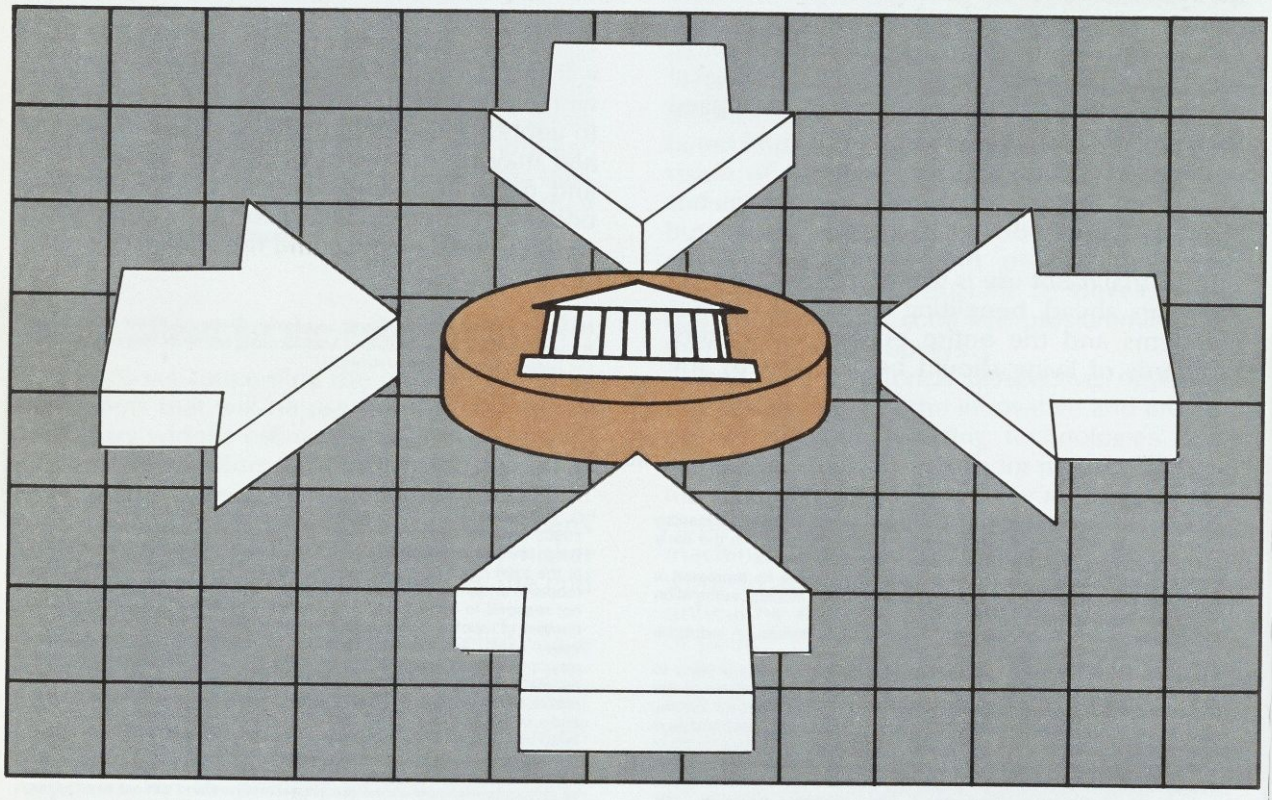
[15]See L. Argote and others, "The Human Side of Robotics: How Workers React to a Robot," *Sloan Management Review*, 24 (Spring 1983), and F. K. Foulkes and J. L. Hirsch, "People Make Robots Work," *Harvard Business Review*, 62 (January-February 1984).

[16]See W. J. Finch, "Why Aren't U.S. Manufacturers Using Robots?" *Robotics World*, 1 (December 1983).

Insulating Banks from Nonbank Affiliates

Larry D. Wall

With varying effectiveness, regulations seek to shield banks from problems encountered by holding companies' nonbank affiliates, and to prohibit BHCs from engaging in high-risk activities. But legislation is afoot that could relax these constraints, as well as broaden the range of activities a BHC may undertake.



Bank holding companies and their nonbank affiliates are regulated within the system that protects bank safety. Among these regulations are restrictions to prevent bank holding companies (BHCs) from engaging in excessively risky nonbank activities, from taking excessive risks through their affiliates, and from transferring nonbank losses to bank affiliates.[1] Many BHCs are trying to have these restrictions relaxed, especially the restrictions on activities, and federal bank regulators generally agree that activity deregulation would be desirable. The Treasury Department has distilled a great deal of thought on bank holding company-affiliate relationships into specific proposals that would remove restrictions on activities and at the same time add restrictions on bank transactions with affiliates. Some of these proposed changes are embodied in Senate Bill 2181, which was introduced during 1983.

Protecting the safety of the banking system is critical because of its key role in the payments mechanism and in the transmission of monetary policy. Protecting individual banks also is important because the government insures deposits. Regulations protecting bank safety and soundness are essential because the safety net that protects banks (deposit insurance and access to the discount window) reduces incentives for the

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financial markets to control bank risk.[2] Nonbank affiliates are regulated in part because of a concern that nonbank problems will affect a BHC's bank affiliates. For instance, affiliates can be affected if the BHC diverts resources from its banks to assist nonbank affiliates. The problems of nonbank affiliates can also spill over into banks if nonbank failures undermine depositor confidence in bank affiliates, or if nonbank failures result in the loss of an important service to the bank affiliates.

This study will discuss constraints on BHC activities and other regulations that serve to insulate banks from their nonbank affiliates. We find that the restrictions on BHC activities do limit their expansion, but it is not obvious that these controls reduce BHC riskiness. Regulations influencing the riskiness of approved nonbank subsidiaries can address problems that have

"In sum, although regulation reduces banks' exposure to problems in their nonbank affiliates, significant exposure remains."

significant implications for bank safety and soundness, yet otherwise leave responsibility for controlling risk with shareholders and creditors. Regulations limiting bank transactions with nonbank affiliates limit the danger of nonbank problems spilling over into bank subsidiaries, but banks still can be affected by their subsidiaries' problems. In sum, although regulation reduces banks' exposure to problems in their nonbank affiliates, significant exposure remains. The analysis that follows indicates that some proposed changes in regulation of intra-holding company transactions are unlikely to have a significant effect on bank safety and soundness.

Riskiness of New Nonbank Affiliates

The first line of defense shielding banks from their affiliates consists of regulations designed to prevent BHCs from engaging in activities believed to be excessively risky. These include restrictions on the types of activities that bank affiliates can undertake, and the requirement that each BHC expansion into new activities receive approval of the Federal Reserve System's Board of Governors.

Activity Restraints. Two sets of activities have been approved for BHCs. One set of approved activities exists for BHCs' domestic operations and another, less restrictive set covers foreign operations.

BHC domestic operations are limited to activities "which the Federal Reserve Board after due notice and opportunity for hearing has determined (by order or regulation) to be so closely related to banking or managing or controlling a bank as to be a proper incident thereto."[3] The Board's power to authorize domestic activities for BHCs is limited also by Glass-Steagall restrictions on the affiliation of commercial and domestic investment banks and by restrictions on BHC domestic insurance activities.[4]

The restraints on BHCs' domestic activities do not apply to "any company which does no business in the United States except as an incident to its international or foreign business."[5] The Board allows BHCs to perform any activity permitted to Edge Act and agreement corporations in Regulation K. Activities authorized under Regulation K are more extensive because Congress has declared its intent to grant international banking and financial corporations operating under federal supervision sufficient powers "to enable them to compete effectively with similar foreign-owned institutions in the United States and abroad."[6] Among the activities prohibited domestically but permitted in foreign countries are managing a mutual fund (if the fund's shares are not sold in the United States or to U.S. citizens); underwriting, distributing, and dealing in debt and equity; underwriting life insurance; and operating a travel agency.[7]

Available data provide little evidence that activity constraints force BHCs to be less risky than they otherwise would be. Larry D. Wall and Robert A. Eisenbeis (1984) point out that BHCs' risk exposure is determined by their management, for BHCs can take as much risk as they

want exercising traditional banking powers.[8] The researchers see no reason to expect that BHCs would take more risks merely because they receive permission to engage in additional activities. In fact, they cite evidence indicating that BHCs could reduce risk if permitted to diversify into new domestic activities. A review of the literature for this study found no studies of the riskiness of foreign activities.

Further Tests. All BHCs seeking acquisitions or expanding into new nonbank activities must obtain the prior approval of the Federal Reserve Board, even if the activity has been approved by regulation. Before approval the Board must consider whether the activities to be acquired "can reasonably be expected to produce benefits to the public, such as greater convenience, increased competition, or gains in efficiency that outweigh possible adverse effects such as undue concentration of resources, conflicts of interests or unsound banking practices."[9] The Board has used this power to consider both the financial condition of parties to the transaction and the condition of affiliated parties that are not direct parties.[10]

The prior approval requirement affects BHCs that wish to expand, even though the Board approves almost all such requests to acquire another firm or expand into a new activity.[11] In most cases a BHC knows whether it will win approval before it comes to the Fed since the Board follows precedents established by its earlier decisions and Federal Reserve staff will help in interpreting any ambiguities. Few BHCs submit applications that they believe the Federal Reserve Board will reject.

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Regulating Nonbank Affiliates

The Federal Reserve Board has several tools for influencing the risk position of BHCs and their nonbank affiliates. These tools include a variety of means of dealing with unsafe or unsound practices, and capital adequacy guidelines. The Board can also require that BHCs and nonbank subsidiaries submit reports and undergo inspections so their financial condition can be monitored.

Unsafe and Unsound Practices. The Board of Governors can use a variety of enforcement mechanisms to prevent BHCs and people associated with them from engaging in practices that are unsafe, unsound, or in violation of applicable laws or regulations. The Board can enter written agreements with individuals or BHCs that agree to change their practices. If the involved parties refuse to do so, the Board can initiate proceedings to issue a cease-and-desist order.[12] If the cease-and-desist procedure proves too lengthy and the Board determines that failure to act is "likely to cause insolvency or substantial dissipation of assets or earnings" it can issue a temporary order until a final order is issued. The Board may assess cash penalties for violations of a cease-and-desist order or of the Bank Holding Company Act.

The Board can begin procedures to remove a director or officer of a BHC if: (1) the person has violated a law, regulation, or cease-and-desist order, engaged in unsafe or unsound practices, or breached his fiduciary duty; (2) the act has or probably will cause substantial loss or other financial damage, has seriously prejudiced the interests of depositors, or has resulted in the individual's financial gain; and (3) the act involved personal dishonesty or a willful disregard for the safety or soundness of the bank.[13]

BHCs can be required to terminate their involvement with specific activities. The Board can direct a BHC to end its involvement if the activity poses a "serious risk to the financial safety, soundness or stability of a bank holding company subsidiary bank" and if it is inconsistent with sound banking principles.[14] BHCs that are ordered

to terminate an activity can stop performing it, sell the activity to an unaffiliated party, or spin the activity off into a new corporation owned by the BHC's shareholders.

These powers allow the Board to deal with unusual situations but leave most of the control over risk to the BHCs' owners and creditors. The Board cannot impose small penalties for moderate risk taking and larger penalties for extreme cases. Each of the Board's options can be costly to the BHC or individuals involved. For example, a Board order to terminate an activity can seriously disrupt a BHC, and even a cease-and-desist order can have considerable consequences. A publicly traded BHC must disclose these orders, and so could face funding problems if the Federal Reserve Board determined it was engaging in unsafe or unsound activities. Thus the Board reserves these penalties for serious abuses.[15] Most of the responsibility for limiting risk lies with BHC owners and creditors.

Capital Adequacy Guidelines. A second way the Federal Reserve might influence BHCs' risk position is through its capital guidelines, which apply to the consolidated BHC rather than its individual components. The guidelines are intended to limit the riskiness of the BHC as a whole.[16]

If the guidelines obligate BHCs to hold more capital than they otherwise would, then they can reduce BHC risks. An increase in capital can provide holding companies with a larger cushion to absorb losses. Capital guidelines also increase the private sector's incentive to monitor risk by enlarging the amount of private funds that can be lost if a BHC fails.

Whether the guidelines significantly reduce holding company risk depends on their effect on the amount of capital held by BHCs and on the effect of additional capital on their risk positions. Studies of the regulators' effect on bank capital adequacy before the guidelines were established suggest that regulators were relatively ineffective in influencing BHC capital positions.[17] Casual observation of BHC actions since then suggests that the guidelines may be effective. For example, several large BHCs that were below the guidelines have issued capital and now meet the guidelines. This evidence is inconclusive, however, since financial markets' demands may have been responsible for at least part of the capital increase.

The claim that increases in BHC capital mandated by regulators cause BHCs to reduce their risk significantly can be challenged on two grounds: the required increases are too small to have a significant effect and they may lead BHCs to enlarge their risk exposure elsewhere. The losses in a bank failure often swamp the institution's capital by a wide margin. These banks would not be saved by capital adequacy guidelines. Michael Koehn and Anthony M. Santomerro (1980) and Maureen O'Hara (1983) argue that increases in bank capital may lead banks to widen their risk exposure in other ways. Their studies can be interpreted as implying that banks try to maintain some optimum amount of risk per unit of capital. When increases in capital force a bank to depart from this optimum, it will assume additional risk (e.g., by making riskier loans or taking more interest rate risks) to restore the original ratio.

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Nonbank Reporting and Examination Requirements. If the Federal Reserve is to carry out its supervisory role it must obtain information on the BHCs it regulates. Congress has authorized the Fed to require BHCs and their nonbank affiliates to submit reports and allow examination.[18] The Federal Reserve currently requires BHCs and nonbank affiliates to file annual reports on their financial condition. Fed policy is to examine most large BHCs and those smaller organizations with significant nonbank assets at least every 18 months. Other BHCs are examined at least every

three years.[19] These examinations focus on the parent BHC and its nonbank subsidiaries, since banking subsidiaries are examined separately by an appropriate federal banking regulatory agency.

In addition to Fed reporting requirements, publicly traded BHCs must also meet the Securities and Exchange Commission's requirements for public disclosure.[20] These standards are intended to help investors evaluate the risks and returns from investing in a BHC's securities. They reduce BHCs' riskiness to the extent that creditors and shareholders use the information to avoid investing in risky companies.[21] The SEC standards often require fuller disclosure than do those of the Federal Reserve.

Little work has been done evaluating the effectiveness of BHC disclosure and examination. George J. Benston (1984) suggests that bank examiners might be auditing banks insufficiently for fraud and misreported data. He notes a study by John F. Bovenzi, James A. Marino, and Frank E. McFadden (1983) that found bank examination data added little to the predictive power of publicly disclosed data in models that predict bank failure. He also cited his own 1973 study that indicated most bank failures were due to embezzlement or change of management control between examinations. Benston acknowledges, however, that the benefits from additional auditing may not exceed its cost.

Gary G. Gilbert (1983) implicitly questions the regulatory benefit of requiring additional disclosure to financial markets.[22] He says the "existence and potential of 'true' market discipline is not persuasive enough" to justify substituting it for regulator discipline. Benston (1984) questions the desirability to BHC shareholders and bondholders of government-imposed reporting requirements, arguing that both parties can demand sufficient information before they purchase a bank's securities. He further contends that banks will disclose adequate information in order to obtain funds at the lowest cost. But government disclosure requirements may force banks to provide information even when the costs exceed the benefits. Benston concludes that if management is honest it will disclose the optimal amount of information. Larry D. Wall (1984b) argues that managers may be reluctant to let others monitor their performance, and so some minimal disclosure requirements may be appropriate to overcome their reticence. His viewpoint is strengthened by two investment analysts, James H. Wooden and Thaddeus W. Paluszek (1983), who contend that they "often lack sufficient information to assess properly" BHC nonbank affiliates.

Transactions Between Banks and Their Nonbank Affiliates

Restrictions on transactions between banks and nonbank affiliates constitute the final line of defense protecting the banks. These restrictions are intended to protect banks from their nonbank affiliates; however, they do not protect nonbank firms from their bank affiliates. Indeed, one reason BHCs are allowed to diversify into nonbank activities is a hope that the nonbank firms will help their bank affiliates in times of trouble.[23]

"The restrictions that limit banks' exposure to nonbank risk can be divided into three main categories: pricing restrictions, other transaction restrictions, and capital transfer restrictions."

The restrictions that limit banks' exposure to nonbank risk can be divided into three main categories: pricing restrictions, other transaction restrictions, and capital transfer restrictions. The pricing restrictions limit banks' ability to transfer resources to their affiliates through the pricing of interaffiliate transactions. The other transaction restrictions seek to prevent risks from being transferred to the bank through credit extensions. The capital transfer restrictions limit reductions in bank capital. The capital restrictions are designed to protect all banks, and are not directed specifically at BHC bank subsidiaries.

Pricing Restrictions. BHC bank subsidiaries can divert income to their affiliates by overpaying for the assets, services, and liabilities they buy from those firms and accepting underpayment for the assets, services, and liabilities they sell to them. A deceptive BHC may manipulate interaffiliate pricing in order to provide covert aid to ailing affiliates or to exploit minority shareholders in a bank.[24]

The Federal Reserve has taken the position that any transfer of income should be accomplished through bank dividends and not through the pricing of interaffiliate transactions. While the Fed does not attempt to monitor every transaction, it has the power to deal with clear abuses.

