Economic Review

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INVESTMENT BANKING

Are Merger Services Worth the Price?

AGRICULTURE

Crop Costs, Prices, and Productivity

INTERNATIONAL TRADE

A Textile and Apparel Currency Index

Economic Review

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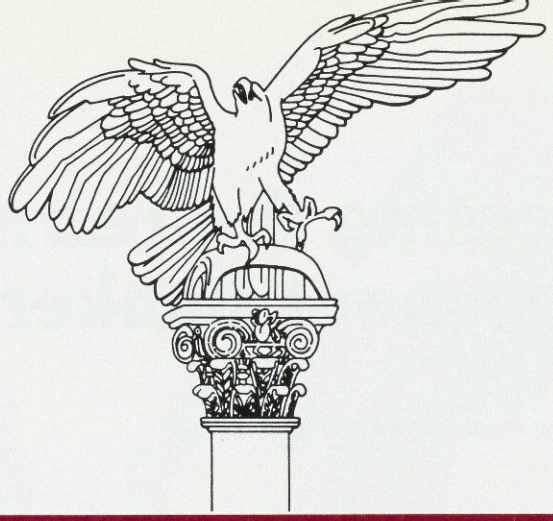

Assessing the Fairness of Investment Bankers' Fees

William Curt Hunter and Mary Beth Walker

Investment bankers have been criticized in recent years for charging merger fees many consider excessive. The authors look at merger and acquisition activities and the fees that investment banking firms charged for these functions. This study, which measures the market imputed dollar gain in firms' stock prices, concludes that investment banks' fees represent compensation commensurate with the ensuing gains in stock prices.

Investment banking firms have traditionally performed a number of key functions that enhance the liquidity and efficiency of U.S. capital markets. Underwriting, market-making, and advising corporations on capital structure, dividend policy, mergers, acquisitions, and divestitures are among the diverse financial services that such firms provide. While other financial institutions offer many of these same services, the investment banks' specialization and expertise in corporate financial matters, along with their position overlooking capital markets as a whole, give them a comparative advantage that permits them to command handsome fees. For example, the merger departments at three leading Wall Street investment banking firms—Goldman, Sachs; First Boston; and Morgan Stanley—each are estimated to have earned about $200 million in merger fees during 1985.[1]

In recent years, however, investment bankers' fees have increasingly been criticized as excessive. In a development that both reflects and goads disenchantment with the fee structures at leading Wall Street firms, popular business publications have lambasted them in cover stories such as "Merger Fees That Bend the Mind" and "Wall Street's Overpaid Young Stars." Reportedly, some major corporations may choose to bypass investment bankers altogether in future merger transactions in favor of a do-it-yourself approach.[2] Even so, since investment bankers' expert advice shields public corporations' officers and boards from suits filed by dissenting shareholders under the business judgment rule, the demand for investment banking merger advice is unlikely to disappear.

This article summarizes the authors' research on the role played by investment banks in mergers and acquisitions, in particular focusing on the fees paid for such services.[3] Based on a representative sample of U.S. corporate mergers concluded between 1979 and 1985, the analysis reveals that the bankers' fees, though large in absolute terms, are only a small percentage of the economic value created by the mergers. This finding, while not conclusively demonstrating competitiveness, argues against any claim that the investment banks' merger fees are excessive in any economic sense. On average, when measured against the gain that the merger creates for the new entity (or against the purchase price of the company), the fee approximates that of a typical real estate transaction.

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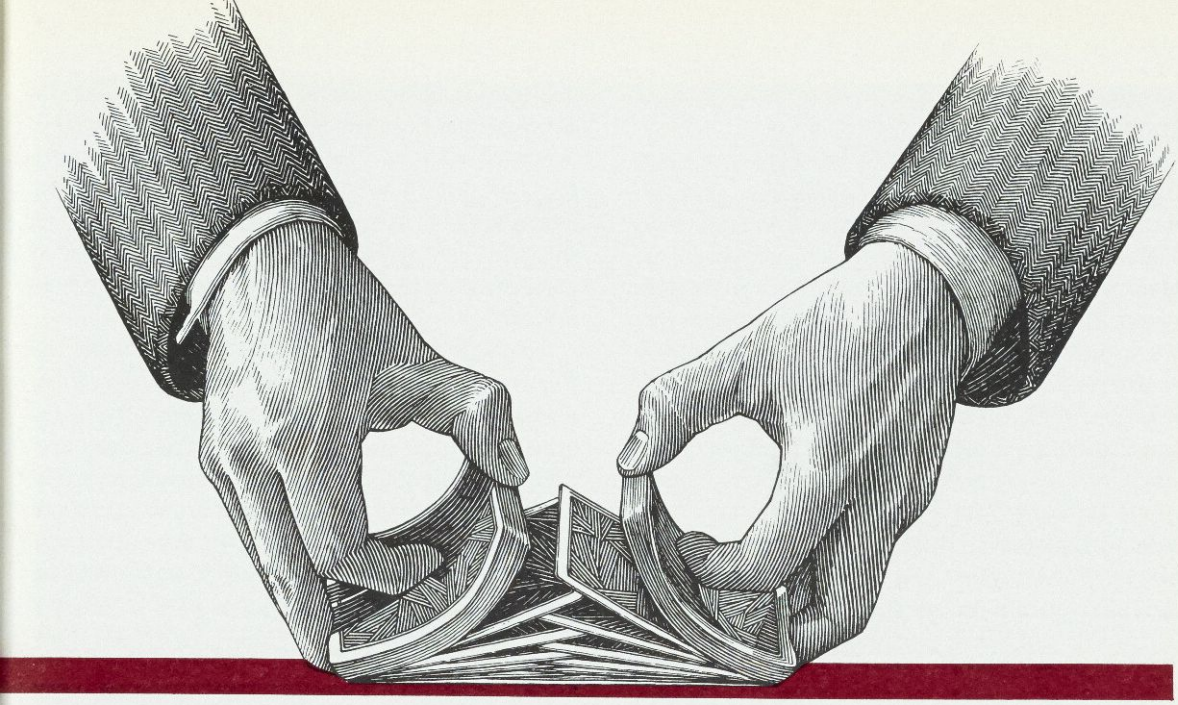
The Merger Fee Contract

The value of the services provided by investment banks should be the ultimate arbiter of



whether their merger fees are excessive. Clearly, investment bankers' services are considered worthwhile by the corporations that employ them. Otherwise, their lucrative fees would have seriously disadvantaged investment banks, enabling other financial services institutions to capture their merger- and acquisition-related activities. Since such services consistently account for a substantial portion of investment banks' revenues, one cannot conclude that the associated fees are not competitively priced.