Two important tools for dealing with large diversions are the cease-and-desist order and the power to remove officers and directors associated with unsafe or unsound activities. The Board has noted specifically that cease-and-desist orders may be appropriate to stop diversion of bank income to nonbank affiliates including the parent BHC. In its June 1981 revision to Regulation Y it cited the charging of excessive fees for services provided, balances maintained by subsidiary banks in support of parent borrowing, prepayment of fees, and non-reimbursement of expenses incurred by a bank for its nonbank affiliates, calling such practices "inappropriate and, potentially, unsafe and unsound." Formal action (written agreeements or cease-and-desist orders) was prescribed when the practices have a material and adverse effect on the bank.[25] The Board did not discuss the possibility of removing officers and directors associated with major diversion of bank resources, but presumably this power could also be used if a bank's financial stability was threatened.

The Board can respond to diversions of bank income through the BHC application process by treating the diversions as an adverse factor in assessing a holding company's management. The Board did this in 1972 when it rejected a merger application by a BHC that had been charging excessive management fees.[26]

The Board has also warned BHC chief executive officers that, under certain circumstances, holding company transactions with affiliated banks can expose officers and directors to criminal liability. The Board cited the example of assets being purchased from subsidiaries for substantially more than they would be valued in an arm's-length commercial transaction. In the Board's view, this may constitute "a misapplication of bank funds" subject to criminal penalties under 12 USC 656.[27]

In addition to the Federal Reserve's ability to handle major diversions, minority shareholders in banks can also take legal action.[28] Minority shareholders have a right to their proportionate share of a bank's profits. If the prices charged by a BHC's affiliates are too high (or the prices paid to the bank are too low), then bank profits in effect are transferred from minority shareholders to the BHC. Courts generally avoid questioning a corporation's business judgment but they will act in cases of unfair pricing. The exact responsibilities imposed on majority shareholders vary among the different states. Probably the weakest standard is the requirement that majority shareholders' actions not be "gross and palpable overreaching behavior."[29] Some states go much further and impose a fiduciary duty on majority shareholders.[30]

"BHC bank subsidiaries can divert income to their affiliates by overpaying for the assets, services, and liabilities they buy from those firms and accepting underpayment for the assets, services, and liabilities they sell to them."

The pricing restrictions have not stopped all diversions of bank income, but then the Federal Reserve does not attempt to do that.[31] What the Fed wishes to stop are those diversions that might have a material effect on a bank's financial condition.

Transaction Restrictions. Banks' transactions with their nonbank affiliates are regulated by Section 23A of the Federal Reserve Act.[32] Section 23A limits the amount of transactions and imposes collateral requirements on transactions

that do or could result in a bank supplying credit to one of its nonbank affiliates. The section prohibits banks from purchasing a low-quality asset from an affiliate unless the bank had conducted an independent credit evaluation and committed itself to purchase the asset prior to the time the affiliate acquired it. Bank transactions with affiliates are also required to be on terms and conditions that are consistent with safe and sound banking.

Bank transactions with nonbank affiliates are subject to restrictions that do not apply to transactions with bank affiliates. The restrictions apply to five types of transactions: (1) a loan or extension of credit to the affiliate, (2) a purchase of or an investment in securities issued by the affiliate, (3) a purchase of assets, including assets subject to an agreement to repurchase, (4) the acceptance of securities issued by the affiliate as collateral security for a loan or extension of credit to any person or company; and (5) the issuance of a guarantee, acceptance, or letter of credit, including an endorsement or standby letter of credit on behalf of an affiliate.[33]

The amount of covered transactions between a bank and its nonbank affiliates is limited. Transactions with individual affiliates may not exceed 10 percent of capital stock and surplus and all covered transactions with affiliates may not exceed 20 percent. Moreover, every loan, extension of credit to, or guarantee, acceptance or letter of credit issued on behalf of a nonbank affiliate by a bank must be secured by collateral at the time of the transactions. Low-quality assets are unacceptable as collateral.[34]

The real estate investment trust (REIT) problems of the mid-1970s demonstrated a flaw in the old Section 23A: firms managed but not owned by BHCs were not subject to 23A.[35] BHCs felt that REIT failures would adversely affect the holding companies' image and therefore funneled aid to prevent their demise. This loophole was closed by the Bank Affiliates Act of 1982, but the REIT problems serve as a reminder that every law has its loopholes.

Restrictions on Capital Reduction. Bank capital reductions are restricted by limitations on bank dividend payments, stock repurchases, and by capital adequacy guidelines. The first two types of regulations limit bank capital reductions at any given time, while the third limits total reductions in bank capital.

In the absence of prior regulatory approval, all national and member bank dividends are restricted to the sum of the current year's earnings and the prior two years' retained earnings.[36] Insured state nonmember bank dividends generally are limited by state regulations. BHC banks may not repurchase their stock without prior approval of their federal bank regulator.[37]

Capital adequacy guidelines limit the total amount of capital that can be withdrawn from a bank. The guidelines for national and state member banks are similar to those for BHCs. Insured state nonmember banks must maintain equity capital equal to at least 5 percent of assets.[38]

"In the past BHCs have shown great ingenuity in getting around other restrictions, and the possibility remains that a loophole still exists in the current regulations limiting transactions."

The restrictions on bank capital reductions cannot prevent BHCs from reducing capital adequacy ratios of affiliated banks to support nonbank operations. The restrictions do, however, slow the rate at which capital can be withdrawn and prevent withdrawals that would leave a bank with inadequate capital. Affiliated banks are protected from failure attributable to excessive dividend payments and stock repurchases.

Do Transaction Restrictions Protect Affiliated Banks? Restrictions on transactions with affiliated banks can reduce the prospects of a BHC's nonbank problems spilling over but they cannot totally isolate the bank. In the past BHCs have shown great ingenuity in getting around other restrictions, and the possibility remains that a loophole still exists in the current regulations limiting transactions. Furthermore, banks can be

affected in several ways by problems in affiliates even if no improper transactions are involved.[39]

One way banks can be affected by affiliates' problems is if the BHC demands that the bank increase its earnings and dividends. Bank dividend payments are often limited by earnings, but a bank can boost its payments by increasing those earnings. Assuming the bank is efficiently run, the only way it can improve earnings is by making higher risk, higher return loans. Thus, a bank may be called upon to make a greater than usual number of risky loans so it can pay large dividends. If this happens and the bank is lucky, its loans will reap higher earnings. Otherwise, the bank could experience lower earnings and even lose money.

Bank regulators can prevent a bank from taking excessive risk, but only if they detect the increased risk-taking. If a bank's increased risk-taking places it in an unsafe or unsound position, then its supervisor can enter a written agreement with the bank or issue a cease-and-desist order. The odds of the bank's regulators detecting the increased risk can be improved if they know which parents may call upon banks to provide additional earnings. Thus, the requirement that nonbank affiliates file reports with the Federal Reserve and submit to Fed examinations is an important part of the bank supervision process.

A second way a bank can be endangered is if its nonbank affiliates' problems trigger a run by bank depositors, as in the case of Beverly Hills National Bank.[40] Depositors know BHCs can demand that a bank take greater risks in an attempt to earn more. They may also construe the problems of a nonbank subsidiary as indicative of the past and future quality of a bank's management. The success of prior bank management is called into question by any management ineptitude demonstrated by the nonbank problems. The excellence of future management is in doubt because nonbank problems could divert top executives' attention away from running the bank. Regardless of whether the bank is in any danger, depositors may decide that prudence requires them to withdraw deposits until the bank can be reevaluated.

A third way a bank can suffer is if the problems of its nonbank affiliates cause it to lose vital services. BHC nonbank affiliates provide important services to affiliated banks, such as data processing, and some deregulatory proposals call for BHCs to be given authority to offer significant financial services. Banks as well as their customers may come to depend on the services provided by the BHC's nonbank affiliates. The failure of such affiliates could adversely affect a bank's relationship with its customers and even hurt the bank's own financial condition. This risk could be reduced by prohibiting banks from offering products to customers in conjunction with their nonbank affiliates. But hindering tandem offerings of services by banks and nonbank affiliates would destroy one of the fundamental reasons for deregulating BHCs: improving banks' competitiveness so they can maintain their dominant position in the payments system and money supply.[41]

"Hindering tandem offerings of services by banks and nonbank affiliates would destroy one of the fundamental reasons for deregulating BHCs: improving banks' competitiveness so they can maintain their dominant position in the payments system and money supply."

Even though restrictions on bank transactions with nonbank affiliates can reduce the potential risks to banks, they do not eliminate risk. BHCs may push banks to take excessive risks to provide additional earnings that can bail out nonbank subsidiaries. Depositors may withdraw their deposits from the banking affiliates of troubled BHCs, and banks and their customers could lose valuable services.

Reform Proposals

Senate Bill 2181 incorporates a number of changes in BHC regulation that had been proposed in earlier sessions of Congress. The intent of these reforms is to broaden banks' ability to

compete effectively in the financial services industry without increasing their risk exposure. The most important change is to allow BHC nonbank affiliates to engage in additional activities including underwriting municipal revenue bonds and mortgage-backed securities, insurance underwriting and brokerage, and real estate investment, development, and brokerage. The bill would also allow the Federal Reserve Board to authorize BHCs to engage in additional activities of a financial nature.

In order to limit risk-taking, the proposal would restrict bank transactions with affiliates further. It would require that the terms of bank transactions with affiliates be at least as favorable to the bank as those prevailing at the time for comparable transactions with nonaffiliated corporations. Banks are currently prohibited from advertising or in any way suggesting that they will be responsible for their affiliates' obligations; however, the proposal would permit affiliates to use similar names. Finally, the proposal would prohibit a bank from buying those securities for which one of its affiliates is a principal underwriter.

Under the proposed bill, the Federal Reserve System could continue to require reports from nonbank affiliates and to examine them, but the Federal Reserve's information-gathering authority would be curtailed somewhat. The proposal would limit routine reporting requirements for BHCs and nonbank affiliates to the type of reports that firms must file with the Securities and Exchange Commission. The System also would be directed to minimize the scope and frequency of examinations of BHC nonbank affiliates to the extent feasible.

The purpose of modifying the information-gathering authority of the Fed is to limit those costs borne by nonbank BHC affiliates that are not also borne by unaffiliated competitors. Federal Reserve reporting and examination imposes costs on BHC nonbank affiliates that reduce their ability to compete with unaffiliated firms.

Increased restrictions on transactions between bank holding companies and their affiliates probably would have little significant effect on the riskiness of affiliated banks, and expanding the activities permitted to BHCs is unlikely to prompt them to increase their risk exposure. Restrictions on transactions with affiliates are unlikely to improve the safety of banks. The Federal Reserve already has broad power to deal with transactions that create an unsafe and unsound situation. Restrictions that impose additional limits on transactions should have a material effect on affiliated banks' financial condition. Moreover, any attempt by the Federal Reserve to enforce stricter requirements would require that it extend its review of interaffiliate transactions. An in-depth review of more BHC transactions undoubtedly would prove expensive to both the Fed and to BHCs. Consequently, it would thwart the cost reductions proposed in S 2181. Restrictions on bank purchases of securities underwritten by affiliates would be desirable, however, if BHCs are granted new securities authority.

Conclusion

A wide variety of regulations attempt to insulate banks from problems in their BHC affiliates. The first line of defense consists of regulations designed to prohibit banks from affiliating with firms involved in what are thought to be risky activities. Second, regulations can be used to limit the riskiness of permitted bank affiliates. The final line of defense is composed of regulations that limit bank transactions with affiliates.

The importance of the first line is questionable, in large part because it is not obvious that BHCs would increase their risk exposure as a result of expanding into new activities. The second line gives the Federal Reserve the ability to deal with unsafe and unsound situations, while most of the responsibility for controlling risk is left with BHC shareholders and creditors. The third line reduces bank exposure to problems residing in its nonbank affiliates but does not, indeed cannot, fully eliminate the risk. Nonbank problems can spill over into banking affiliates even if no improper transactions are involved. Thus, current regulations reduce banks' exposure to problems in their nonbank affiliates, but by no means do they eliminate the exposure. Proposals to eliminate some of the restrictions on BHC activities and strengthen the limitations on BHC transactions with affiliates are unlikely to weaken the first line of defense or to strengthen the third.

NOTES

[1]Some of the restrictions on BHC activities also exist because of concerns about conflict of interest and concentration of financial power. See the *Economic Review* of the Federal Reserve Bank of Atlanta (May 1984) for a further discussion of these issues.

[2]See Wall (1984a) and Wall (1984b).

[3]12 *United States Code* (USC) 1843 (c)(8).

[4]The Federal Reserve Board's Regulation Y contains the list of activities approved by regulation. Among these activities are making and servicing loans; industrial banking; trust company functions; investment or financial advice; leasing personal or real property; community development; data processing; insurance sales; underwriting credit life, health, and accident insurance; courier services; management consulting to depository institutions; issuing and selling money orders, savings bonds, and travelers checks; appraising real estate; arranging commercial real estate equity investment; brokering securities; underwriting and dealing in government obligations and money market instruments; providing foreign exchange advisory and transactional services; and acting as a futures commodity merchant. With many of these activities, approval depends on the BHC's agreement to limits on the conduct of the activity that are specified in Regulation Y.

[5]12 USC 1843(c) (13).

[6]12 USC 611(a).

[7]12 *Code of Federal Regulations* (CFR)211.3(d).

[8]For example, banks can take very large risks in speculating on interest rate and foreign exchange movements.

[9]12 USC 1843 (c)(8).

[10]See "Bankshares of Indiana/Goodwin Brothers Leasing," *Federal Reserve Bulletin*, vol. 60 (December 1974), p. 872.

[11]The Board's 1983 annual report shows 1,091 nonbank acquisition requests approved and none denied (Board of Governors of the Federal Reserve System, *70th Annual Report, 1983* [1984].).

[12]12 USC 1818(b) et seq.

[13]12 USC 1818(e).

[14]12 USC 1844(e)(1).

[15]At the end of 1983 the Federal Reserve was supervising 5,371 bank holding companies. During 1983 the Board's staff initiated a total of 36 cease-and-desist orders and written agreements to BHCs or their subsidiaries. The Board issued one temporary cease-and-desist order to a BHC. Eleven cease-and-desist orders were initiated involving individuals participating in the affairs of the financial institutions (BHCs and state nonmember banks). It collected on one civil money penalty from a BHC according to the 1983 annual report of the Board of Governors of the Federal Reserve System.

[16]BHCs are divided into three groups for purposes of the capital adequacy guidelines: multinational BHCs (as designated by the Fed; in practice, the 17 largest BHCs), regional BHCs (all other BHCs with assets in excess of $1 billion), and community BHCs (those with less than $1 billion in assets). The guidelines are applied to two definitions of capital, primary and total. Primary capital consists of common stock; perpetual preferred stock; surplus; undivided profits; reserves for contingencies and other capital reserves; mandatory convertible instruments (capital instruments with covenants mandating conversion into common or perpetual preferred stock); and allowance for possible loan losses. Total capital includes the primary capital components plus limited-life preferred stock and qualifying subordinated notes and debentures. Regional and multinational BHCs are expected to maintain a primary capital ratio of at least 5 percent, community organizations at least 6 percent.

BHCs are classified into one of three zones based on their total capital ratio. Regional and multinational BHCs with total capital ratios above 6.5 percent and community banks with ratios above 7 percent are classified as Zone 1 BHCs. Regionals and multinationals with ratios between 5.5 and 6.5 percent, along with community BHCs with ratios between 6 and 7 percent, are classified as Zone 2 BHCs. Regionals and multinationals below 5.5 percent and community BHCs below 6 percent fall into Zone 3. BHCs in Zone 1 are presumed to have adequate total capital. BHCs in Zone 2 are presumed to be undercapitalized and must submit an acceptable comprehensive capital plan to the Federal Reserve. BHCs in Zone 3 have a strong presumption of undercapitalization, must also submit an acceptable plan, and are subject to "continuous analysis, monitoring and supervision." 12 CFR 225 Appendix A. The Board has proposed modifying these requirements so that all BHCs are expected to meet a 5.5 percent minimum primary capital to assets ratio and a 6 percent total capital to assets ratio.

[17]These studies include Peltzman (1970), Mingo (1975), Dietrich and James (1983), and Marcus (1983).

[18]12 USC 1844(c).

[19]The 1983 annual report of the Board of Governors of the Federal Reserve System.

[20]See Coulson (1983) for a description of the SEC's disclosure requirements for BHCs.

[21]Benston (1984) argues that shareholders may use the information to help them invest in more risky firms rather than less risky ones.

[22]His discussion focused on the merits of bank disclosure.

[23]This hope is demonstrated by the Board's frequently expressed desire for BHCs to serve as a source of strength to their bank subsidiaries.

[24]All shareholders in a firm are supposed to share the firm's profits in proportion to their ownership share. Resource transfers through pricing allow the BHC to obtain part of a bank's profits without sharing them with minority shareholders in a bank.

[25]Federal Reserve Regulatory Service, 4-876.

[26]"First Southwest Bancorporation, Inc./Bellmead State Bank and Three Other Banks," *Federal Reserve Bulletin*, vol. 58 (1972), p. 301.

[27]The letter is quoted in Federal Banking Law Reports on December 2, 1976, p. 81,879.

[28]This potential source of discipline exists only in banks that have shareholders that are unaffiliated with the BHC. The shares of many BHC banks, including most of the very large banks, are entirely owned by the BHC (except for directors qualifying shares).

[29]*Trans World Airlines* v. *Summa Corp.*, vol. 374, page 789 of the *Delaware Chancery Reports* 3.74 A. 2d 789 (Del. Ch. 1967).

[30]See Furst (1979) and DeLaGruz (1980) for a more extensive discussion of majority shareholders' duties to minority shareholders.

[31]The only way to stop all diversions would be for the Fed to review carefully all bank transactions with affiliates. Such a review would be very expensive.

[32]See Rose and Talley (1983) for a more extensive discussion of Section 23A.

[33]12 USC 371(c).

[34]The market value of the collateral must equal at least the following: 100 percent of the amount if the collateral is an obligation of the United States or its agencies, or an obligation fully guaranteed as to principal and interest by the United States or its agencies, or is a note draft, bill of exchange, or bankers' acceptance eligible for rediscount or purchase by a Federal Reserve Bank, or a segregated, earmarked deposit account with the bank; 110 percent if the collateral is an obligation of any state or political subdivision of the state; 120 percent if the collateral is composed of other debt instruments, including receivables; or 130 percent if the collateral is composed of stock leases, or other real personal property.

[35]See Sinkey (1979) for a further discussion of banks' REIT problems.

[36]12 USC 60(b) restricts national bank dividends. 12 USC 324 restricts member bank dividends.

[37]All BHC banks are subject to federal regulation as they are required to obtain FDIC insurance by the Bank Holding Company Act (12 USC 1842 [e]).

[38]Federal bank regulators have proposed new standards that consist of a 5.5 percent primary capital to assets ratio and a 6 percent total capital to assets ratio. These new standards would apply to all banks.

[39]See Eisenbeis (1983) for a more extensive discussion of the merits of trying to isolate risk in nonbanking subsidiaries.

[40]Golembe Associates (1982) point out that the run was due in part to similarities in the two firms' names: Beverly Hills Bancorp and Beverly Hills National Bank. They also note that the bank was selling small denomination commercial paper of the holding company across the bank's counters. Both of these circumstances could be eliminated by regulation without significantly affecting either banks or BHCs.

[41]The payments system and money supply are important to the efficient operation of the economy. The dominant position of banks is important because banks, unlike most other nonbank firms, are subject to safety and soundness regulation and receive special protection from failure.

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INTERSTATE BANKING: STRATEGIES FOR A NEW ERA

The race is on. Despite existing geographic restrictions, banking organizations are aggressively seizing every opportunity to venture into interstate financial services. Bank holding companies are establishing nonbank affiliates across state lines, offering 24-hour telephone banking, and even buying out-of-state financial institutions when permitted to do so. State legislatures in the Southeast have followed New England's lead in passing regional interstate banking laws. The Supreme Court soon will consider landmark cases that could either ban or encourage regional interstate banking. Congress is pressured from all sides: some want it to back regional interstate banking or to allow unrestricted nationwide banking, while others urge Congress to plug the "nonbank" loophole that has opened banks' traditional markets to a host of new competitors. Bankers must decide what strategies to pursue now and when the dust settles.

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The Outlook for Commercial Real Estate in the Southeast

Joel Parker

Technological advances, changes in living and working styles, and the economic challenges of building downtown have fueled commercial development in the suburbs. Some observers consider commercial real estate to be an industry driven less by market demand than by the availability of capital.

Commercial building forms a large, vital segment of the southeastern construction industry. Commercial and residential construction combined employ over 683,000 people in the Southeast, accounting for over 5 percent of the region's employment and almost 5 percent of its personal income. Commercial builders' efforts can be seen all over the Southeast in such structures as Georgia-Pacific's headquarters in downtown Atlanta, the Omni International complex in Miami, and the River Front redevelopment in Nashville. Despite the high profile of such properties and their importance to local economies, the public's understanding of the processes that led to their constructon is generally dim.

To clarify some facets of commercial real estate development, the Federal Reserve Bank of Atlanta recently sponsored a workshop in which industry experts discussed their roles. From their diverse perspectives as consultants, developers, architects, financiers, and leasing brokers, the participants addressed common—and sometimes disputed—issues. For instance, each questioned whether developers and financiers made adequate use of available market information to analyze the need for additional office space. The consensus was that all too

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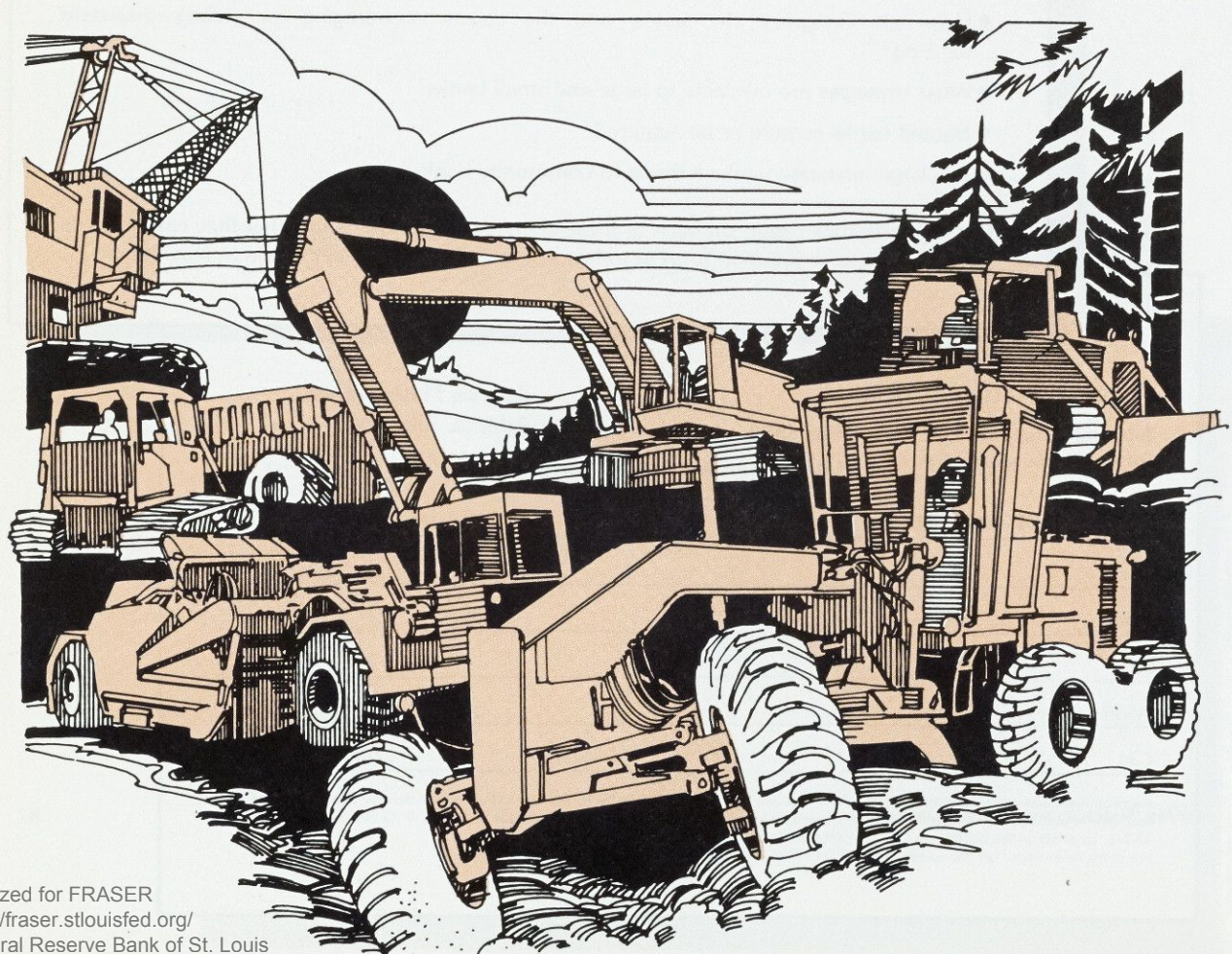


often the decision to develop rested instead on the mere availability of funds. This tendency suggests that commercial development is a "capital driven" rather than "market driven" industry, which would explain much of the excess space in some southeastern markets. Another shared concern was the apparent movement of businesses to the suburbs and the hurdles confronting developers who wish to work in downtown areas. A third thread running through the presentations was technological progress and its impact on the design, location, and market size for commercial development. The insights gleaned from this workship are summarized below, following an overview of the phases of commercial real estate development.

Phases of Commercial Development

The developer of an office building initiates the whole construction process and assumes the risk of failure. First he must acquire the land on which he plans to build. If the land is in parcels with two or more owners, the developer must negotiate the best possible price with each. Preferably for the developer, the landowners should not know what is planned for the property; otherwise they may hold out for higher prices, possibly lowering the project's final rate of return. In builders' jargon, this process of buying the building site is called "land assembly."

Once land has been acquired, the developer selects design specifications for the building. The architect takes his initial charge from the developer, but his final design proposal factors in the qualities of the particular site, surrounding infrastructure, type of tenants expected, local climate, and esthetics. In choosing a design, the developer considers an approach he thinks will lease well and the time required for construction. If the design is too expensive to construct or insufficiently attractive to prospective tenants, the developer's targeted rate of return may be jeopardized. Developers today recognize the positive contribution that the integration of functional and artistic design can make toward a building's financial success.

After selecting a design, the developer must determine whether the project complies with local zoning regulations and, if not, he must apply for a zoning variance. While differing from community to community, the rezoning process can be lengthy, even to the point where it undermines acceptable financing arrangements as interest rates climb.

Once the developer has the land, a viable design, and the legal go-ahead to use the land as he proposes, he either finances the project internally or presents the package to a potential financier. Possible sources of outside financing include mortgage bankers, insurance companies, investor groups, syndications, commercial banks, and savings and loan associations. Developers may seek financing only for projects they are reasonably certain will deliver their expected rate of return.

When all arrangements are completed except letting the contracts and beginning physical construction, a press release is sent to the local media. Until this point, the developer is careful not to publicize his efforts, because prior media coverage could drive up land prices and perhaps intensify local government or neighborhood opposition to zoning variances. After the critical contracts are signed, publicity works in the developer's favor by announcing to potential tenants the upcoming availability of new office space.

Site Selection and Timing of Entry

Where and when should a developer build? Industry wags respond, "Wherever and whenever he can get financing." Raymond Torto, partner of Torto, Wheaton and Associates, a Boston consulting firm, explained how a developer or financier might "do his homework."

Torto pointed out that market research should answer three questions for the developer. First, which markets will allow him to build, lease, and turn a profit? Second, in which submarkets should he locate his project? Third, when is the opportune time to bring a building "on stream" in the market? While good market research provides answers, it is only one part of a complex profit equation. In practice, Torto said, many developers either research the market only informally before building, or they do no market research at all.

Commercial real estate market analysts have a multitude of variables to consider. Torto explained that the vacancy rate, the ratio of unleased space to total space in the market, is

the first variable. Sometimes space is calculated in total square footage and sometimes in usable space footage, but one tells the story as well as the other. A declining vacancy rate generally indicates a tightening office market. Vacancy rates rise when economic downturns result in tighter space utilization by firms, or when new office space "comes on line" faster than it can be leased.

The price of office space, the second variable, is quoted in dollars per square foot. Rising prices indicate that space demand is squeezing supply, which bids up prices. But in any market there are several grades of office space, each selling for a different price. Hypothetically, the prices of one grade of space could be bid up without affecting the others appreciably. Rising prices indicate a more lively and competitive market overall.

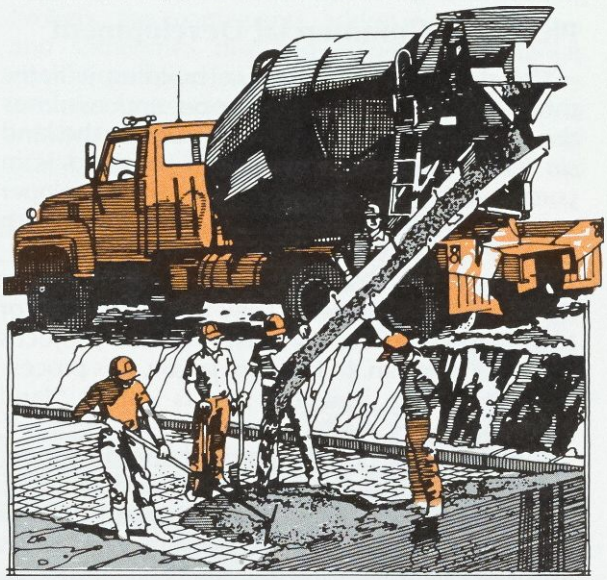
Torto noted that the per square foot ratio of lease price to construction cost can be a helpful consideration. The higher this ratio, the higher the markup over cost. This indicator overcomes a shortcoming of the simple price trend as an indicator—that prices rise in response to rising costs. A developer who leases his space for more than the building across the street does not necessarily enjoy a larger margin over costs. For instance, if construction costs are rising more quickly than leasing prices, compressing the price and cost margins on new office space, price alone would not signal that new space was becoming less profitable over time.

According to Torto, the size of the office leasing market determines how changes in other market variables should be weighted. A city or metropolitan area such as Atlanta, Miami, or Jackson, Mississippi serves as the basic market unit, although most medium-sized and larger cities have identifiable and important submarkets. Taking office vacancy rate as an example, we would expect an indicator to change more slowly in Atlanta with its large inventory than in Jackson.

When a developer considers building in a market, his ability to prelease a portion of the space could make the difference between undertaking or aborting the project. With high vacancy rates, prospective tenants can shop around for the best deal, which makes preleasing difficult. Atlanta has a reputation among area developers for resisting preleasing. A high ratio of preleased space to total space under construction implies a strong demand for new space.

The rate of new construction in a market must be weighed against the leasing rate for existing vacant space, Torto said. Because of the long lead time for planning and construction (commonly 12 to 18 months), a building's availability for leasing does not necessarily coincide with the emergence of a demand for space. To double-check whether a market's low vacancy rate indeed indicates a need for more office space, the rate of subleasing should be used. Businesses tend to sublet if they ascertain that they have overcommitted on space for present and future needs. A high rate of subleasing points to excess capacity in the market, which a low vacancy rate can conceal.

Torto indicated that the average number of square feet per employee in a market also can



reveal a market's latent excess capacity. If the number significantly exceeds the industry's 200 square feet per employee rule of thumb, the vacancy rate may be understated in that market. If the businesses there could be released from their lease contracts, many probably would lease less space. Firms may tolerate poorly used space for a time, but ultimately they are likely to sublet it.

Businesses usually prefer to place all employees of like function in the same building rather than in scattered offices. If no single available block of space is large enough to accommodate

them, they may build or lease elsewhere. Thus even a high vacancy rate can be suspect in that it conceals information on the availability of large blocks of contiguous space.

Absorption, which Torto cites as the key variable in office market analysis, is commonly quoted for gross space absorbed and space absorbed net of moves within the market. Net absorption is a better indicator of the market's capacity for absorbing new space, for when firms simply move within the market that space is not counted as absorbed. Market analysts commonly divide the amount of unleased space on hand by the yearly absorption rate to discover the number of years' supply on hand at current absorption rates. The shorter the duration of complete absorption, the better for the prospective developer.

Data for these indicators are available for most medium-sized and large cities. Even so, Torto notes that many of these markets are chronically overbuilt and nursing in excess of a year's worth of unleased office space. (Houston's unleased office space exceeds the total office space inventory of Boston.) Office market analysts say the methods used to gather data are not always refined. For example, vacancy rate surveys are rarely a representative sampling of holders of office space in a city, and so they introduce a larger than necessary error in the rates. And while the "box of tools" available to market analysts has a number of components, it is woefully deficient in forecasting a market's capacity. Not a single leading indicator is among the variables discussed above; all are coincident indicators. In addition, Torto observed that the common indicators emphasize office space supply over demand. To predict the successful leasing of a building in the planning stage, we must develop some way of forecasting market demand.

Urban Commercial Development

Regardless of demand, the downtown developer faces a unique obstacle: "The critical problem in downtown areas really is land assembly." Raymond Gotlieb, president of Metropolitan Properties in Birmingham, remarked that time and the existence of multiple layers of previous development have made urban land assembly a cumbersome and costly chore. In the suburbs, where single landowners hold large tracts of land, acquisition is a straightforward process. The density of past development in the downtowns frequently forces developers to assemble a piece of land by buying it from several parties.

Dealing with a number of owners during land assembly leads to a sort of "prisoners' game" in reverse. The individual parcels have little value to the developer because he needs the whole tract for his project. The less aware that landowners are of the developer's overall scheme, the more likely they are to sell their parcels quickly without bargaining for a premium price. But should any owner realize that the developer has acquired every parcel except his own, he gains excellent bargaining leverage. If the developer must pay the premium to buy the holdout's land, Gotlieb remarked, this outlay will depress the project's final rate of return.

Gotlieb explained that in buying from as many as 20 or more landowners to complete a particular tract, a developer stands a good chance of encountering at least one holdout. This probability is greater in downtown areas because the local media are more likely to publicize the story than if the land was in the suburbs. Carried to its extreme, the difficulty could induce developers to avoid downtown areas altogether. Gotlieb surmised that this obstacle has contributed to the slow progress or lack of redevelopment in the downtowns of some southeastern cities.