Investment banking merger contracts are of three basic types: (1) fixed-fee contracts, where fees are independent of the outcome of merger negotiations; (2) contracts where fees are contingent on the successful conclusion of the merger and on the number of shares acquired; and (3) contracts where fees are contingent on the successful conclusion of the merger, on the price paid, and on the number of shares purchased. Given that a fixed-fee contract guarantees the banker's compensation even if the merger fails and regardless of his effort, such contracts may not be in the interest of the buying and selling firms. Such a situation poses what is known as a moral hazard problem, meaning that the terms of the contract diminish the agent's (investment banker's) incentive to perform optimally. The moral hazard problem can manifest itself in any principal-agent relationship. In professional sports, for example, the long-term guaranteed contracts awarded to superstars fit this description. The athletes are paid regardless of their on-the-field performance. Thus, the incentives to perform optimally may be compromised. As a rational response to this problem in merger markets, contingent or performance contracts have come to be the most common form of merger fee contract.

Despite the predominance of contracts designed to elicit bankers' optimum effort and despite the heavy reliance on investment bankers' services, merger fees still may be out of kilter. This disproportion may be especially evident where merger fees are figured asymmetrically—that is, in contracts that include fixed as well as contingent components, or where sliding fee schedules are employed. A widely cited example of the latter, the so-called Lehman formula, states that the merger fee equals 5 percent of the first $1 million of the purchase price, plus 4 percent of the second million, plus 3 percent of the third million, plus 2 percent of the fourth million, plus 1 percent of the remainder.

Since standard merger fee contract designs in no way preclude excessive merger fees, the value of the services investment bankers provide to buying and selling firms helps gauge whether their fees are fair. One measure of the worth of the bankers' activities in the merger and acquisitions market is the net economic value of the gain created or generated via mergers where the bankers act primarily as

intermediaries for the acquiring and acquired firms.

Investment bankers intermediate between the buyers and sellers of corporate assets in much the same manner as real estate agents do between the buyers and sellers of property. However, there are significant differences between the two agency relationships. From the viewpoint of this analysis, a notable difference is the structure of the agents' fee contracts. Realtors' fees, on both sides of the transaction, tend to be a straightforward percentage of the price of the property changing hands. Investment banking merger fees, by contrast, are seldom figured symmetrically, as was discussed above. Furthermore, even in cases where the fees do depend on the dollar size of the transaction, the empirical evidence does not support an exact relationship; that is, the frequently cited Lehman pricing formula does not hold in practice. Thus, it seems clear that excessive fees would correspond to the merger situation where the investment banker's fees exceed the surplus generated by the transaction.

The problem then is determining what economic gain accrues to the combined firm that results from a given intermediated merger. This calculation appears difficult at best, in that the true value of a merger seems to be subjectively defined by the acquiring firms. Fortunately, modern financial theory offers a methodology, described in the following sections, for obtaining an unbiased estimate of the incremental or additional economic value created by a merger.

The scope of analysis of investment bankers' fees presented here is confined to intermediated mergers. Consequently, this study does not consider whether the net increase in value that ensues from banker-assisted mergers exceeds that which would follow if firms identified targets and effected mergers on their own. Clearly, if firms could readily seek out merger candidates—the do-it-yourself approach—and achieve the same transactions more economically, they would tend to bypass the investment bankers.[4]

Measuring Merger Synergy

Merging firms expect to realize some economic surplus or gain as a consequence of joint production opportunities or economies of scale or scope. In other words, they anticipate that the merger will give rise to synergy that should translate into a net increase in the value of the combined entity over and above the values of the firms as separate entities. Thus, the merger creates value that neither firm could achieve on its own.

An ideal measure of such synergy would be the increment in the value of the two firms anticipated prior to the merger. Since these ex ante data are unavailable (that is, they are private, subjective estimates), this increment is approximated by using the market imputed dollar gain in the firms' stock prices for each merger in the sample. The methodology used in this instance was originated by Paul Malatesta (1983) and adapted by others.[5] To obtain market imputed gains to the merging firms, the standard abnormal returns technique was used. This technique, based on Eugene Fama's (1976) market model and standard event study methodology, is explained in the accompanying box.

Sample Data

The sample of mergers for this study was derived from a number of public sources—the *Wall Street Journal Index, Mergers and Acquisitions, Fortune,* the Federal Trade Commission's *Statistical Report on Mergers and Acquisitions,* and the Conference Board's *Announcements of Mergers and Acquisitions,* among others. For the years 1979 through 1985, these publications reported more than 800 mergers. Many of the firms involved in these transactions were private companies, and were therefore eliminated for lack of available data. In order to narrow the sample to mergers where comparable services were performed, truly hostile takeovers also were excluded from the sample as being atypical of the majority of investment banks' business. Likewise, mergers for which investment bankers provided only fairness opinions or underwriting services were deleted. After this paring down of the sample, 125 mergers remained. Information on the fees paid to the investment bankers was obtained from the proxy statements merging firms filed with the Securities and Exchange Commission.

The Idea behind Event Studies

Intuition dictates that the success of a merger or acquisition should be judged only after the financial performance of the combined firm is observed over a sufficient period of time. Recent results from financial economics, however, allow us to avoid this waiting period.

The theory of efficient markets holds that the market will accurately reflect the expected value of an acquisition—to the buying and selling stockholders alike—via changes in stock prices that occur *immediately* upon the first public announcement of the impending transaction. (Due to information leaks, some of the value may be captured before the announcement.) While this thinking does not imply that the market's first response to the news is always correct, both theory and evidence suggest that the initial stock price changes reflect an unbiased estimate. According to the efficient market hypothesis, market prices respond in an unbiased manner to new information but not to old information.

In using these concepts to gauge the financial synergy created by any true "news," economists employ a statistical technique known as the event study methodology.[1] To measure accurately the market's assessment of a news event—the merger announcement, in this case—the research first identifies the relationship between the return on a particular stock and the return on the overall stock market as represented by some market index. This exercise is carried out over a period of time during which the news does not affect the market price of the stock. Once this stock price-stock market relationship is estimated, the actual returns on the stock throughout a time period around the announcement date are compared with those predicted by the historical relationship to find the differences, which are termed the abnormal returns. At a given point in time, say time t, stock returns should be sensitive to the release of new information. Information available before time t should not affect abnormal returns during this period; rather, the old information's influence should have been incorporated previously.

To apply the event study methodology to the case of corporate mergers, the historical relationship between the returns on the sample company stocks and the returns on the stock market overall was established by means of the following regression equation (the simple market model):

$$R_{it} = a_i + b_i R_{mt} + u_{it}, \qquad (1)$$

where R_{it} is the return to firm i at time t, R_{mt} is the equally weighted return to the aggregate stock market at time t, u_{it} is an independently and identically distributed random error term, and a_i and b_i are estimated for each firm in the sample, employing a 260 trading-day span, from 280 days before the first public announcement of the merger to 20 days before this announcement. Using these estimates, predicted returns for each firm i for 20 days before and 5 days after the public announcement date were generated. This time period was chosen in recognition of possible information leaks about the merger before the public announcement date and lags in response after the announcement date.

Abnormal returns were then calculated as the difference between actual and predicted returns:

$$AR_{it} = R_{it} - \hat{a}_i - \hat{b}_i R_{mt}, \qquad (2)$$

where $\hat{a}_i$ and $\hat{b}_i$ are the statistical estimates of a_i and b_i from equation (1). These abnormal returns were then multiplied by the previous day's closing stock price, P_{t-1}, and by the number of shares outstanding, S_{t-1}, to obtain daily abnormal dollar returns, ADR_{it}:

$$ADR_{it} = AR_{it} P_{t-1} S_{t-1}. \qquad (3)$$

These daily abnormal dollar returns were then cumulated over the 25-day window around the public announcement date for each company:

$$ADR_i = \sum_{t=-20}^{+5} ADR_{it} \qquad (4)$$

Finally, the ADRs for the two merging firms were summed to obtain an estimate of the gain in each merger.

Note

[1]See Brown and Warner (1985) or Schwert (1981) for a detailed description.

Note that this study comprehends a wide variety of mergers, from acquisition of tiny companies to mergers of giants. As Table 1 illustrates, purchase prices ranged from $34 million to nearly $6 billion, and associated fees collected by investment bankers ran the gamut from approximately $100,000 to $20 million. To put these data in proper perspective, Table 2 compares the fees charged in the sample mergers with the incremental economic value these transactions created.

Fees paid to investment bankers for their assistance in mergers and acquisitions averaged 6.6 percent of the merger-generated gains. The large standard deviation indicates that this ratio varied greatly. However, in only 3 of 125 cases did this fee-to-gain ratio exceed 1; that is, the investment banker's fee exceeded the market imputed value of the merger. Moreover, the value of the gains in these three cases averaged only $3.24 million, in sharp contrast with the overall average of $86.1 million. For a comparison, Table 2 also displays fees as a proportion of the price paid for the acquired firm. According to this measure, the fee averages less than 1 percent of the transaction price, with a maximum value of only 3.4 percent.

Table 1.
Summary of Sample Merger Data

	Mean Value (million $)	Standard Deviation	Minimum Value (million $)	Maximum Value (million $)
Fee	4.99	4.31	.10	20.00
Gain	86.12	210.61	-689.16	748.02
Purchase Price	835.68	10,004.90	34.50	5,773.10

Table 2.
Investment Bankers' Fees Relative to Merger-Generated Gain*

	Mean Value	Standard Deviation	Maximum Value
Fee/Gain	.066	.488	4.152
Fee/Price	.009	.007	.034

** All values expressed as proportions.*

Conclusion

Merger fees for this sample of mergers in which investment bankers provided comparable services average only 6.6 percent of the economic gain created by the associated mergers. The authors find no evidence that these fees should be labeled excessive. In fact, compared with other agency fee contracts, these charges appear to be quite legitimate. Furthermore, since contingency contracts, which predicate the investment banker's fee on successful completion of the merger and on other factors, are used almost exclusively today, it is reasonable to infer that investment bankers exert efforts in behalf of the firms that hire them.

For these reasons, firms contemplating a do-it-yourself approach simply because fees charged by professional merger intermediaries appear excessive would do well to scrutinize the costs and benefits of self-search. Investment banker merger fees that may at first glance seem disproportionately steep in fact are more likely to represent fair compensation.

Clearly, this examination of the data does not decide the issue of whether firms comtemplating mergers or acquisitions should rely on investment bankers to act as intermediaries or should act on their own behalf. What has been shown is that firms which do utilize or rely on investment bankers in mergers are, on average, not paying excessive or unreasonable fees for the services provided. Further research is necessary to determine more completely the overall contribution of investment bankers to merger market activity.

Notes

[1]See Petre (1986).

[2]Ibid.

[3]The results presented in this article were taken from a comprehensive analysis of merger market efficiency conducted by Hunter and Walker (1987).

[4]Data suggest, however, that such firms are still likely to engage investment bankers for fairness opinions to protect against shareholder lawsuits brought under the business judgment rule. In analyzing more than 300 mergers between public companies over the period 1979-85, it was found that in the majority of unintermediated mergers those firms did purchase a fairness opinion. The fairness opinion is simply a statement from an investment banker that the value negotiated by merging firms' management is reasonable or fair, based on the banker's expert judgment.

[5]See also Dennis and McConnell (1986) and You, Caves, Smith, and Henry (1985).

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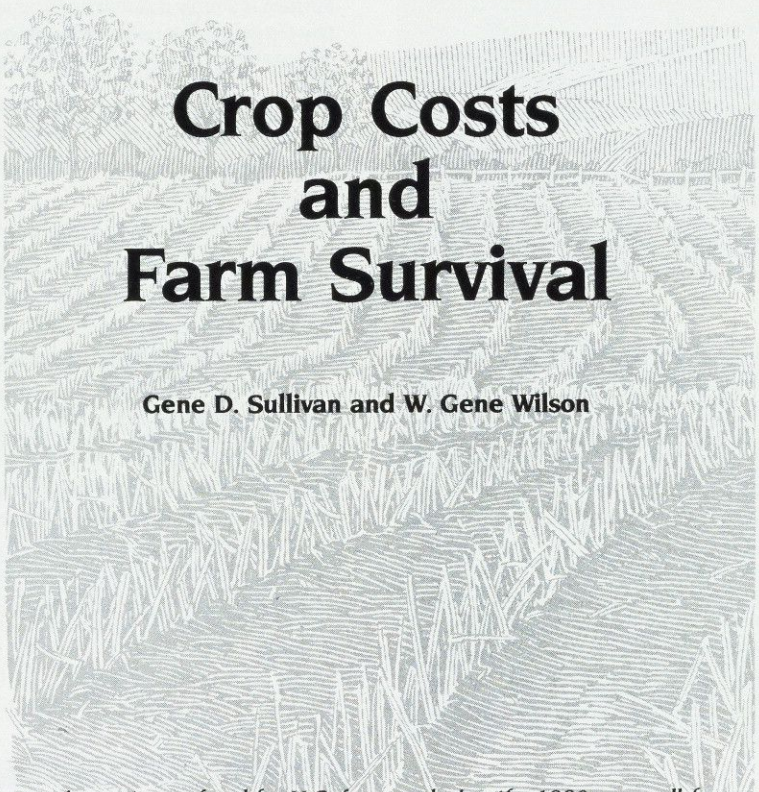
Crop Costs and Farm Survival