Alternative solutions to the downtown land assembly problem include leaving the market to its own resources, promoting some form of condemnation by municipal governments, or urging government officials to play a strong advocacy role in the development of downtown areas. Gotlieb's preference is the third solution, which he views as a middle ground. Many downtowns need redevelopment but cannot attract developers who see easier money in the suburbs. Developers are the entrepreneurs in this industry; they decide when and where to build.

Most workshop participants agreed that the first solution, allowing the market to function naturally, will not promote urban commercial development in cities where financial incentives are absent. Developers build in areas offering the greatest profit opportunities, of course. Gotlieb believes that attracting development to downtowns where land assembly costs more than in adjacent suburbs will require either

government incentives or a lengthy wait for the market itself to reverse the relative incentives, independently of the desires of developers or city officials.

Another possible solution is for cities to condemn portions of their downtowns and auction the land to developers. The burden of land assembly then would shift to city governments. But, as Gotlieb noted, such a radical departure from market guidance of activities—and one that directly affects the wealth, income, and political influence of so many—would be politically unworkable almost everywhere. The condemnation procedure is associated too closely in the public mind with high-handed governments serving special interests.

City government advocacy of some urban commercial development steers the middle course between free market and condemnation driven development. Without interfering with the market, city government acts as a catalyst to remove obstacles to desirable development and to facilitate its progress. The City of Atlanta's joint venture with the Rouse Company to redevelop Underground Atlanta seems to offer a good example of this kind of municipal leadership.

Gotlieb pointed out that developers sometimes associate a greater risk with downtown projects than with those in the suburbs. The higher cost of land frequently dictates that a large building be constructed to show "pro forma" profitability. Developers can control risk in the suburbs by building in phases of approximately 12 months' duration. This schedule enhances the builder's ability to anticipate interest rate and leasing difficulties and to delay later phases until profit is more certain. Large downtown buildings seldom can be phased in this manner, and so the developer's risk is increased. Gotlieb said that, excepting special circumstances or incentives, many developers choose to reduce the risk they perceive by concentrating their work in the suburbs.

If tenants prefer to lease in the suburbs, the builder's risk of building downtown is compounded. The builder could mount his own campaign to sell prospective tenants on the advantages of the urban work setting, but government can do this far more effectively. Many southeastern city dwellers apparently prefer to work in the suburbs rather than downtown.

"Amenity" is a buzzword for developers building in the suburbs, but it is critically important to urban development as well. Narrowly defined, amenities refer to dedicated athletic facilities, good restaurants, free parking, park-like settings, an easy commuting distance, and the prestige of the area. Amenities enhance a worker's perception of the work environment. Government can do much to foster development of urban amenities just as it contributes to infrastructure through police, fire protection, and road construction. As a result, government can indirectly reduce a developer's risk and enhance the likelihood of his developing downtown.

In some southeastern cities, downtown white-collar workers evacuate to the suburbs after 5 p.m. According to Gotlieb, before a steady demand for restaurants, shops, theaters, and the like can emerge, people must take up residence in the downtown area. But with the abundance of land and inexpensive housing close to the centers of most southeastern cities, residents do not feel compelled to live "close in," he said. Even suburban commuters often are relatively close to downtown. Gotlieb questioned whether southeastern downtowns can attract the "people traffic" needed to spur investment in amenities that are prerequisite to extensive office development. He is dubious that this will happen soon.

Suburban Commercial Development

Land assembly is not the formidable barrier to the suburban developer that it is to the downtown developer. Thus he may have greater latitude for responding to the dictates of the market. J. Donald Childress, Atlanta partner of Dallas-based Trammell Crow Company, contended that developers are listening to their markets and, to some extent, basing their decisions on local market conditions. However, some developers' decisions apparently are founded on the availability of funding or on the existence of other building activity in a location. The commercial real estate depression of the mid-1970s probably resulted in part from such practices. He observed that Atlanta, Orlando, and Tampa experienced a commercial building boom through the first quarter of this year. Charlotte, Miami, and Richmond, on the other hand, have not developed nearly as fast recently.

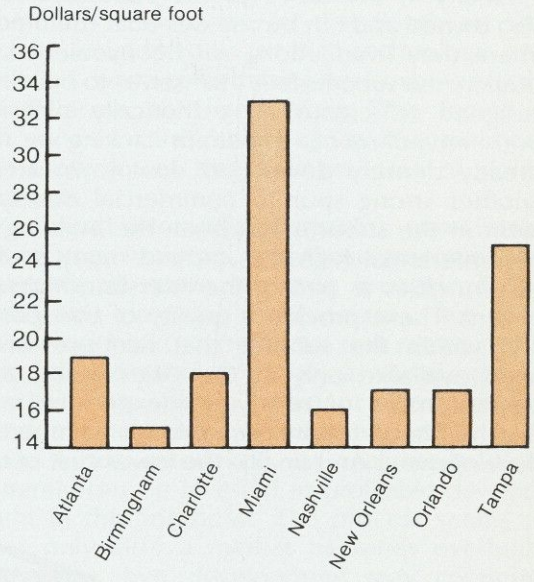
Childress' experience is that business must be handled on a local basis by those most familiar with the market. In his estimation Trammell Crow, the nation's largest commercial real estate developer, personifies the achievement of this method. The firm builds nationwide through local partners such as Childress, who own the projects they develop. Successful development makes a partner wealthy, but partners also share the cost of failure.

When developers build only in their local markets, there can also be drawbacks. If a market becomes overbuilt, developers who know only that market must either build at high risk of losing money or remain idle. Some developers cannot afford a hiatus, and even those who can may simply choose to take the risk. This risk-taking aggravates existing marketing difficulties for overbuilt areas. A regional or national perspective may alleviate the developers' tendency to build in their markets regardless of demand. For instance, firms developing in several markets can exercise control over which deserve current attention and which should be left fallow.

According to Childress, an important impetus to the commercial construction boom in southeastern cities is the huge supply of capital that banks, savings and loan associations, insurance companies, and other investors are willing to commit to real estate today. In fact, so strong is their desire to invest in commercial real estate that representatives of these institutions call on developers concerning their financing needs. The force of their conviction that commercial real estate is a good investment probably encourages some to relax their lending standards. An important safeguard that usually exists in this type of dealing—an adversary relationship—thus is undermined, and loan officers under pressure to make more loans may fail to exercise sufficient caution.

In Childress' view, the evidence suggests that a significant percentage of the commercial development in the Southeast is not a response to the market's demand for new space. Rents for comparable space in the West, Southwest, and Northeast commonly exceed those in the Southeast, where new office space demand is insufficient to push up rates. In the absence of high rents, it would seem that developers are attracted to the Southeast owing to the availability of capital for development (see Chart 1).

Chart 1. Cost of AAA Office Space



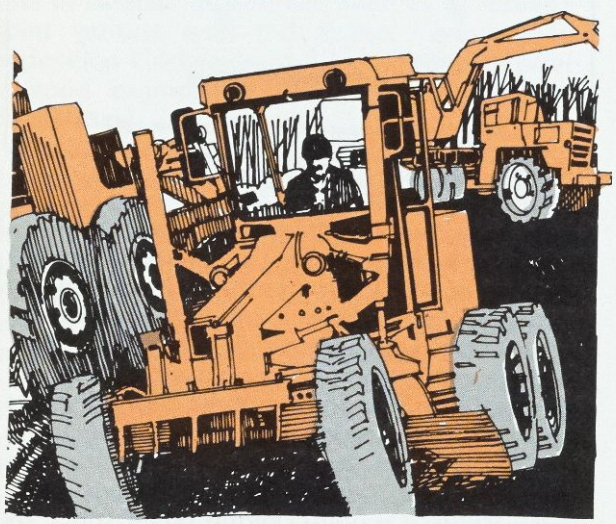
Source: Coldwell Banker data as of first quarter 1984.

Childress cited deregulation in several industries as a source for new office space demand. The breakup of AT&T, for example, ushered in an immediate demand by many of the new companies that were spun off. Companies that once shared the same offices or building required new buildings to establish their own identities as rivals. With deregulation of the financial services industry, new business opportunities have given rise to many new institutions. All of these likewise require unique office space by which the public can identify them.

Business office space began to move from downtown areas to the suburbs in the late 1950s and early 1960s, Childress explained. The widespread use of the telephone loosened the bonds that had constrained businesses to concentrate in one area of a city to facilitate good communications. The advent of high quality, high speed data transmission technology in the late 1960s and early 1970s cut the last tie binding the business community together in the downtowns. The stage was set for firms to

situate wherever they pleased. Childress himself expects "there will be a relentless and uninterrupted migration to the suburbs."

Initially in the move to the suburbs, those who owned and ran businesses built them near where they lived. Along with convenience of location, the suburbs lent themselves to buildings designed to create an esthetically pleasing work environment, a benefit lacking in the already densely developed downtown areas. Another strong spur to commercial development in the suburbs has been the building of circumferential highways around many southeastern cities as part of the interstate highway system. These provide a quality of transportation within the suburbs that had previously been available only at the cities' hubs, and opened miles of relatively inexpensive land that had been too inaccessible for commercial development. And finally, the lower cost of the



suburban land strongly attracted developers because it enabled them to build more profitably. The construction itself could be phased in ways that are not possible with most downtown development.

Childress noted that while not forced to construct large buildings for "pro rata" profitability, suburban commercial developers recently have introduced both large and tall buildings outside downtown. Until now, most suburban offices were low-rise structures that took advantage of inexpensive acreage. He cited his company's recently completed Atlanta Galleria complex as a pathbreaker in this high-rise market segment. Childress remarked that the success of the Galleria and other huge office buildings in the suburbs is linked to large companies' preference for suburban locations. These companies require vast blocks of contiguous space, which up to now were available only in the downtowns. The large firms also desire the prestige of structures such as the Galleria, and may have avoided the suburbs until such accommodations became available. Downtowns thus have become the province of professional firms, large financial institutions, convention facilities, and other firms that consider their image as a citizen of the local community to be of utmost importance.

An Architect's Perspective on Commercial Real Estate

Whether a project is located downtown or in the suburbs, whether it is redevelopment or new office space, its design has advanced to the fore as a critical factor in marketing to prospective tenants. With excess office capacity pandemic in medium-sized and large cities nationwide, developers must pursue every advantage—and good design can give them an important competitive edge. With its appeal to tenants seeking the prestige of an attractive structure and setting, a handsome property is more likely to achieve full occupancy. Gerald Hines, one of the nation's largest developers, has placed striking, esthetically pleasing design in the vanguard of his firm's marketing efforts.

Joseph Amisano, president of Toombs, Amisano and Wells of Atlanta, emphasized that building function and esthetics cannot be separated. The failure of either can undermine a project financially. Office development continues to increase in the suburbs, and suburban offices facilitate a different work style than do those downtown. Amisano remarked that both architects and developers can take advantage of the demand for structures supporting the new style, which favors easy commuting, an environment left as natural as possible, less formal work hours, and greater integration of work and non-work life.

New technologies may give rise to the most radical changes in the way an office building should function. The combination of telecommunications and microcomputers potentially can give information workers near independence from the traditional office. Amisano contends that no one yet believes the traditional office will disappear, but increasingly it looks as if the demand will be for a different kind of office space. Information workers can work at home three or four days out of five, traveling to the office only to consult with supervisors and to stay in touch with company events. The financial services industry already has taken great strides toward delivering its services electronically through automated teller machines, point-of-sale terminals, and credit and debit cards.

The chief challenge to architects in this rapidly changing business environment is to design structures that will function for many years. The so-called "high tech" building attempts to accommodate developments in office technologies by providing preinstalled hookups for data, text, and remote video conferencing. The design of such buildings must be flexible enough to embrace future innovations, yet not be so imposing or special purpose as to limit potential renters only to high-tech firms.

Commercial Real Estate Financing

Once the developer has acquired land and accepted a design, he can present his plan to a host of potential financiers: real estate financiers, banks, savings and loan associations, independent mortgage bankers, insurance companies, pension funds, syndication funds, and private investors. "The real estate financing business is experiencing an expansion in the Southeast," said Peter VanGraafeiland, president of the Oxford Mortgage Company of Raleigh, North Carolina. Atlanta, Tampa, and Orlando are attracting a large share of present attention, but it appears that up-and-coming growth areas include Gainesville, Florida, Greenville, South Carolina, and Greensboro and Raleigh in North Carolina. VanGraafeiland argues that these cities have been overlooked by commercial developers in their haste to build in Miami, Atlanta, and Charlotte, and in his opinion they are underdeveloped relative to the larger cities. This may be an example of the developer's bias in favor of markets where considerable building activity already is underway.

Particular types of industry seem to prefer the Southeast over other sections of the country. Corporate relocations to the Southeast are heavily weighted toward high-technology, low pollution, white-collar businesses such as Northern Telecom, IBM, and Wang. They locate in the region for the quality of life, the quality of the work force, and a lower cost of doing business.

New and relocating companies, commercial developers, investors, and those managing the financing all seem to have recognized the Southeast's potential simultaneously. But, VanGraafeiland said, commercial real estate financing has the same tendency as development: overbuilding. Banks, insurance companies, pension funds, and syndicators reportedly have more funds earmarked for real estate than currently can be invested in profitable development in the Southeast. The process seems to slow only after a market becomes overbuilt, and even then development may continue. Clearly, portions of the commercial real estate financing community ignore indicators and bypass market analysis just as do many developers.

VanGraafeiland, like Torto, implied strongly that the long-run stability of the commercial real estate industry depends heavily on financiers' and developers' hard-nosed analyses of the potential profitability of proposed building projects. Too often developers seem to consider the economic viability of a project as an afterthought to their decision whether to build. While developers trust that their projects eventually will show a profit, apparently few undertake a formal analysis beforehand. Those providing the financing likewise seem to put less faith in standard credit screening techniques than in the fact that many developers and financiers favor the prospects for a particular market, a tendency noted by Childress.

When faced with default on a commercial development loan, VanGraafeiland said that the financier does not always take a loss on the deal. If commercial property reverts to him, the lender conceivably could still turn a profit. A combination of deep pockets and moderate to high inflation can enable the lender to carry a property, whether it produces a positive cash flow or not, while seeking a buyer. Not infrequently, inflation over 5, 10, or 15 years will

allow the lender to dispose of the collateral at a cash profit, as some insurance companies have done.

As Torto and Childress earlier implied, a correlation exists between knowledge of the local market and the long-run profitability of a commercial building. Thus corporate lenders who develop and manage properties from a distance have more trouble realizing profits than do lenders with a strong local presence. VanGraafeiland noted that over the long haul, local lenders have been more adept at selecting projects best suited to their communities. The higher success rate indicates an opportunity for joint ventures between local developers and large corporate developers, yet these seldom work out, he said. First, large corporations resist giving up any autonomy, whether in real estate development or elsewhere. Second, local developers, entrepreneurial by nature, clash with the cumbersome business style of their would-be partners.

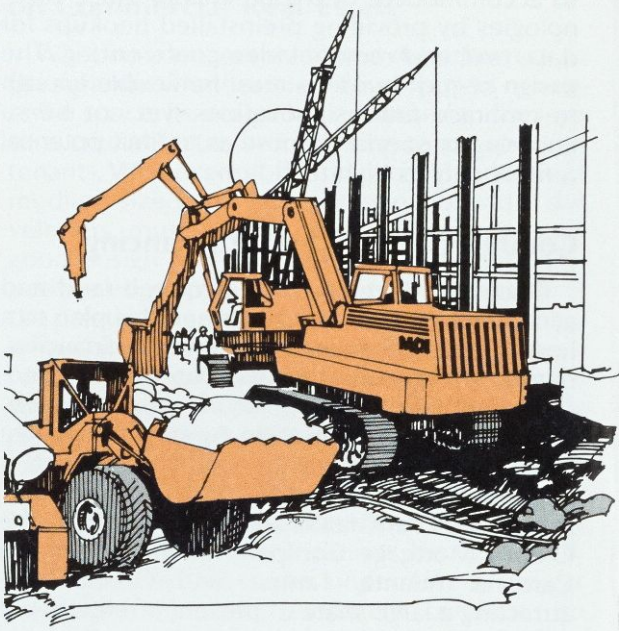
Large corporate lenders' difficulties may be rooted in their size and bureaucratic structure, VanGraafeiland said. Corporate decisions, frequently made by committees, require compromises that can take considerable time to work out. He agreed with Childress that real estate in most of the Southeast is a local business, one best understood and conducted by those who live in and know the local market. Centralized corporate decisionmaking, in real estate as elsewhere, can be rigid and thus unresponsive to demand and supply conditions that vary in each market. He feels that the tendency toward uniform policies reduces the expense of administering real estate operations in many markets but penalizes the profitability of each market's operations.

VanGraafeiland pointed out that corporate financiers tend to favor large structures that draw public attention, which may be an advantage for downtown developers. The time, expense, and overhead associated with any corporate project all favor large buildings. Georgia-Pacific's new corporate headquarters in downtown Atlanta typifies this approach. The company required only part of the space in the building, erected in a submarket burdened with unleased office space. But the large structure creates an identity for the corporation and the location offers maximum visibility.