Gene D. Sullivan and W. Gene Wilson



The adverse circumstances faced by U.S. farmers during the 1980s are well-known. This article focuses on the economic climate for six major crops and determines that many farmers, especially in the Southeast, are not meeting their costs without support payments. In the absence of substantial price increases, these agricultural producers must be willing to adopt such productivity-enhancing techniques as implementing new technology, utilizing better management methods, or switching to different crops. Some producers will probably have to leave farming altogether.

News about tumbling prices and farm foreclosures has alerted observers to the troubled state of the farming industry. During 1985 and 1986, economic shifts forced the most heavily indebted and inefficient agricultural producers out of business. A number of economic conditions—declining asset values, which lessened borrowing power; high levels of production outlays; and high costs of servicing loans that were acquired during a more prosperous period—threatened many more farmers.[1]

This article explores the economic conditions for producers of six major crops—corn, wheat, soybeans, cotton, rice, and peanuts—during the 1980s. The research reveals wide yield and cost disparities from region to region and even within states. Which areas of the country sustain production of particular commodities will be determined ultimately by how market prices

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and per-unit production costs compare among the different regions. During periods of adversity, such as the post-1980 drop in prices for agricultural products, high-cost areas cannot continue to compete with more efficient areas without special assistance.

In the Southeast, where yields for corn, soybeans, and wheat fall below national averages, the importance of stepping up productivity is obvious: more effective approaches could make the difference between viable farming businesses and ailing, lackluster enterprises. While much of this article's analysis highlights the Southeast, similar dynamics apply to agricultural production nationwide. Most crop farmers generally suffered from relatively high costs and low prices during the 1980s, and many became dependent on government supports or target prices. Though a moderate shift in costs and prices of, say, 10 percent would be sufficient to cover many—though not all—of farmers' costs, the adjustment process of lowering costs and achieving higher productivity can be relatively slow. However, increased productivity is one way producers can exert some influence over their financial condition, provided debt loads are not already too heavy.

Spreading Costs through Higher Yields

The key to survival in agriculture, in the short run at least, is the relationship between the cost of production and the price received for the product. When cost per unit of production exceeds the return, continued production is endangered. How long production can continue depends on what portion of costs is covered. Increased productivity or output per acre can help offset the impact of higher expenses and lower prices by reducing per-unit production costs. Whether or not capable farmers are able to stay in business depends, then, on (1) prices for products, (2) costs of inputs, and (3) productivity. Farmers can do little to alter prices beyond choosing the best time of year to market their goods. Market prices are often determined by worldwide demand, a circumstance beyond the control of individual farmers.

Costs of inputs are only slightly easier to influence. Purchasing in larger lots, shopping for the lowest prices, economizing on use of inputs, repairing old machinery and equipment, and purchasing second-hand equipment (especially during periods of frequent foreclosure sales) can reduce production costs somewhat. Beginning farmers or those who lease can also benefit from declines in land costs during periods of adversity, but land price reductions are a liability for most established farmers who suffer declines in the collateral value of their major asset at a time when credit needs may be intense.

Because the individual producer can have an impact on yield per acre, productivity offers the best opportunity for maximizing financial success. By increasing output per acre, thus reducing costs per unit, the producer may be able to maintain a positive margin between average cost and selling price even though prices decline. This is especially true when fixed costs are high.

Variable costs are those directly related to production, while fixed costs are incurred even if production ceases. Seed, fertilizer, and insecticides, for example, are costs that accrue only as a crop is produced. Depreciation on buildings and machinery, property taxes, utilities, and interest on outstanding real estate debt are costs that go on whether or not crops are produced. A farmer who chooses to leave his land idle will still incur these fixed costs. It is possible, however, to lower fixed costs per unit of output by increasing the yield from an acre of land, thus spreading the cost over a larger output. The practice of double cropping—for example, the production of wheat in the winter and spring and soybeans in the summer and fall—is one way southeastern farmers have attempted to distribute their fixed costs. However, the success of this approach depends on management skill and cooperative weather.

Farmers with high debt levels typically have the greatest fixed costs and little option for postponing payment, while farmers who have little or no debt have a lower cost structure. Because they do not have to meet loan payments, debt-free farmers can survive longer during periods when revenue from production covers little more than variable or out-of-pocket costs.

Weathering adversity appears to require relatively high yield levels, low costs per unit,

and low fixed financial commitments, or some combination of these elements. Ultimately, those farmers with the highest margins over variable costs have the best chance of survival. Returns beyond variable costs can be applied toward fixed costs—those that would not have been covered had no production taken place. Obviously, losses grow quickly when producers fail to cover fixed costs, and funds are rapidly exhausted if production proceeds in conditions that make it impossible to recover current (variable) expenditures.

Are crop farmers covering total costs? Only some portion of fixed costs? Less than variable costs? An exploration of market prices, average yields per acre, and typical costs per acre helps answer these questions. Comparisons among regions can be drawn by examining crop production budgets, which provide representative costs for major crops throughout the country, and data on yields per acre at the national, state, and county levels.[2] In the analysis that follows, variable, fixed, and total costs per unit of production will be compared with season average prices and the government support or target prices for six important crops in major production areas.[3]

The relationships among costs, prices, and productivity ultimately determine farm profits and production patterns on a regional, state, and intrastate basis. This article, with its accompanying charts and tables, presents costs and returns information for major crop-producing regions with special attention given to the six southeastern states located within the Sixth Federal Reserve District. For the most part, the analysis utilizes average results for 1981-85 to represent the normal experience in all areas.[4]

Corn: Costs, Prices, Yields

The nation's most important crop in terms of acreage and income is corn, and economic results from its production have a major impact on crop farmers' overall financial prospects. A look at the effects of costs, prices received for corn, and yields per acre on farmers' returns in various regions provides a good illustration of how these factors mesh to determine farmers' financial well-being. Table 1 shows the per acre costs of producing corn in five U.S. Department of Agriculture (USDA) production areas, as well as calculations of yields required to cover total and variable costs per acre at season-average market prices for corn during 1981-85. (All tables are grouped at the end of the article beginning on page 20.) Averages of actual yields for the five-year period from 1981 to 1985 are shown by producing region and are assumed to represent the area's normal production level.

The total costs of producing corn vary by more than $100 per acre, or 42 percent, among the various regions, about the same percentage as the variation in yields, which ranged from a low of 78 bushels in the Southeast to a high of 110 bushels per acre in the Lake States/Cornbelt (Midwest) area.

Assuming normal production, total costs averaged $2.67 per bushel for the United States but ranged from $2.61 in the Lake States to $3.18 in the Southwest. This spread between the highest and lowest cost areas was proportionately less than the 45 percent difference in average yields. Thus, yields alone are not a sufficient indicator of the most efficient areas of production. Cost and market price variations between regions can offset yield differences.

Chart 1 compares corn production costs per bushel and market prices in each area. Only in the Northeast and the Lake States did the market price exceed the average production cost based on average yields. All areas covered variable costs as well as the majority of fixed costs based on average 1981-85 figures. With target prices guaranteeing returns to participating growers at $2.80 per bushel, the average grower in most areas saw profits from corn production during this period. However, producers in the Northern Plains, the Southeast, and the Southwest experienced losses. For the nation, profits averaged 13 cents per bushel, or about $14 per acre, amounting to about a 5 percent return on a total cost of $282 per acre.

The Southwest has typically commanded the highest market prices for corn because of its limited production and its remoteness from the major midwestern producing area. These relatively high prices have helped to stem growers' losses in Texas and California. In the Southeast, however, production costs are even higher, and farmers receive much less of a price premium for their products. Southeastern producers, then, are under more financial pressure than those in

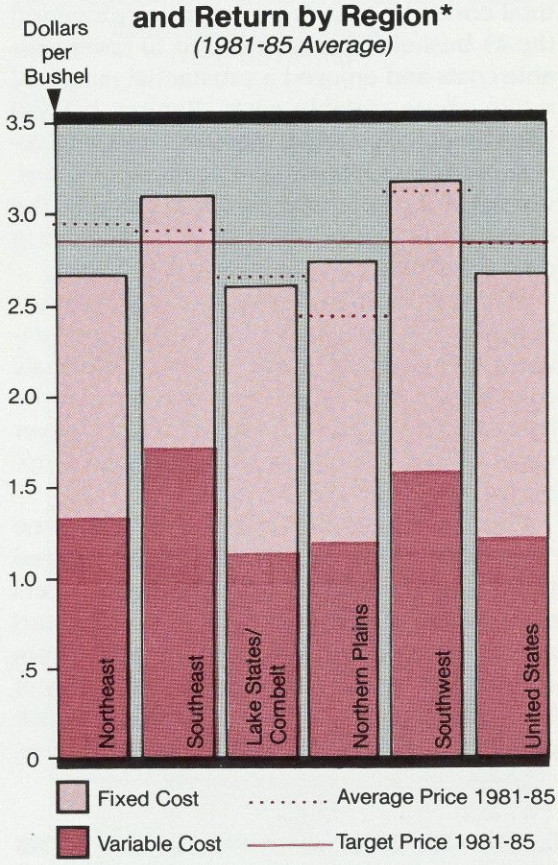
other areas of the country, largely because of lower yields and high costs per bushel.

Corn in the Sixth District. Corn is the second most important crop in the states of the Sixth Federal Reserve District—Alabama, Florida, Georgia, Louisiana, Mississippi, and Tennessee—as measured by planted acreage.[5] Each of the six states considered here devotes some acreage to corn production, but Georgia and Tennessee account for about two-thirds of the region's acreage (Table 1). Despite the importance of this crop in the region, the District states do not produce enough corn to meet their needs and must import the majority of their livestock and poultry feed from other regions. Corn can be planted early in the season (February and March) in much of the area, and it matures ahead of the nation's major production in the Cornbelt. District farmers can normally get somewhat higher prices than midwestern growers because their crop is available just before the Cornbelt's harvesting season begins. This price advantage helps to offset in part the handicap of average yields that are less than three-fourths the nation's.

Producers in the District states enjoy some cost advantages over the average national producer as well. Although total variable costs run slightly higher than the U.S. average, fixed costs are substantially lower because of lower land prices, so that total regional costs per acre are about 14 percent below the average for the United States. However, because of lower yields, costs per bushel in the region are substantially higher than the U.S. average. As a result, area producers who were not participating in the government program lost an average of about 27 cents per bushel, whereas nonprogram producers at the national level lost an average of 13 cents per bushel.

Given the average market price of $2.97 per bushel, the typical southeastern producer would have needed 82 bushels per acre to cover total costs. In the United States the yield per acre required to cover total costs was 101 bushels. In the Sixth District, only Louisiana obtained yields high enough to cover total costs; most of the other states were short by at least 8 bushels per acre. However, all states exceeded the number of bushels needed to cover variable costs. Thus, the average producer had returns over and above out-of-pocket expenses to apply toward fixed costs, which would not have been covered had production ceased.

Chart 1.
Corn: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



** For definition of regions, see Table 1.*

Sources: U.S. Department of Agriculture (USDA), National Economics Division, Economic Research Division, *Economic Indicators of the Farm Sector: Costs of Production 1985* (August 1986); USDA, Agricultural Statistics Board, National Agricultural Statistics Service, *Agricultural Prices: 1986 Summary* (June 1987) and *Agricultural Prices:* (1986); other information computed by the authors.

Corn yields varied widely within states and, it may also be presumed, among farmers within individual counties. Faring much better than other areas of the region, 13 of Louisiana's parishes (counties), accounting for 68 percent of the harvested corn acreage, exceeded the 79 bushels per acre needed in that state to cover total costs. Only two parishes, with less than 1 percent of the acreage, failed to produce the 44 bushels per acre needed to cover variable costs.