One strong point of the large corporate lenders, their huge financial reserves, can sometimes prove a weakness. Plentiful reserves may cause them to carry a project through what they think is merely a cyclical market downturn; only later do they realize that the problem is more lasting. Smaller local lenders probably avoid funding a project in the face of a cyclical downturn. For this reason, small commercial real estate lenders likely contribute less to long-run overbuilding than do their larger corporate counterparts.

Syndications

At the other end of the spectrum from the large corporate lender is the individual investor who participates in financing development through syndications. Syndications funnel investors' funds to developers and owners of real estate to generate income and tax benefits for the investors. Richard Schwartz, executive vice president of First Capital Companies in Coral



Gables, Florida, attributes the success of syndications over the past 10 to 15 years to the American public's growing interest in real estate investment.

The Southeast has attracted 28 percent of the dollars raised in public syndications, the largest share of any region. The Northeast, with

10 percent, has garnered the least. Among southeastern states Florida captures the most syndication investment, followed by Georgia, the Carolinas, and Alabama. Nation-wide, capital for investment in syndications flows most heavily from California, Texas, and Florida, the first two because of their large populations and Florida because of its high concentration of retirees with their extensive savings. New York, Michigan, and Illinois, conspicuous by their absence from this list, restrict the sales of limited real estate partnerships. Of all syndication monies, roughly half are invested in apartments and 48 percent in office buildings, shopping centers, and industrial real estate.

Investors are looking increasingly to real estate because they judge it is a better hedge against inflation than the national stock and bond markets. As people experience "bracket creep," they pay ever-increasing shares of their incomes in taxes while their buying power stays the same or declines. To counter this drain, wage earners seek investments that appreciate but do not deliver a taxable flow of income, and real estate can meet these requirements. Heightened general awareness of economics and finance and intensifying media coverage of business topics have brought real estate increasingly to the public's attention as a possible investment. As Schwartz commented, "Real estate development and ownership are still considered at the very core of American free enterprise."

Syndications—real estate partnerships composed of general and limited partners—have become the most popular vehicle for individuals investing in real estate, he said. The general partner, a person or company with expertise in evaluating and making real estate investments, manages the property portfolio for the limited partners. The limited partners furnish the capital to be invested.

In Schwartz's estimation, the popularity of limited partnerships can be traced to three main factors. First, just as when they hold stock in a corporation, limited partners enjoy limited liability. If the partnership fails or loses money, they lose only their investment. Second, the general partner handles day-to-day operating details of the business, freeing the limited partners from oversight of their investment. And third, tax consequences such as deductible interest, depreciation, and tax credits are passed on to the limited partners. A business loss by the partnership is deductible pro rata by each limited partner—an attractive arrangement to many high-income taxpayers.

Schwartz explained that limited real estate partnerships can be divided into private and public placements. Generally, private placement partnerships accept fewer than fifty investors, each having minimum incomes of $200,000 per year and considerable investment expertise. This type of investor usually seeks tax savings, not income from the partnership. The limited partners' investments sometimes are paid in installments, with the general partner providing the balance in the form of a loan with interest. Payment of the final installment retires the loan. Such leverage minimizes the limited partners' financial participation and maximizes their tax benefits. Private placements usually concentrate on a single specified piece of property per partnership.

Private placement limited partnerships frequently have been cited in criticism of tax shelter uses. Schwartz mentioned that the IRS routinely scrutinizes income tax returns for the deduction of interest whose actual payment is deferred (the accrued interest method) and looks at the general partner's policies concerning what is expensed in the current year and what is depreciated over several years. Yet recent revisions of the tax law have for the most part preserved the tax advantages associated with holding and investing in real estate.

Public placements, the other category of limited real estate partnership, target smaller investors with lower incomes, generally those making $30,000 per year or more. This investment vehicle accommodates annual $2,000 IRA investments and regular investments of as little as $5,000. Schwartz noted that one large syndication firm attributes 40 percent of its sales in the first four months of the year to IRAs alone. Investors in public placement tend to seek income more than private placement investors do. Their investments are accumulated into what are called "blind pools" before the general partner decides where to place them. An average public placement holds capital ranging from $5 million to $25 million.

From 1970 through 1983 public placements raised about $12 billion, of which two-thirds was accumulated in the 1980-1983 period. Fifty-five percent was collected by the industry's six largest firms; however, their profits and the ease of entry have lately attracted many new

competitors. Large stock brokerage firms and insurance companies consider their existing customers a potential source of funds for public placement limited partnerships in which they act as the general partners. The intense competition has focused more on where to invest than on how to increase the already plentiful supply of funds.

Schwartz contends that limited partnerships have removed some of the obstructions to the investing public's view of real estate as a high-quality investment. First, even those experienced in the corporate equity and debt markets realize their expertise is not directly transferable to real estate. In a limited partnership, where the general partner serves as the expert, participants are freed from the necessity of becoming knowledgeable in every area into which the partnership might venture. However, potential investors must carefully weigh past success and good reputation when selecting the firm that will act as their general partner. Many individual investors also see real estate's poor liquidity as a drawback. Even though limited real estate partnerships cannot legally make the limited partners' funds liquid without compromising their partnership status, the lack of liquidity is a drawback only when viewed from outside the balanced investment portfolio context. Before the day of limited partnerships, small investors could not diversify their real estate investments without leveraging extensively. Because public placement syndications each invest millions of dollars, they can diversify into different types of properties in different markets to achieve an optimum balance between risk and return.

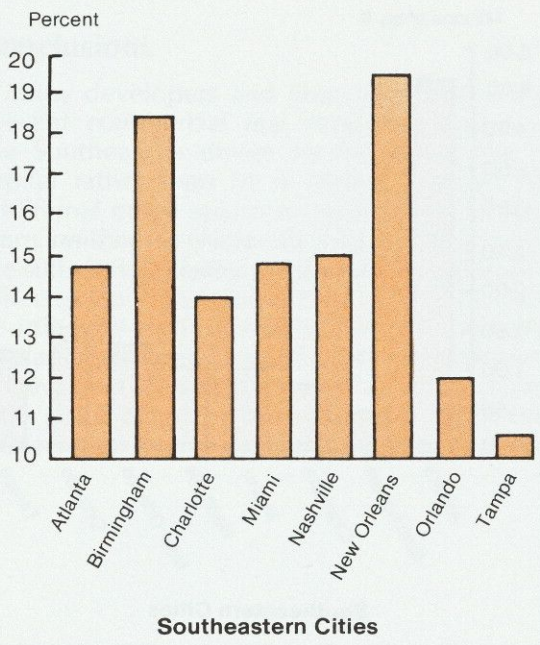
Despite the success of syndications, Schwartz cautioned that investment in real estate retains some well-recognized risks. Reduced inflation and more controlled economic growth temper opportunities for the large capital gains of the recent past. Schwartz observed that, whereas past growth in the industry bailed out many poor investments, this safety net will be much less reliable in the future. Particularly in the Southeast, the inmigration that fueled the region's real estate markets has slowed. Typically, residential housing markets diminish first, followed in 12 to 18 months by the commercial real estate markets. A tapering of southeastern residential market activity began early this year. In addition, as Amisano remarked in the context of office design, new technology is coming on line that will allow people to work, bank, invest, and shop without leaving home, and this may cut the demand for commercial real estate. Evolving technology will alter some commercial markets radically, sending valuable properties the way of the blacksmith shop and the full-service gasoline station.

Public syndications have invested most heavily in residential apartments because tax laws allow them to be written off faster than other real estate investments. On a per-unit basis, apartments can be purchased for less than the cost of building new ones, and they allow for larger rent increases and cash flows than do newly constructed apartments. On the downside, Schwartz said, maintenance and upkeep can severely limit the cash flow from an apartment complex. Moreover, renters close to buying their own homes effectively place an upper bound on rents: large or too frequent rent increases will motivate them to vacate their apartments in favor of purchasing homes.

Established commercial real estate can provide even greater security to the investor than do apartments, Schwartz said. Large lessees, called "major credit tenants," rarely vacate on short notice. In retail shopping malls anchor stores serve this function; in office properties banks and professional firms do the same. The investor strongly prefers properties where rents from the major credit tenants cover the debt service, ensuring a positive cash flow in all but the worst of times. According to Schwartz, a "net lease" is the most secure form of commercial real estate investment, with the tenant or tenants managing the space they occupy. But the investor's gain in security from a net lease is offset by the inability to negotiate frequent rent increases.

Since 1971, Schwartz noted, limited real estate partnerships have achieved an average 18-20 percent appreciation of equity, taxed at the favorable long-term capital gains rate after liquidation. This figure excludes the return from an additional 5 to 7 percent of cash flow, which brings the total closer to 30 percent per year. Such favorable returns would seem to indicate that syndications will remain a popular investment vehicle and source of development funds.

Chart 2. Office Vacancy Rates in the Southeast



Source: Coldwell Banker data as of first quarter 1984.

Office Leasing in the Southeast

Leasing is the final step in the commercial real estate production cycle. The process may be substantially complete by the time the building is finished if the developer preleases successfully. But even if 100 percent preleased, which is unusual, most medium-sized to large properties experience some tenant turnover, and so require a more or less continual leasing effort. Thus while new properties create the most obvious need for leasing, business relocations within an existing market also create business for office space brokers.

The office space broker and leasing agent see the market from a different perspective than the developer or financier. Regardless of the vacancy rate, a broker can earn a living so long as the market has some activity. According to Samuel Friedman, Jr., president of AFCO Realty Associates, in Atlanta, for instance, the vacancy rate has been high by most standards for many years and now rests at about 15 percent (see Chart 2). As a rule of thumb, a building must be 75 to 82 percent leased before it begins to break even, and so it would appear that the market is an unprofitable one in which to build. Yet, Friedman said, developers consider Atlanta a prime market, at least for the next six months to a year. This discrepancy is explained by the existence of multiple submarkets within the overall Atlanta office market. In some submarkets the finished-building occupancy rates exceed 90 percent.

Friedman suggested that in their analyses developers should consider the secular success of buildings in a particular submarket rather than relying wholly on the market's cyclical trend. He believes that long-run profitability is the best indication of market demand for new space. To operate on this basis the developer must have sufficient capital to survive the start-up period, especially during a cyclically slow leasing time. "There is no way in our free enterprise system that we are going to see building supply and demand generally in cycle the way we would like it to happen," Friedman said.

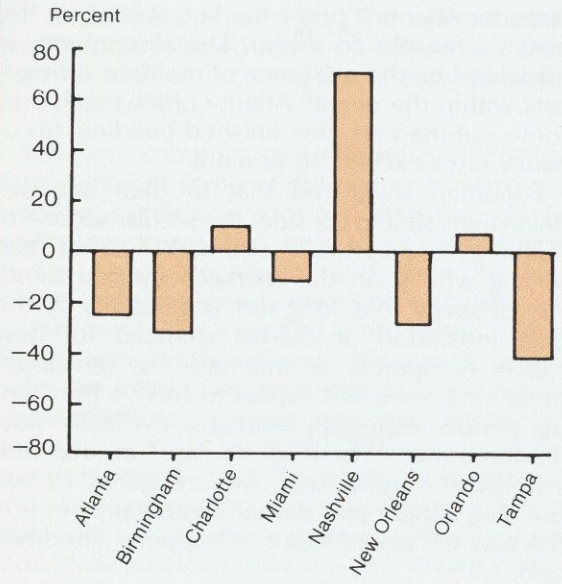
A long-run trend of businesses moving to the suburbs from the downtowns seems evident from the office broker's viewpoint. In his contacts with firms seeking to lease office space, Friedman perceives a gradual change in life style and business culture that will reinforce employees' preference for working near their suburban homes. An Atlanta financial executive captured the spirit of the movement when he asked his broker, "Why should I drive an hour so I can get on the phone for eight hours and drive another hour to get home?"

Outlook for the Southeast

Workshop participants agree that continued migration of people and businesses to the Southeast will maintain commercial real estate as a growth industry in the region. However, not all markets will share the benefits of this growth equally (see Chart 3). And the profit potential for developers, financiers, and office brokers will vary widely from market to market.

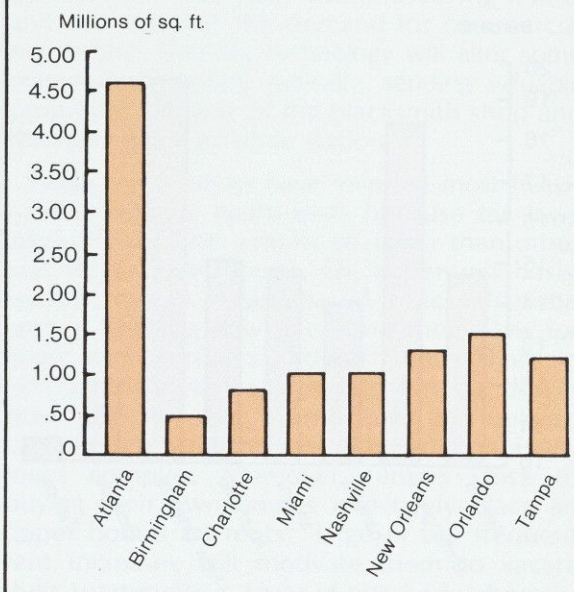
Atlanta, Orlando, and Tampa seem to offer especially bright prospects. Development and leasing continue in Atlanta in spite of its being considered overbuilt by some analysts. The city's ability to attract as many as 25,000 new residents annually because of the availability

Chart 3. Nonresidential Construction Contracts
Percent Growth from June 1983 to June 1984



Source: McGraw Hill, F. W. Dodge.

Chart 4. Average Office Space
Absorption Rates (gross)



Source: Coldwell Banker. Rates calculated through the first quarter of 1984.

of jobs and quality of life will assure its important role in southeastern commercial building and leasing activity. Developers in slow markets who are hoping to expand look to Orlando. Already a major tourist destination, the city is acquiring a thriving commercial sector founded on advanced technology manufacturing. Another Florida city, Tampa, rates high in potential: its office vacancy rate has plummeted from 5 percentage points above the national average to 2½ points below for four consecutive calendar quarters.

Charlotte, Miami, and Nashville all have benefited from recent office market growth and are assimilating existing space. Charlotte added considerable office space in the late 1970s and early 1980s, but development has now slowed considerably. As the commercial hub of the Carolinas, the city eventually should absorb enough office space to attract commercial developers again (see Chart 4). Nashville has been regarded by some as a rival to Atlanta for firms relocating in the Southeast, but recent commercial construction may outpace demand. Nashville's office vacancy rate soared from 10½ to almost 15 percent in the first quarter of this year. Miami's vacancy rate has remained high since the first quarter of 1983, and out-of-town developers do not consider it a "hot" location for building. But Miami's vacancy rate declined this year for the first time in five calendar quarters, which may bode well for the city's future.

Birmingham and New Orleans currently suffer from insufficient demand and excess supply. Even with Birmingham's recent economic progress, the demand for commercial space in the city probably will be slow for some time as its economy adjusts away from manufacturing and toward service industries. New Orleans' office space vacancy rate bounded from 19.5 percent in the first quarter to 20.5 percent in the second quarter of this year, close to its historic high of 21 percent at the end of 1983.

Once the World's Fair closes, the current oversupply problem may be aggravated.

Conclusions

Many developers and financiers believe the present commercial real estate expansion in the Southeast is driven by the availability of capital rather than by a market demand for additional office space. In many markets, they warn, neither the short- nor long-term prospects are sufficient to justify the planned expansion of office space. Financiers rich in funds to lend are courting developers, who in turn are using the availability of funds to justify more development.

Developers, financiers, and leasing executives who participated in our workshop agree that southeastern businesses are continuing to move from the downtowns to the suburbs. Except for large financial institutions, professional firms, and convention facilities, our panelists believe new market entrants are likely to continue locating in the suburbs. They concur that the suburbs will remain popular with commercial developers despite the renaissance taking place in the core cities of many urban areas. Frequently, developers cannot justify the additional risk of building downtown compared with the risk of building in the suburbs, especially since technology can support information businesses in both locations. The seeming preference of many people for living and working in the suburbs, the sometimes prohibitive challenges of redeveloping in southeastern downtowns, and the availability of technology that permits management to operate a business almost anywhere may push firms progressively farther from cities' historic business districts.