Mississippi producers, who benefited from a higher market price than other District states, needed the fewest bushels per acre to cover total costs. All Mississippi counties exceeded the 43 bushels per acre needed to cover variable costs and enjoyed a substantial margin of return above variable costs. Returns beyond variable costs, coupled with the unattractiveness of other alternatives such as soybeans, wheat, and grain sorghum, may explain the expansion in Mississippi's harvested acreage in corn since 1985.

States with serious losses from corn production were Alabama and Florida. None of Alabama's counties and only a few of Florida's counties covered total costs; one-third of the harvested acreage in both states failed to cover variable costs. Not surprisingly, acreage dropped sharply from 1985 to 1987.

Corn producers in Georgia and Tennessee covered variable costs, but relatively few covered total costs. The majority of Georgia's producers covered less than half of their fixed costs, and acreage dropped by more than one-third from 1985 to 1987. On the other hand, a majority of Tennessee's producers covered more than half of their fixed costs, and acreage reduction was substantially less than in Georgia.

Soybeans: A Low-Cost Crop

The economic feasibility of soybean farming, like that of corn, depends on the balance among costs, prices, and yields. Table 2 compares soybean production in the nation's four major growing areas with U.S. production overall. Total costs per acre were highest in the Lake States region, where yields were also highest. Yields were lowest in the Delta and Southeast regions; costs per acre were lowest in the Delta region. Moderately low costs and high yields gave the Northern Plains states the lowest average production cost per bushel over the five-year period.

The Southeast region, as defined by the USDA, in the case of soybeans includes the Carolinas, Virginia, and Kentucky, as well as the Sixth Federal Reserve District states. This area recorded the highest costs per bushel. Chart 2 shows that average market prices exceeded total costs per bushel in only the Northern Plains and Lake States regions. However, all regions covered variable and most of their fixed costs. In this situation, most producers would be expected to continue growing soybeans unless other enterprises proved more profitable or financial reserves had been exhausted. The fact that national acreage had fallen less than 7 percent by 1987 confirms the relative appeal of soybean production.

Soybeans in the Sixth District. For the more narrowly defined six-state region, soybeans have been the most important field crop measured by both planted acreage and cash receipts. Soybeans typically cover nearly half of the total harvested cropland in the District states, and revenue from soybeans accounts for about one-fourth of total cash receipts from crops. Soybean production has played a major role in shaping the financial condition of farmers in this region and is, in fact, a source of significant economic difficulties in the area.

The popularity of soybeans here can be traced in part to the crop's adaptability to low-fertility soils prevalent in the region. The symbiotic relationship of the crop with bacteria in the soil enables it to produce some nitrogen for its own use, so that soybeans can be grown with less expense for commercial fertilizer than most other crops. Requirements for cultivation and herbicides for weed control are also relatively low since in normal weather the crop quickly produces a canopy of vegetative growth that tends to shade out competing weeds and grasses. The crop's relatively short growing season allows for planting as late as July with little reduction in yields per acre, provided sufficient moisture is available to support normal growth. This short growing season makes it possible for regional farmers to plant soybeans immediately following the harvest of early-growing small grain crops such as winter wheat, oats, rye, and barley. When successful, this double-cropping approach enables farmers to expand the total crop revenue produced from an acre of land within a single year as well as to spread fixed costs over more units of output.

Adaptability to a wide range of soil types and ease of production contribute to low costs per acre. Although variable costs per acre are higher in this six-state region than in the nation as a whole, the nation's fixed costs are 50 percent higher than the District's largely because of the

higher cost of land (see Table 2). The fixed cost advantage becomes especially significant when growers can spread these costs over an additional crop through the practice of double cropping. (No allowance was made for double cropping in the cost calculations presented in this study.)

During the past decade, prospects for high profits were an additional impetus for the rapid expansion in soybean acreage in the region. Prices at times moved above $9 per bushel as compared with a season-average price of approximately $5 per bushel in 1985. The sharp reduction in price since 1980 explains much of the difficulty farmers have experienced during the past five years. Total costs, by comparison, declined relatively little during this time. The squeeze between falling market prices and relatively steady production costs eradicated profits for most producers and contributed to heavy losses for many less efficient farmers.

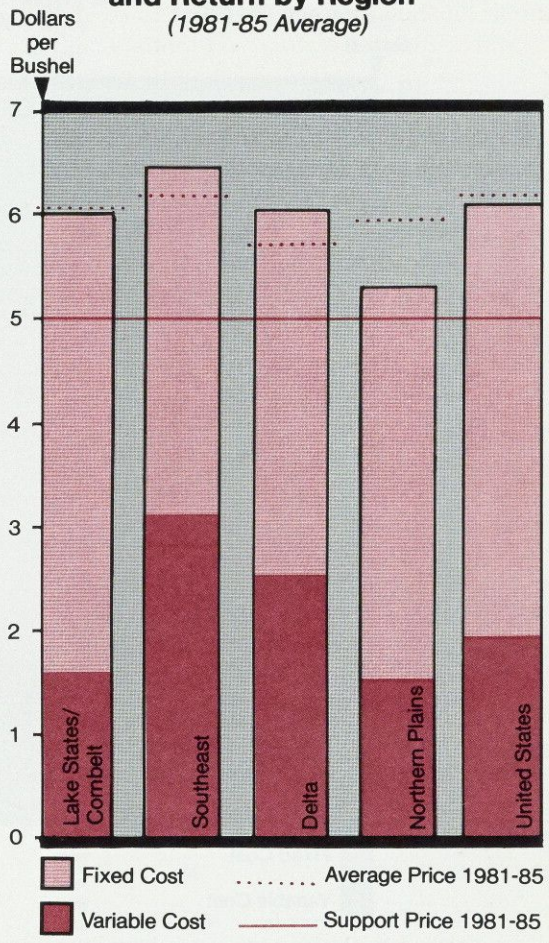
Soybean yields per acre, like corn yields, were lower on average in these six states than in the nation as a whole (Table 2). The region's production level was only 80 percent of the comparable U.S. average of 30 bushels per acre in the 1981-85 period.

Total costs per bushel of soybeans in the District states averaged $6.25 compared to a market price of $6.12. Thus, the region's soybean producers not only failed to cover costs but lost about 13 cents per bushel on average during the period (Table 2).

Despite growing losses since 1980, Sixth District farmers continued to plant soybeans, though acreage has shrunk. The obvious reason for continuing production was that in all six states, farmers covered more than variable costs; in Louisiana and Florida, fixed costs were covered as well. After paying out-of-pocket costs, farmers in the region as a whole still retained a significant amount to apply toward fixed costs, which would not have been covered had production ceased (Table 2). The added possibilities of meeting a portion of fixed costs with a second crop, such as winter wheat, grown on the same land made continued soybean production in the region even more attractive.

As with corn, soybean yields vary markedly from area to area within states and even from farm to farm. Analysis reveals that some areas across the six-state region profited from soybean production while most producers suffered losses. In Tennessee, 33 counties, accounting for about 38 percent of the total acreage, attained yields and total returns high enough to equal or exceed total costs. Some other states did not fare as well. However, a significant portion of counties in other District states attained returns at or above the break-even levels. Both prices and yields fell in 1986, and by 1987 acreage in the six District states had dropped 25 percent below its level in 1985, no doubt reflecting the continuing failure and retrenchment of farming operations.

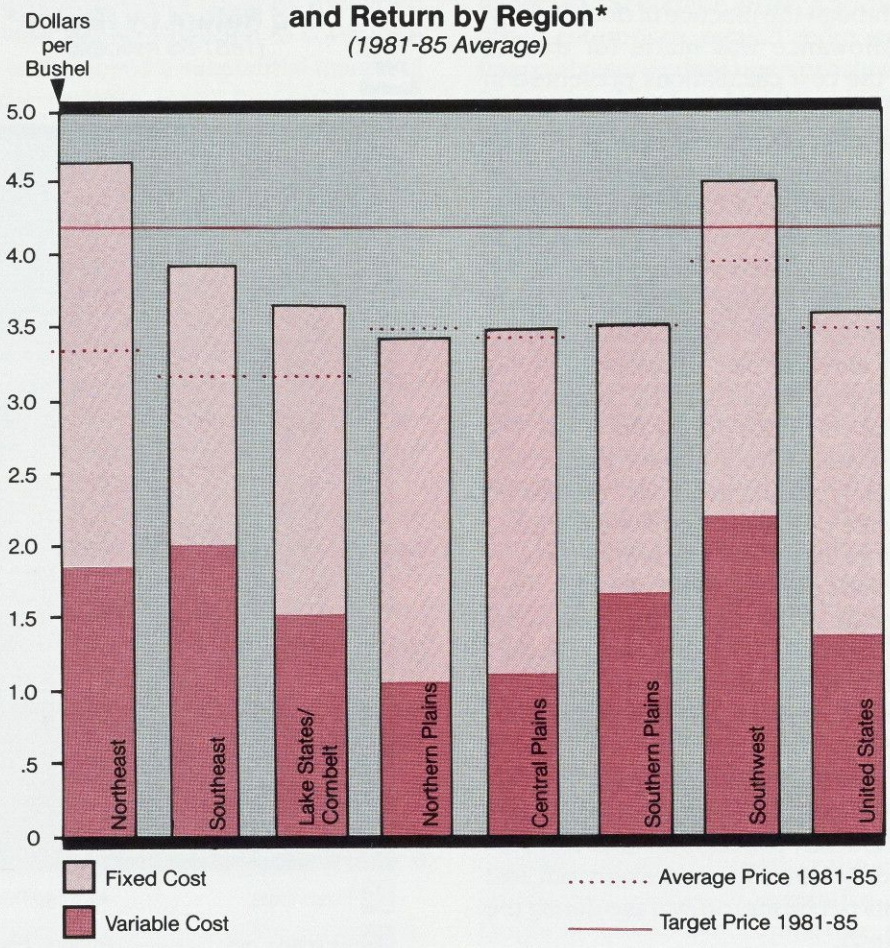
Chart 2.
Soybeans: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



** For definition of regions, see Table 2.*

Sources: See Chart 1.

Chart 3.
Wheat: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



** For definition of regions, see Table 3.*

Sources: See Chart 1.

Wheat: Double-Cropping Offsets High Costs

Production of wheat is more widely dispersed across the United States than any other crop. Table 3 lists seven separate wheat-growing regions, but two areas—the Central and Southern Plains states—account for about two-thirds of the nation's harvested acreage. At 77 bushels per acre, yields were highest in the Southwest, where irrigation costs pushed up the region's production costs to $345 per acre, the highest in the nation. These costs are triple those in the Southern Plains, where the average yield of 31 bushels is the lowest of all regions. Wide variations in yields and costs from area to area contribute to large disparities in wheat production costs per bushel. Based on five-year average yields, the Northeast registers the highest total production cost—$4.60 per bushel, compared to $3.12 per bushel in the Northern Plains states.

Chart 3 shows the variations in production costs from region to region. The average market price from 1981 to 1985 was not high enough to cover total production costs in any region except the Northern Plains. Prices were too low to cover as much as two-thirds of fixed costs in two regions—the Northeast and the Southeast—suggesting that producers in these regions were

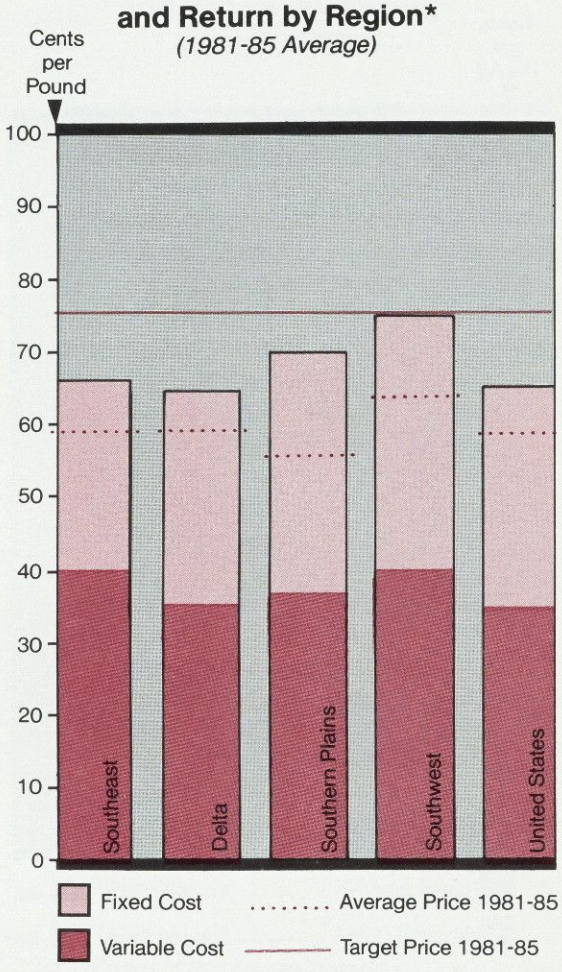
under the most financial pressure from wheat production operations. However, double cropping in the Southeast might have enabled those producers to cover a larger portion or perhaps all of their fixed costs. With normal yields and an average target price of $4.18 per bushel available to growers participating in the government's wheat program, only producers in the Northeast and Southwest failed on average to break even. Declines in wheat acreage since 1985 largely reflect reductions in areas where wheat was produced outside of government programs and therefore resulted in large losses to producers.