A Crucial Year for Southeastern Farmers

Gene Wilson and Gene Sullivan

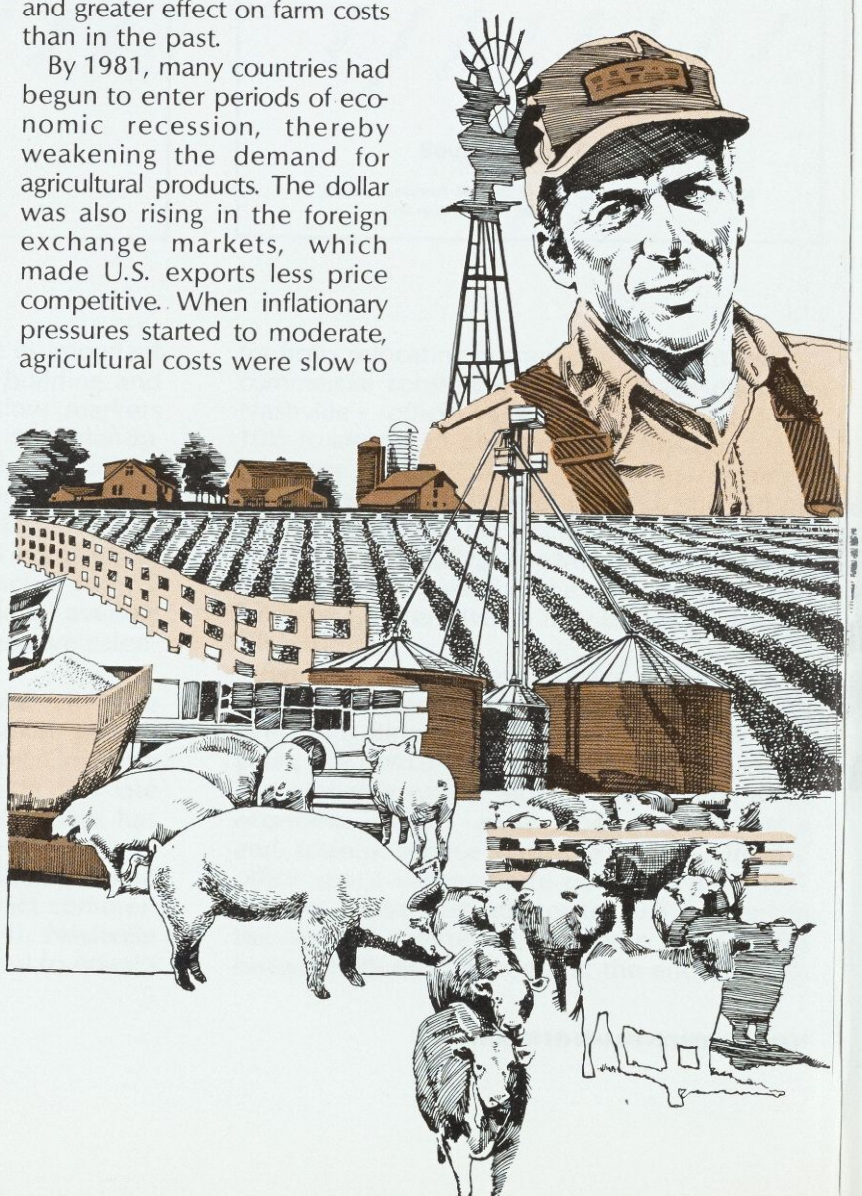
Droughts, faltering profitability, decreasing asset values, and current interest rates have confronted some southeastern farmers with almost insurmountable difficulties. But even though lenders expect that additional liquidations lie in the near future, most farmers seem likely to begin a recovery this year.

The nation's farm sector has experienced substantial distress with rising liquidations throughout the early eighties. Current problems stem largely from the reaction to economic conditions that emerged in the early 1970s. Accelerating inflation coincided with a worldwide shortfall in agricultural production to trigger sharp price increases for grains, oilseeds, and related products. A decline in the value of the dollar against foreign currencies reduced effective prices of U.S. agricultural exports. Farmers were able to enlarge sales and their share of the world market. Upward pressures on production costs lagged, since a fairly high proportion is fixed rather than variable. In this environment, farm income rose quickly.

U.S. farmers responded by increasing acreage and, at the margin, financed landholdings with substantial borrowing. Investors also added to holdings and land prices began to rise rapidly. (Average values for the U.S. doubled in the five years from 1976 to 1981.) Toward the end of the 1970s, farmers, lenders, and most of the agribusiness complex believed that the markets for agricultural products were virtually limitless and that high incomes for agriculture would continue for the foreseeable future.

But variable costs soon began to rise and the market for farm output failed to live up to expectations. Fuel costs jumped in late 1978, following the original OPEC increase five years earlier, and accelerating U.S. inflation placed pressure on costs of other equipment and supplies. Interest rates also rose sharply, particularly toward the end of the decade. Because so many more farmers were highly leveraged, the rise in financing costs had a quicker and greater effect on farm costs than in the past.

By 1981, many countries had begun to enter periods of economic recession, thereby weakening the demand for agricultural products. The dollar was also rising in the foreign exchange markets, which made U.S. exports less price competitive. When inflationary pressures started to moderate, agricultural costs were slow to respond, paralleling the pattern on the upside. The resulting declines in farm income were aggravated by drought in many areas. As a result, the rise in land prices halted and since



The authors are members of the Atlanta Fed's Research Department.

then declines have occurred in some of the most prominent farming areas. In Iowa and Ohio, for instance, average prices have fallen 28 percent since 1981.

The U.S. economy has expanded vigorously in the last year and a half, with a notable lack of inflationary pressures to date. But the farm sector has not participated widely in the recovery. While interest rates declined during the recession, they began rising as the economy gained momentum, in large part because of the need to finance massive government deficits. The dollar has continued to rise and since 1980 has gained 54 percent against the currencies of major trading partners. This has constrained demand for U.S. exports of agricultural products.

With prices of land and equipment weak, the capacity of highly leveraged farmers to borrow has contracted. In fact, some lenders have found themselves with inadequate collateral to secure loans that were made when land prices were higher. Farm foreclosures and liquidations have increased significantly.

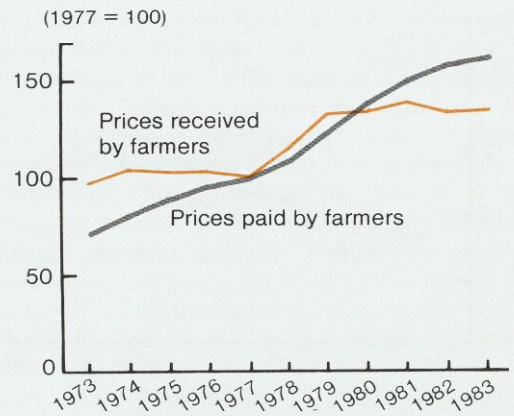
Fortunately, the majority of farmers, even in the most troubled areas, are not heavily indebted and do not face imminent failure. The severity of problems does vary from region to region, however, and the Southeast is one area where difficulties began to emerge earlier. The particular features of the problems in this region are examined below.

Ingredients for Farm Distress

Weather. Since 1977 drought has caused wide fluctuations in yields of major southeastern crops. The average yield of soybeans, for instance, has varied from a low of 15 bushels an acre to a high of 28. The impact has been equally severe on cotton, with the average regional yield ranging from 420 pounds an acre to 718 pounds. Georgia farmers have experienced the greatest crop damage. For example, the state's corn yield has varied from 42 to 85 bushels an acre over the past seven years. Such production volatility, in combination with other factors, created considerable income instability for farmers in this region. Since many farmers were unable to repay operating loans, debts accumulated rapidly.

Prices and Costs. Paradoxically, the favorable prices and high returns that prevailed during the early 1970s set the stage for the serious financial problems of southeastern farmers today. In 1972, for example, the cost of producing soybeans (excluding land) was $1.40 a bushel while the total return was near $4.40 a bushel. The net return of $3 a bushel typified the high profit opportunities that stimulated farmers to expand output rapidly and to bid up farmland prices in an effort to enlarge their operations. Speculative demand for land also was a factor in price increases.

Chart 1. Annual Average Indexes of Prices

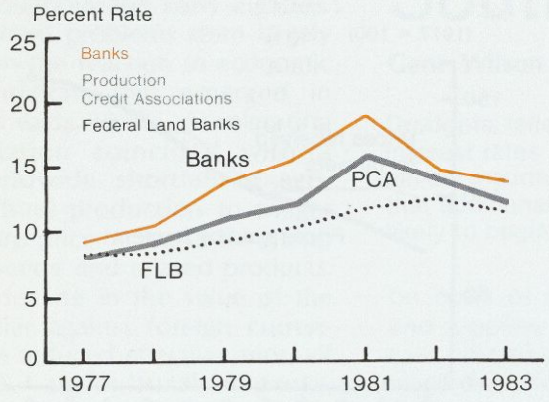


Source: USDA Statistical Reporting Service, *Agricultural Prices, 1983 Summary* (June 1984).

Profit margins narrowed yet remained strongly positive in subsequent years until 1980. That year's severe drought cut production sharply and pushed the cost of production per bushel well above the return. Since then costs have hovered much closer to selling prices, so that profit opportunities have been limited for all farmers, especially those with above-average costs. Instead of returns at double or triple production costs as in the early 1970s, the margin between cost and return has often been insufficient to pay the opportunity cost for money invested in land.

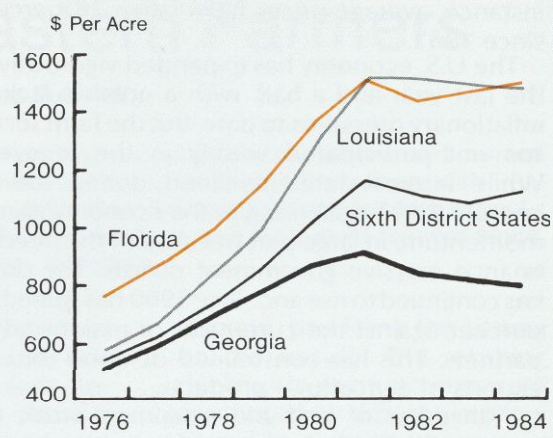
Large numbers of below-average producers have been unable to cover expenses. Chart 1 shows that, since 1980, increases in prices paid by farmers have outrun prices received. Many farmers could not make principal or even interest payments on previous indebtedness. With declining land prices restricting borrowing capacity, those producers soon exhausted the collateral basis for securing additional loans. The result has been an unusually large number of farmers facing foreclosure and liquidation.

Chart 2. Interest Rates of Farm Lenders
4th Quarter, 1977-1983



Source: Federal Reserve Board, *Agricultural Finance Databook*.

Chart 3. Average Farm Real Estate Values



Source: U. S. Department of Agriculture, *Farm Real Estate* (May 23, 1984).

Interest Rates. For those farmers with significant amounts of borrowed capital, the rising cost of money has been a major additional problem. Not until near the end of the seventies did farmers find the cost of borrowing money advancing significantly. Non-real estate farm loans at banks cost borrowers almost 3 percent more at the end of 1979 than at the beginning and fully 5 percent more than two years earlier. By the fourth quarter of 1982, the cost of money on farm loans had doubled (see Chart 2). Present interest rates, although lower than two years ago, remain above the average of the 1970s. Considering that many commercial farmers borrow at least some of their operating expenses, interest rates had a strong bearing on net farm income.

Farm Assets. Clearly, the value of farm assets has fallen over the past three years. Reports from auction sales indicate that market values of used farm equipment decreased sharply as more farmers sold out and others reduced the size of their operations. But it is the decline in value of farm real estate that is of most importance. In many areas, the market for farmland was so weak in 1982 and 1983 that market values were difficult to determine. According to estimates from the U.S. Department of Agriculture provided on April 1 of each year, total farm real estate values in the region fell during 1982 and 1983 but have turned up slightly in 1984. The behavior of average farm land values in the United States was similar, except that large declines in Iowa and Nebraska caused the U.S. average to fall slightly (−1%) in 1984 as well. Chart 3 shows the average values for the Sixth District since 1976, along with the District states in highest and lowest positions.

The sharpest declines occurred in Georgia, Mississippi, and Tennessee. In Georgia, total farm real estate values fell nearly 10 percent from 1981 to 1982, another 3 percent from 1982 to 1983, and an additional 2 percent from 1983 to 1984. Mississippi land values fell 13 percent before gaining 5 percent from 1983 to 1984. For the combined area of the Sixth District states, value declined 7 percent from 1981 to 1983 and then increased 4 percent from 1983 to 1984, reflecting similar increases in Mississippi, Tennessee, and Florida. Over the past year farm real estate values either continued to fall slightly or held steady in Alabama, Georgia, and Louisiana. The decline in land prices indicates that the 79.1 million acres in the region lost $6.2 billion in value from April 1, 1981 to April 1, 1983. Even though reported values in some locations have increased in 1984, farmland markets remain weak. Land prices almost certainly would plummet if all of the land from seriously troubled farming operations were suddenly placed on the market.

Adapted from the February 21, 1983 issue of **Fortune** *with the magazine's permission and that of the artist.*

Resulting Debt

A combination of the inflationary 1970s environment and a series of unfavorable crop years caused an acute rise in the region's farm debt. Debt rose at annual rates of 10 percent or more, with a 1980 increase of nearly 20 percent. From approximately $5 billion in 1970, southeastern farm debt climbed to nearly $20 billion in 1983. Interest payments surged from 8 percent of the region's farm cash receipts in 1977 to 14 percent in 1982. These trends greatly heightened the importance of a stable cash flow for farmers to service the large amount of debt.

Reduced income, rising costs, and declining asset values together have left highly leveraged farmers in a precarious financial condition. Most of those farmers turned to the Farmers Home Administration (FmHA) for financing when commercial lenders were unwilling to extend additional credit or when attractive disaster credit from the FmHA became available. The FmHA's standing policy is to lend to those farm operators who are unable to obtain credit elsewhere at reasonable terms and rates. Thus, the FmHA has the overwhelming majority of southeastern farm borrowers who are delinquent in loan payments, who have exhausted their borrowing capacity, and who face dim prospects of generating sufficient future income to repay their accumulated indebtedness.

Precise numbers are unavailable, but estimates based on reports from various lenders indicate that around 8 percent, or 25,000 of the region's 320,000 farms, are in these dire financial straits. About 21,000 of those farmers or 85 percent are borrowers from the FmHA. Agency spokesmen say these 21,000 delinquent borrowers represent 42 percent of the FmHA's total farm customers in the Sixth District states, up from 40 percent at the end of 1983. Farmers in Georgia and Mississippi, with the most severe financial problems, account for 10,000, or nearly half of the total delinquencies.

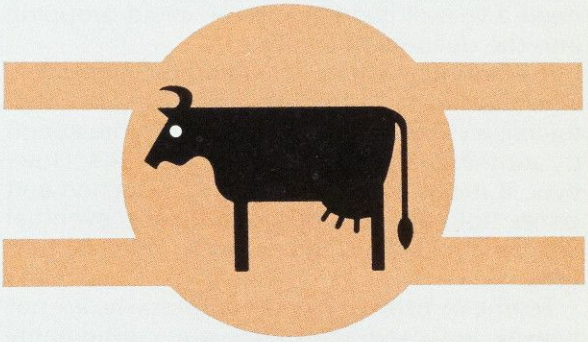
A breakdown by state illustrates the problems Sixth District farmers have encountered in repaying past debt.

Florida has one of the highest FmHA delinquency rates in the nation, with 61 percent of borrowers delinquent on payments. The good news is that FmHA borrowers account for only a small portion of the state's total farm debt and an even smaller segment of its farmers. This implies that only a small portion of Florida's farmers are in financial trouble, but that for them the trouble is indeed serious.

Georgia also is among the leaders in FmHA delinquency rates, and here there is little good news. The worst of the financial difficulty is in the southern half of the state, where much of Georgia's crop farming occurs. Unlike Florida's, a substantial number of Georgia's farmers borrow from the FmHA and approximately 60 percent of these borrowers are delinquent on loan payments.

Tennessee's farmers have the lowest FmHA delinquency rate in the District (33 percent) although adverse weather could intensify the problem. In past years, the financial condition of Tennessee's farmers has been among the best in the six-state region. Indeed, less than 10 percent of the state's farmers even borrow from the FmHA, which reflects higher overall credit quality among Tennessee's farmers than in other southeastern states.

The FmHA delinquency rate of Mississippi's borrowers is much lower than Georgia's, but the number of delinquencies is similar. Whereas only 9,600 Georgians are customers of the FmHA,



over 12,000 Mississippians use this source for credit. Of these, 40 percent are delinquent.

Alabama's farmers, enduring the same drought as others experienced last year, saw their FmHA delinquency rate rise to 37 percent, slightly above 1983's level. Only 12 percent of Alabama's farmers are FmHA customers. The majority of farmers in the state have continued to look to commercial banks and the Farm Credit System for their needs.

A growing sector of Louisiana's farm community also is experiencing financial difficulty. By 1984, nearly 10 percent of the state's farmers were delinquent on FmHA loans, and the delinquency rate increased from 43 percent in 1983 to 46 percent near mid-1984.

Table 1. Ratios of Debts to Assets of Farmers in Sixth District States
(January 1 of each year)

	1979	1980	1981	1982	1983
Alabama	17.5	16.5	16.8	18.5	19.1
Florida	16.0	16.2	15.8	18.8	19.0
Georgia	21.4	22.8	24.7	28.8	28.9
Louisiana	15.3	15.5	15.1	17.8	18.9
Mississippi	18.7	19.1	18.6	22.8	25.0
Tennessee	16.5	16.9	17.6	19.1	19.2

Source: U.S. Department of Agriculture, *Economic Indicators of the Farm Sector: State Income and Balance Sheet Statistics, 1982.*

In addition to the group of farmers who have failed to make loan payments on time, there are also a number of producers carrying heavy debt loads who have managed to keep their loans current so far. Some have avoided delinquency by refinancing and extending loan terms, but the decline in asset values has limited the continued use of this technique. These farmers seriously need a year of good income to avoid dropping into the delinquent status.

It is estimated that, including the borrowers who are already delinquent, about 20 percent of the region's farmers would be gravely threatened by another poor cropping season in 1984. However, if major crops yield good production and prices hold at planting season levels, eventual failures are likely to remain well under 10 percent.

For the 75 to 80 percent of farmers who are not heavily indebted, prospects are considerably brighter. Many of these farmers, particularly those with small farms, use little or no farm credit and the others are customers of commercial banks or the Farm Credit System. Optimistic lenders believe that, provided 1984 is a profitable year, these borrowers may already have seen the worst of their financial troubles and may be back on the road to financial health. An American Bankers Association survey conducted last fall supports this view, for it indicates that fewer farming customers quit in fiscal year 1983 than in the previous year. This group's liquidations and delinquencies thus may have decreased slightly for the calendar year 1983.

The Payment-in-Kind (PIK) program for 1983 was beneficial in that it enabled participants to avoid costs, thereby enhancing their net income and the opportunity to reduce their debt burden. Although the participating farmers' incomes have also suffered, their high equity positions have so far ensured their survival.

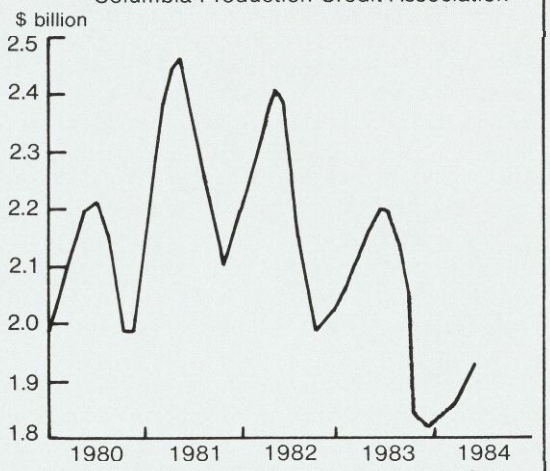
The overall financial condition of the region's farmers is depicted in Table 1, which shows average debt-to-asset ratios of farmers and landlords in six southeastern states. In spite of the heavy indebtedness of those farmers in serious financial difficulty, in no state does average debt equal more than 30 percent of total assets. In fact, except for the two states where problems are most severe, Georgia and Mississippi, the average ratios were below 20 percent in 1983. The ratio advanced forcefully from 1981 to 1982, however, in conjunction with the downturn in land prices. On the whole, the majority of farmers across the Southeast remain in a strong financial position and most will continue to operate even if 1984 profits are poor or nonexistent.

Sources of Farm Credit

Commercial banks are not the major source of farm credit in the Southeast, as they are nationwide. Farmers have turned to the farm credit agencies for a major share of their borrowing needs as operations have grown larger and more specialized. The FmHA also has inherited a great number of troubled borrowers from commercial banks and cooperative credit institutions as unfavorable events increased the risk of lending to heavily indebted farmers.

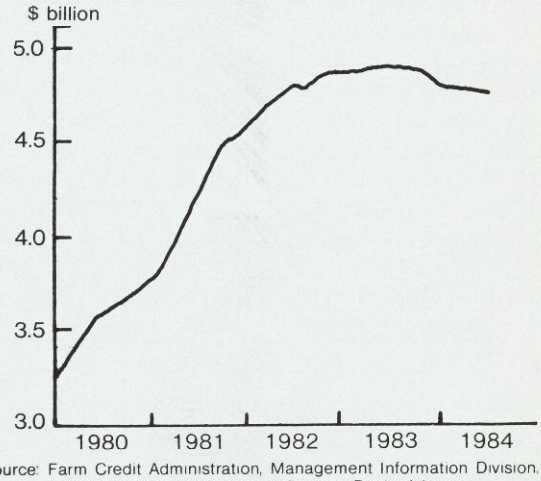
Farm credit extended by principal lenders began to slow in 1982 (Charts 4-6). Total loans

Chart 4. Farm Loans Outstanding
Columbia Production Credit Association



Source: Farm Credit Administration, Management Information Division, *Loan Operations*; and Federal Reserve Bank of Atlanta.

Chart 5. Farm Loans Outstanding
Columbia Federal Land Bank



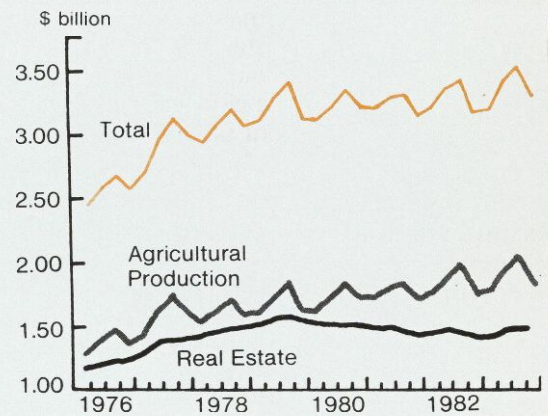
Source: Farm Credit Administration, Management Information Division, *Loan Operations*; and Federal Reserve Bank of Atlanta.

actually declined markedly at Production Credit Associations in the region; total loans outstanding fell by around one-fourth from 1980 to the spring of 1984. New loans at Federal Land Banks, the major source of long-term credit, also dropped in 1982, but the downturn in total loans outstanding did not occur until 1984.

Farm credit growth at commercial banks essentially ceased in 1980. Bank credit remained mostly flat until 1983 when an expansion in both production and real estate credit accompanied the PIK program and the swift contraction in loans from other credit sources. Also, interest rates on bank loans became more competitive with rates at PCAs and FLBs. Despite the recent increase for commercial banks, however, the share of farm credit extended is less than 20 percent of the total for four major lenders.[1]

Loans to southeastern farmers are unlikely to grow briskly again until farm production becomes more profitable. This is especially true for lenders such as southeastern commercial banks, insurance companies, and individuals who have a variety of alternative uses for their funds. The farm credit agencies, on the other hand, are in business for the sole purpose of lending to agriculture. Whereas they have curtailed loans when losses increased, they will not reduce agricultural lending just because loans to other sectors of the economy reap higher returns.

Chart 6. Sixth District Bank Farm Loans for Real Estate and Agricultural Production, and Total Outstanding



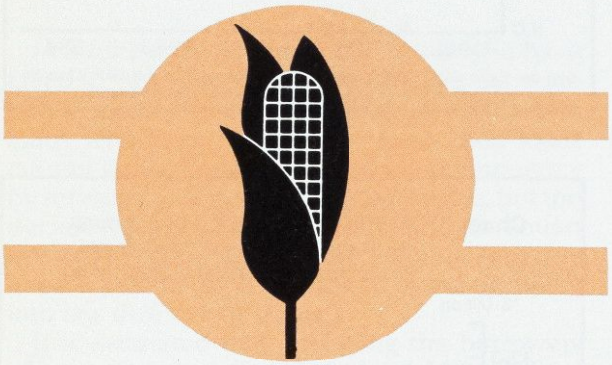
Source: Federal Reserve Bank of Atlanta.

Prospects for Recovery

Even under favorable conditions, lenders estimate that from 5 to 10 percent of the region's farmers are unlikely ever to be able to repay accumulated indebtedness. These borrowers probably will exit soon from the farm scene. With good production and prices holding near midyear levels, most other farmers will begin to recover in

1984. Several years will be required, however, for the most deeply indebted to get back on sound financial footing again.

If crop production does no better than attain the region's five-year average yields and if market prices hold at their early summer of 1984 levels, only peanut and corn producers can expect a positive return after paying all non-land costs. With this scenario, soybean producers would just break even and producers of sorghum, wheat, cotton, tobacco, and rice would face net losses. Of course, some producers obtain yields well above average levels and all hope that 1984 will be a favorable season. In that case crop yields



would far exceed the recent five-year average, which includes the serious shortfall resulting from the unusually severe drought in 1980.

For example, should average yields of soybeans equal the 27 bushels an acre obtained in 1982 and prices remain near $7 per bushel, southeastern growers could make profits of about $20 per acre in 1984 rather than just break even. For producers averaging above 30 bushels per acre, as many did during 1982, profits could rise substantially higher. This summer's increasingly frequent rainfall brightens prospects that most crop yields will indeed be above average at harvest time.

Barring significant demand growth and crop price upswings, however, southeastern producers whose crop yields fall consistently at or below average levels will continue to experience financial difficulty. Much of southeastern crop production is marginal in the sense that output per acre lags behind the national average. Only in cotton, peanuts, and tobacco does regional productivity equal or exceed the national average. For soybeans, corn, grain sorghum, and rice, the southeastern states typically remain 15 percent or more below the national average productivity per acre.

The hope for most southeastern crop producers over the longer run is that they can somehow increase crop productivity or reduce production costs to become competitive with other producing areas. Double cropping, the technique of growing two crops on a given acre each year, has been used successfully by some producers to increase total revenue per acre. Biological improvements in plants, such as increasing efficiency of photosynthesis and enhancing nitrogen fixation by the plant root system, also could aid producers in competing with more productive areas of the country.

Without massive growth in demand for crops produced, however, a portion of the land now under cultivation in the Southeast may be returned to producing forage for livestock, diverted to timber production, or just left idle. Today a number of idle fields are scattered across the southeastern countryside, evidence that farmers or their lenders decided the land could not be cultivated profitably during the 1984 season. In such an economic environment, land prices are unlikely to show much upward movement in the near term. It may take several years before land markets improve to the point where farmers can again look to appreciated land values as the basis for obtaining additional credit for their operations.

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[1]For lender shares of farm credit by states, see "Farm Credit in the Southeast: Shakeout and Survival," *Economic Review*, Federal Reserve Bank of Atlanta (January 1983).

FINANCE

STATISTICAL SUPPLEMENT

$ millions	JUN 1984	MAY 1984	JUN 1983	ANN. % CHG.		JUN 1984	MAY 1984	JUN 1983	ANN. % CHG.
UNITED STATES									
Commercial Bank Deposits	1,374,456	1,351,113	1,256,967	+ 9	Savings & Loans**				
Demand	318,047	307,596	296,622	+ 7	Total Deposits	665,873	657,462	605,886	+ 9
NOW	90,648	89,818	77,885	+16	NOW	20,383	20,098	16,627	+23
Savings	361,175	359,151	339,938	+ 6	Savings	173,699	174,463	187,206	- 7
Time	650,546	634,549	576,573	+13	Time	474,805	466,273	404,931	+17
Credit Union Deposits	52,569	51,964	57,830	- 9		APR	MAR	APR	
Share Drafts	5,650	5,525	5,027	+12	Mortgages Outstanding	544,124	535,887	481,690	+13
Savings & Time	46,932	46,415	45,857	+ 2	Mortgage Commitments	41,090	42,518	27,672	+48
SOUTHEAST									
Commercial Bank Deposits	157,172	155,979	141,189	+11	Savings & Loans				
Demand	37,392	36,964	34,781	+ 8	Total Deposits	N.A.	N.A.	N.A.	
NOW	11,764	11,731	10,010	+17	NOW	N.A.	N.A.	N.A.	
Savings	40,952	40,576	37,572	+ 9	Savings	N.A.	N.A.	N.A.	
Time	72,065	71,132	62,919	+15	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	6,137	6,058	5,352	+15		APR	MAR	APR	
Share Drafts	556	540	413	+35	Mortgages Outstanding	69,397	69,165	65,748	+ 6
Savings & Time	5,447	5,395	4,439	+23	Mortgage Commitments	5,286	5,117	4,040	+31
ALABAMA									
Commercial Bank Deposits	16,409	16,224	14,999	+ 9	Savings & Loans**				
Demand	3,854	3,827	3,584	+ 8	Total Deposits	5,391	5,361	5,292	+ 2
NOW	1,051	1,052	908	+16	NOW	166	160	127	+31
Savings	3,343	3,295	3,151	+ 6	Savings	902	898	907	- 1
Time	8,767	8,608	7,817	+12	Time	4,362	4,341	4,325	+ 1
Credit Union Deposits	966	955	826	+17		APR	MAR	APR	
Share Drafts	100	96	74	+35	Mortgages Outstanding	4,034	4,011	3,607	+12
Savings & Time	842	835	672	+25	Mortgage Commitments	290	289	205	+41
FLORIDA									
Commercial Bank Deposits	55,584	55,374	49,005	+13	Savings & Loans**				
Demand	13,346	13,366	12,408	+ 8	Total Deposits	56,726	56,274	52,591	+ 8
NOW	4,919	4,930	4,190	+17	NOW	2,295	2,314	1,964	+17
Savings	19,288	19,129	16,952	+14	Savings	14,970	15,109	16,671	-10
Time	19,680	19,396	16,513	+19	Time	39,604	39,061	34,294	+15
Credit Union Deposits	2,693	2,633	2,400	+12		APR	MAR	APR	
Share Drafts	280	270	219	+28	Mortgages Outstanding	40,673	40,590	38,718	+ 5
Savings & Time	2,272	2,236	1,829	+24	Mortgage Commitments	3,441	3,397	2,920	+18
GEORGIA									
Commercial Bank Deposits	23,877	23,387	20,107	+19	Savings & Loans				
Demand	7,471	7,278	6,501	+15	Total Deposits	N.A.	N.A.	N.A.	
NOW	1,540	1,530	1,314	+17	NOW	N.A.	N.A.	N.A.	
Savings	5,418	5,275	4,601	+18	Savings	N.A.	N.A.	N.A.	
Time	10,834	10,648	8,715	+24	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	1,280	1,280	1,138	+12		APR	MAR	APR	
Share Drafts	84	84	47	+79	Mortgages Outstanding	8,557	8,492	8,177	+ 5
Savings & Time	1,197	1,197	1,006	+19	Mortgage Commitments	563	551	289	+95
LOUISIANA									
Commercial Bank Deposits	25,887	25,703	24,689	+ 4	Savings & Loans**				
Demand	5,829	5,717	5,784	+ 1	Total Deposits	9,424	9,378	9,229	+ 2
NOW	1,527	1,520	1,342	+14	NOW	237	234	163	+45
Savings	5,560	5,508	5,184	+ 7	Savings	2,325	2,353	2,460	- 5
Time	13,569	13,472	12,891	+ 5	Time	6,992	6,944	6,675	+ 5
Credit Union Deposits	210	209	114	+84		APR	MAR	APR	
Share Drafts	24	24	12	+100	Mortgages Outstanding	8,640	8,538	7,423	+16
Savings & Time	206	204	109	+89	Mortgage Commitments	594	529	411	+45
MISSISSIPPI									
Commercial Bank Deposits	12,121	12,194	11,392	+ 6	Savings & Loans				
Demand	2,384	2,409	2,303	+ 4	Total Deposits	N.A.	N.A.	N.A.	
NOW	855	851	794	+ 8	NOW	N.A.	N.A.	N.A.	
Savings	2,450	2,467	2,433	+ 1	Savings	N.A.	N.A.	N.A.	
Time	6,810	6,789	6,122	+11	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	*	*	*			APR	MAR	APR	
Share Drafts	*	*	*		Mortgages Outstanding	2,075	2,087	2,021	+ 3
Savings & Time	*	*	*		Mortgage Commitments	73	67	34	+115
TENNESSEE									
Commercial Bank Deposits	23,294	23,097	21,649	+ 8	Savings & Loans				
Demand	4,508	4,367	4,201	+ 7	Total Deposits	N.A.	N.A.	N.A.	
NOW	1,872	1,848	1,462	+28	NOW	N.A.	N.A.	N.A.	
Savings	4,893	4,902	5,251	- 7	Savings	N.A.	N.A.	N.A.	
Time	12,403	12,219	10,861	+14	Time	N.A.	N.A.	N.A.	
Credit Union Deposits	988	981	874	+13		APR	MAR	APR	
Share Drafts	68	66	61	+11	Mortgages Outstanding	5,418	5,447	5,802	- 7
Savings & Time	930	923	823	+13	Mortgage Commitments	325	284	181	+80

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 major differences bet this report and the "call report" are size, the treatment of interbank deposits, and the treatment of float. The data generated fr the Report of Transaction Accounts is for banks over $15 million in deposits as of December 31, 1979. The total deposit data gen from the Report of Transaction Accounts eliminates interbank deposits by reporting the net of deposits "due to" and "due from" ot depository institutions. The Report of Transaction Accounts subtracts cash items in process of collection from demand deposits, wi the call report does not. Savings and loan mortgage data are from the Federal Home Loan Bank Board Selected Balance Sheet Da The Southeast data represent the total of the six states. Subcategories were chosen on a selective basis and do not add to total.

* = fewer than four institutions reporting.

** = S&L deposits subject to revisions due to reporting changes.

N.A. = not available at this time.

CONSTRUCTION

12-month Cumulative Rate

	JUN 1984	MAY 1984	JUN 1983	ANN % CHG		JUN 1984	MAY 1984	JUN 1983	ANN % CHG
UNITED STATES									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	57,260	56,359	45,983	+ 25	Value - $ Mil.	74,849	74,675	54,763	+ 37
Industrial Bldgs.	7,468	7,120	5,014	+ 49	Residential Permits - Thous.				
Offices	13,777	13,830	11,268	+ 22	Single-family units	924.7	937.4	752.6	+ 23
Stores	8,536	8,227	5,726	+ 49	Multi-family units	766.5	758.5	573.8	+ 34
Hospitals	1,874	1,960	1,926	- 3	Total Building Permits				
Schools	829	735	845	- 2	Value - $ Mil.	132,109	131,034	100,746	+ 31
SOUTHEAST									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	8,899	8,823	7,076	+ 26	Value - $ Mil.	14,159	14,080	9,719	+ 46
Industrial Bldgs.	887	847	621	+ 43	Residential Permits - Thous.				
Offices	2,040	2,068	1,616	+ 26	Single-family units	191.4	192.5	154.0	+ 24
Stores	1,662	1,628	1,049	+ 58	Multi-family units	181.9	179.2	116.4	+ 56
Hospitals	479	494	418	+ 15	Total Building Permits				
Schools	117	115	166	- 30	Value - $ Mil.	22,984	22,830	16,795	+ 37
ALABAMA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	725	697	371	+ 95	Value - $ Mil.	479	464	328	+ 46
Industrial Bldgs.	180	154	29	+521	Residential Permits - Thous.				
Offices	81	79	60	+ 35	Single-family units	8.2	8.1	6.8	+ 21
Stores	110	111	59	+ 86	Multi-family units	8.9	8.6	5.6	+ 59
Hospitals	13	12	29	- 55	Total Building Permits				
Schools	8	8	4	+100	Value - $ Mil.	1,203	1,160	699	+ 72
FLORIDA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	4,290	4,298	3,630	+ 18	Value - $ Mil.	8,230	8,202	5,579	+ 48
Industrial Bldgs.	413	399	327	+ 26	Residential Permits - Thous.				
Offices	907	925	799	+ 14	Single-family units	104.5	105.1	80.3	+ 30
Stores	957	931	593	+ 61	Multi-family units	98.9	98.5	66.5	+ 49
Hospitals	223	245	253	- 12	Total Building Permits				
Schools	43	38	54	- 20	Value - $ Mil.	12,520	12,500	9,199	+ 36
GEORGIA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,632	1,563	1,083	+ 51	Value - $ Mil.	2,732	2,680	1,959	+ 39
Industrial Bldgs.	176	174	144	+ 22	Residential Permits - Thous.				
Offices	554	537	271	+104	Single-family units	43.6	43.7	35.6	+ 22
Stores	221	208	108	+105	Multi-family units	27.5	26.7	20.0	+ 38
Hospitals	61	57	24	+154	Total Building Permits				
Schools	17	18	25	- 32	Value - $ Mil.	4,364	4,243	3,041	+ 44
LOUISIANA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,165	1,188	1,133	+ 3	Value - $ Mil.	1,176	1,169	912	+ 29
Industrial Bldgs.	30	33	60	- 50	Residential Permits - Thous.				
Offices	329	361	354	- 7	Single-family units	15.9	16.3	15.4	+ 3
Stores	175	170	121	+ 45	Multi-family units	17.7	17.9	12.8	+ 38
Hospitals	149	143	59	+153	Total Building Permits				
Schools	41	42	67	- 39	Value - $ Mil.	2,342	2,357	2,045	+ 15
MISSISSIPPI									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	243	226	156	+ 56	Value - $ Mil.	374	357	239	+ 56
Industrial Bldgs.	14	14	7	+100	Residential Permits - Thous.				
Offices	27	26	15	+ 80	Single-family units	5.4	5.3	4.4	+ 23
Stores	53	53	31	+ 71	Multi-family units	5.8	5.8	2.9	+100
Hospitals	14	13	14	0	Total Building Permits				
Schools	1	2	8	- 88	Value - $ Mil.	617	584	396	+ 56
TENNESSEE									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	844	851	713	+ 18	Value - $ Mil.	1,168	1,208	702	+ 66
Industrial Bldgs.	74	73	54	+ 37	Residential Permits - Thous.				
Offices	142	140	117	+ 21	Single-family units	13.8	14.0	11.5	+ 20
Stores	146	155	137	+ 7	Multi-family units	23.1	21.7	8.6	+169
Hospitals	19	24	39	- 51	Total Building Permits				
Schools	7	7	8	- 13	Value - $ Mil.	1,938	1,986	1,415	+ 37

NOTES:
Data supplied by the U. S. Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts, C-40. Nonresidential data excludes the cost of construction for publicly owned buildings. 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. Publication of F. W. Dodge construction contracts has been discontinued.

GENERAL

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
UNITED STATES					
Personal Income ($bil. - SAAR)	4Q	2,824.2	2,752.5	2,625.2	+ 8
Taxable Sales - $bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's		N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)	JUL	8,728.7	8,688.6	8,619.0	+ 1
Consumer Price Index 1967=100	JUL	311.7	310.7	299.3	+ 4
Kilowatt Hours - mils.	MAY	175.0	174.9	158.6	+10
SOUTHEAST					
Personal Income ($bil. - SAAR)	4Q	341.9	333.9	310.0	+10
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	4,669.3	4,970.9	4,411.0	+ 5
Petroleum Prod. (thous.)	JUL	1,483.5	1,482.0	1,394.0	+ 6
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	28.2	26.4	24.9	+13
ALABAMA					
Personal Income ($bil. - SAAR)	4Q	37.7	37.1	34.9	+ 8
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	122.8	120.3	123.7	- 1
Petroleum Prod. (thous.)	JUL	52.0	51.0	51.0	+ 2
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	3.7	3.4	3.3	+12
FLORIDA					
Personal Income ($bil. - SAAR)	4Q	128.8	125.4	117.7	+ 9
Taxable Sales - $ bil.	JUL	80.0	79.1	69.9	+14
Plane Pass. Arr. 000's	JUN	2,198.7	2,514.5	2,142.1	+ 2
Petroleum Prod. (thous.)	JUL	41.0	42.0	50.0	-18
Consumer Price Index - Miami		JUL	JUN	JUL	
Nov. 1977 = 100		167.0	166.4	160.8	+ 4
Kilowatt Hours - mils.	MAY	8.0	7.1	6.8	+17
GEORGIA					
Personal Income ($bil. - SAAR)	4Q	61.0	59.6	55.8	+ 9
Taxable Sales - $ bil.	2Q	47.5	46.2	42.1	+13
Plane Pass. Arr. 000's	JUN	1,788.8	1,801.0	1,676.7	+ 7
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.	
Consumer Price Index - Atlanta		JUN	MAY	JUN	
1967 = 100		314.0	311.1	302.3	+ 4
Kilowatt Hours - mils.	MAY	4.5	4.1	4.2	+ 7
LOUISIANA					
Personal Income ($bil. - SAAR)	4Q	47.3	46.4	44.6	+ 6
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	345.5	330.0	276.1	+25
Petroleum Prod. (thous.)	JUL	1,300.0	1,299.0	1,208.0	+ 7
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	4.7	4.3	3.9	+20
MISSISSIPPI					
Personal Income ($bil. - SAAR)	4Q	21.8	21.1	20.3	+ 7
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. 000's	JUN	37.3	35.2	37.5	- 1
Petroleum Prod. (thous.)	JUL	90.5	90.0	85.0	+ 6
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	1.9	1.8	1.7	+11
TENNESSEE					
Personal Income ($bil. - SAAR)	4Q	45.3	44.3	36.7	+23
Taxable Sales - $ bil.	JUL	49.3	48.7	43.8	+13
Plane Pass. Arr. 000's	JUN	176.2	169.9	154.9	+14
Petroleum Prod. (thous.)	JUL	N.A.	N.A.	N.A.	
Consumer Price Index 1967 = 100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	MAY	5.4	5.7	5.0	+ 8

	JUL 1984	JUN (R) 1984	JUL 1983	ANN. % CHG.
UNITED STATES				
Agriculture				
Prices Rec'd by Farmers Index (1977=100)	143	144	131	+ 9
Broiler Placements (thous.)	83,960	87,414	81,201	+ 3
Calf Prices ($ per cwt.)	59.20	59.20	60.40	- 2
Broiler Prices (¢ per lb.)	35.5	33.2	30.7	+16
Soybean Prices ($ per bu.)	6.81	7.99	6.16	+11
Broiler Feed Cost ($ per ton)	233	243	217	+ 7
SOUTHEAST				
Agriculture				
Prices Rec'd by Farmers Index (1977=100)	139	137	113	+23
Broiler Placements (thous.)	31,861	33,263	31,573	+ 1
Calf Prices ($ per cwt.)	53.34	53.43	56.36	- 5
Broiler Prices (¢ per lb.)	34.3	31.8	30.1	+14
Soybean Prices ($ per bu.)	6.85	7.84	6.24	+10
Broiler Feed Cost ($ per ton)	237	239	206	+15
ALABAMA				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	608	–	587	+ 4
Broiler Placements (thous.)	10,723	11,245	10,365	+ 3
Calf Prices ($ per cwt.)	52.50	52.00	54.60	- 4
Broiler Prices (¢ per lb.)	32.5	30.5	30.0	+ 8
Soybean Prices ($ per bu.)	6.77	7.91	6.11	+11
Broiler Feed Cost ($ per ton)	240	255	215	+12
FLORIDA				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	1,640	–	2,014	-19
Broiler Placements (thous.)	1,918	1,980	1,917	+ 0
Calf Prices ($ per cwt.)	59.00	60.50	66.20	-11
Broiler Prices (¢ per lb.)	34.0	31.0	30.0	+13
Soybean Prices ($ per bu.)	6.77	7.91	6.11	+11
Broiler Feed Cost ($ per ton)	255	270	230	+11
GEORGIA				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	907	–	855	+ 6
Broiler Placements (thous.)	12,860	13,369	12,630	+ 2
Calf Prices ($ per cwt.)	49.40	49.40	50.50	- 2
Broiler Prices (¢ per lb.)	34.6	31.5	29.5	+17
Soybean Prices ($ per bu.)	6.77	8.00	6.31	+ 7
Broiler Feed Cost ($ per ton)	255	245	200	+28
LOUISIANA				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	453	–	452	+ 0
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	55.00	52.50	56.50	- 3
Broiler Prices (¢ per lb.)	35.5	33.5	31.5	+13
Soybean Prices ($ per bu.)	7.00	7.72	6.20	+13
Broiler Feed Cost ($ per ton)	270	270	265	+ 2
MISSISSIPPI				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	588	–	692	-15
Broiler Placements (thous.)	6,376	6,670	6,660	- 4
Calf Prices ($ per cwt.)	50.70	52.50	55.00	- 8
Broiler Prices (¢ per lb.)	36.5	34.0	31.0	+18
Soybean Prices ($ per bu.)	6.78	7.64	6.22	+ 9
Broiler Feed Cost ($ per ton)	188	190	180	+ 4
TENNESSEE				
Agriculture				
Farm Cash Receipts - $ mil. (Dates: APR, APR)	519	–	563	- 8
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	53.00	52.30	54.00	- 2
Broiler Prices (¢ per lb.)	34.5	32.0	29.0	+19
Soybean Prices ($ per bu.)	6.87	8.16	6.40	+ 7
Broiler Feed Cost ($ per ton)	205	210	200	+ 3

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. R = revised.

EMPLOYMENT

	JUN 1984	MAY 1984	JUN 1983	ANN. % CHG.		JUN 1984	MAY 1984	JUN 1983	ANN. % CHG.
UNITED STATES									
Civilian Labor Force - thous.	115,393	113,251	113,383	+ 2	Nonfarm Employment- thous.	94,886	94,094	90,738	+ 5
Total Employed - thous.	106,812	105,096	101,813	+ 5	Manufacturing	19,768	19,552	18,513	+ 7
Total Unemployed - thous.	8,582	8,154	11,570	-26	Construction	4,537	4,301	4,065	+12
Unemployment Rate - % SA	7.1	7.5	10.0		Trade	21,853	21,628	20,895	+ 5
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	15,972	16,224	15,973	- 0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	20,829	20,616	19,786	+ 5
Mfg. Avg. Wkly. Hours	40.9	40.7	40.3	+ 1	Fin., Ins., & Real Est.	5,710	5,639	5,507	+ 4
Mfg. Avg. Wkly. Earn. - $	373	370	354	+ 5	Trans. Com. & Pub. Util.	5,209	5,143	5,049	+ 3
SOUTHEAST									
Civilian Labor Force - thous.	14,932	14,769	14,710	+ 2	Nonfarm Employment- thous.	12,097	12,047	11,592	+ 4
Total Employed - thous.	13,741	13,662	13,161	+ 4	Manufacturing	2,279	2,266	2,166	+ 5
Total Unemployed - thous.	1,190	1,109	1,549	-23	Construction	740	720	665	+ 11
Unemployment Rate - % SA	7.8	7.8	10.4		Trade	2,934	2,920	2,773	+ 6
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	2,173	2,183	2,160	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	2,445	2,441	2,339	+ 5
Mfg. Avg. Wkly. Hours	41.4	41.0	41.0	+ 1	Fin., Ins., & Real Est.	700	694	668	+ 5
Mfg. Avg. Wkly. Earn. - $	330	326	312	+ 6	Trans. Com. & Pub. Util.	700	698	694	+ 1
ALABAMA									
Civilian Labor Force - thous.	1,795	1,777	1,787	+ 0	Nonfarm Employment- thous.	1,361	1,349	1,331	+ 2
Total Employed - thous.	1,601	1,591	1,543	+ 4	Manufacturing	354	352	341	+ 4
Total Unemployed - thous.	194	185	244	-20	Construction	66	63	61	+ 8
Unemployment Rate - % SA	10.9	10.7	13.7		Trade	281	279	272	+ 3
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	292	288	292	0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	220	220	220	0
Mfg. Avg. Wkly. Hours	41.4	41.0	40.8	+ 1	Fin., Ins., & Real Est.	62	61	60	+ 3
Mfg. Avg. Wkly. Earn. - $	330	323	305	+ 8	Trans. Com. & Pub. Util.	73	72	71	+ 1
FLORIDA									
Civilian Labor Force - thous.	5,067	5,032	4,948	+ 2	Nonfarm Employment- thous.	4,123	4,119	3,887	+ 6
Total Employed - thous.	4,731	4,728	4,515	+ 5	Manufacturing	499	497	461	+ 8
Total Unemployed - thous.	336	305	434	-23	Construction	308	302	266	+16
Unemployment Rate - % SA	6.7	6.4	8.9		Trade	1,106	1,109	1,028	+ 8
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	648	648	640	+ 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	1,015	1,016	963	+ 5
Mfg. Avg. Wkly. Hours	41.5	41.1	41.3	+ 0	Fin., Ins., & Real Est.	308	306	287	+ 7
Mfg. Avg. Wkly. Earn. - $	317	314	299	+ 6	Trans. Com. & Pub. Util.	229	230	233	- 2
GEORGIA									
Civilian Labor Force - thous.	2,813	2,772	2,714	+ 4	Nonfarm Employment- thous.	2,410	2,387	2,288	+ 5
Total Employed - thous.	2,642	2,609	2,508	+ 5	Manufacturing	535	531	510	+ 5
Total Unemployed - thous.	171	163	206	-17	Construction	136	131	114	+19
Unemployment Rate - % SA	6.0	6.1	7.5		Trade	590	582	548	+ 8
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	436	440	441	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	424	418	397	+ 7
Mfg. Avg. Wkly. Hours	41.1	40.9	41.7	- 1	Fin., Ins., & Real Est.	127	126	122	+ 4
Mfg. Avg. Wkly. Earn. - $	310	305	298	+ 4	Trans. Com. & Pub. Util.	154	153	149	+ 3
LOUISIANA									
Civilian Labor Force - thous.	1,959	1,930	1,945	+ 1	Nonfarm Employment- thous.	1,576	1,574	1,568	+ 1
Total Employed - thous.	1,775	1,758	1,701	+ 4	Manufacturing	182	180	179	+ 2
Total Unemployed - thous.	183	173	243	-25	Construction	113	114	116	- 3
Unemployment Rate - % SA	8.6	9.1	11.8		Trade	376	374	371	+ 1
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	316	318	316	0
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	311	313	305	+ 2
Mfg. Avg. Wkly. Hours	41.8	41.9	40.4	+ 3	Fin., Ins., & Real Est.	84	84	83	+ 1
Mfg. Avg. Wkly. Earn. - $	419	422	394	+ 6	Trans. Com. & Pub. Util.	115	115	118	- 3
MISSISSIPPI									
Civilian Labor Force - thous.	1,068	1,052	1,094	- 2	Nonfarm Employment- thous.	800	806	795	+ 1
Total Employed - thous.	956	952	942	+ 1	Manufacturing	210	211	205	+ 2
Total Unemployed - thous.	112	100	152	-26	Construction	33	33	37	-11
Unemployment Rate - % SA	9.5	9.5	12.7		Trade	170	169	165	+ 3
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	177	183	179	- 1
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	127	128	127	0
Mfg. Avg. Wkly. Hours	40.6	40.3	40.8	- 0	Fin., Ins., & Real Est.	35	34	34	+ 3
Mfg. Avg. Wkly. Earn. - $	283	278	271	+ 4	Trans. Com. & Pub. Util.	39	38	39	0
TENNESSEE									
Civilian Labor Force - thous.	2,230	2,206	2,222	+ 0	Nonfarm Employment- thous.	1,827	1,812	1,723	+ 6
Total Employed - thous.	2,036	2,024	1,952	+ 4	Manufacturing	499	495	470	+ 6
Total Unemployed - thous.	194	183	270	-28	Construction	84	77	71	+18
Unemployment Rate - % SA	8.6	8.6	12.1		Trade	411	407	389	+ 5
Insured Unemployment - thous.	N.A.	N.A.	N.A.		Government	304	306	292	+ 4
Insured Unempl. Rate - %	N.A.	N.A.	N.A.		Services	348	346	327	+ 6
Mfg. Avg. Wkly. Hours	41.8	40.6	40.9	+ 2	Fin., Ins., & Real Est.	84	83	82	+ 2
Mfg. Avg. Wkly. Earn. - $	322	313	306	+ 5	Trans. Com. & Pub. Util.	90	90	84	+ 7

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.

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