Wheat in the Sixth District. In the six-state region, commercial wheat production is a relatively new enterprise. Some farmers have successfully combined wheat in a double cropping pattern with soybeans. Yields of soybeans following a wheat crop are usually not equal to the levels obtainable when soybeans are grown alone. Nevertheless, when fixed land and machinery costs are spread over both crops, net returns can be greater than when a single crop is produced. The potential for double cropping was an important impetus for expanding winter wheat acreage in the region during the 1970s.

Wheat yields in the District as a whole and from state to state roughly parallel national norms. Regional production costs per bushel are higher than the national average, and prices fail, by a large margin, to cover total costs (see Table 3). Nevertheless, wheat production in the six states has met farmers' variable costs and a portion of their fixed costs; it has also provided additional revenue as a second crop planted on the same acreage during the same year.

District producers would have needed yields above 40 bushels per acre to cover total costs at average market prices. Although some individual producers obtained yields above 60 bushels per acre, only 14 counties in all six states obtained average yields above 40 bushels per acre on average over the five-year period. At the other extreme, in only one county did five-year average yields fall below the level needed to cover variable costs. Nonetheless, acreage has declined rather sharply since 1985 along with the drop in market prices. Wheat prices would have to exceed $5 per bushel, $2 above the average market price received in 1985, to bring most below-average producers to the break-even level in wheat production.

Chart 4.
Cotton: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



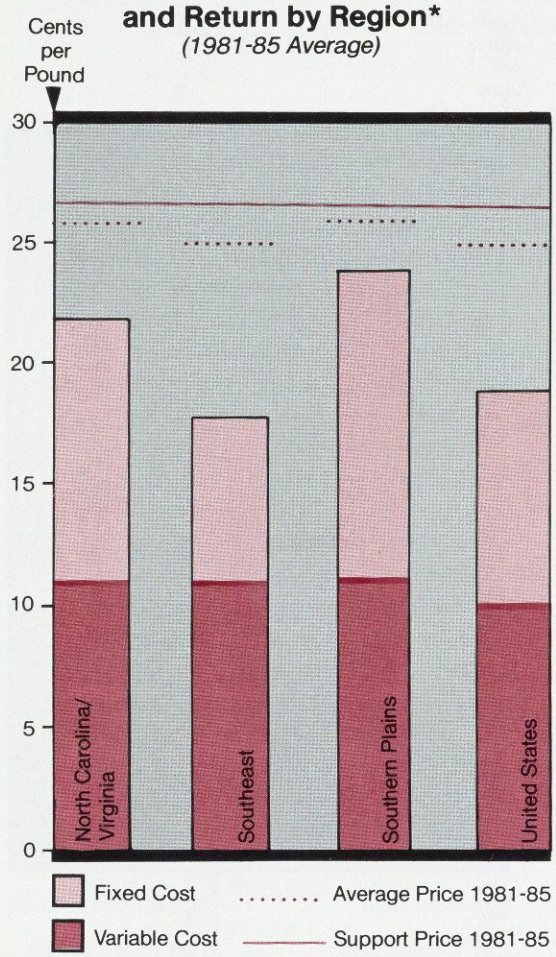
** For definition of regions, see Table 4.*

Sources: See Chart 1.

Cotton: High Yields Boost Returns

The USDA delineates four principal cotton-producing areas stretching across the nation's southern tier of states. The Southern Plains region, including Texas, New Mexico, and Oklahoma, accounts for half the nation's total acreage. The Southeast—which in this instance includes Alabama, Florida, Georgia, and North and South Carolina—and the Delta are two other prominent regions. Table 4 shows that total costs range from a low of $248 per acre in the Southern Plains to more than three times that level in the irrigated Southwest region, which

Chart 5.
Peanuts: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



** For definition of regions, see Table 5.*

Sources: See Chart 1.

includes Arizona and California. Yields also vary widely, with the Southwest normally producing three times more cotton per acre than the Southern Plains states.

Chart 4 indicates that average total costs per pound were much closer together for all regions than were costs per acre. Total costs exceeded average market prices in all regions. While this shortfall was most severe in the Southern Plains states, where the majority of fixed costs were not covered, other producing areas also failed to cover substantial proportions of fixed costs at average market prices. In all areas, average producers qualifying for the target price of 76 cents per pound were able to cover total costs.

Cotton in the Sixth District. Ranking third among crops in the six states of the Sixth Federal Reserve District, cotton production has historically been one of the most important agricultural activities in the region. Although acreage has declined in recent decades as the Southwest has become a more prominent cotton producer, cotton remains a major source of agricultural income in the river delta areas.

The average producer in the region failed to cover total costs when returns were limited to the market price alone (Table 4). Nevertheless, as an average of the 1981-85 period, relatively high yields were sufficient to cover variable costs and most of the fixed costs in the region (Chart 4). Producers outside of the government program had about 22 cents per pound to apply towards the fixed costs of around 28 cents per pound. The average producer in the region needed 726 pounds of lint per acre to recoup total costs based on the 1981-85 average market price. Average yields in Mississippi exceeded the break-even level, and so cotton production was slightly profitable to the typical producer in that state even without government payments.

Peanuts: Prospects Are Good

Of all the crops considered here, the economic outlook for peanut production is perhaps brightest. Table 5 shows costs for the three principal peanut-producing areas in the nation. Per-acre costs are highest in the North Carolina/ Virginia region and lowest in the Southern Plains states. Average yields are highest—about 70 percent above the average for the Southern Plains—in the southeastern region that includes the states of Alabama, Florida, and Georgia.

Chart 5 indicates average total costs per pound are highest in the Southern Plains and lowest in the three-state southeastern region, which has large yields. In all three areas, the average 1981-85 market price exceeded the total cost per pound. Profits are greatest in the Southeast, where nearly 60 percent of the nation's harvested acreage is produced.

Peanuts in the Sixth District. The acreage devoted to peanuts is tightly controlled by government marketing quotas and price support programs, and only three of the Sixth Federal Reserve District states have significant

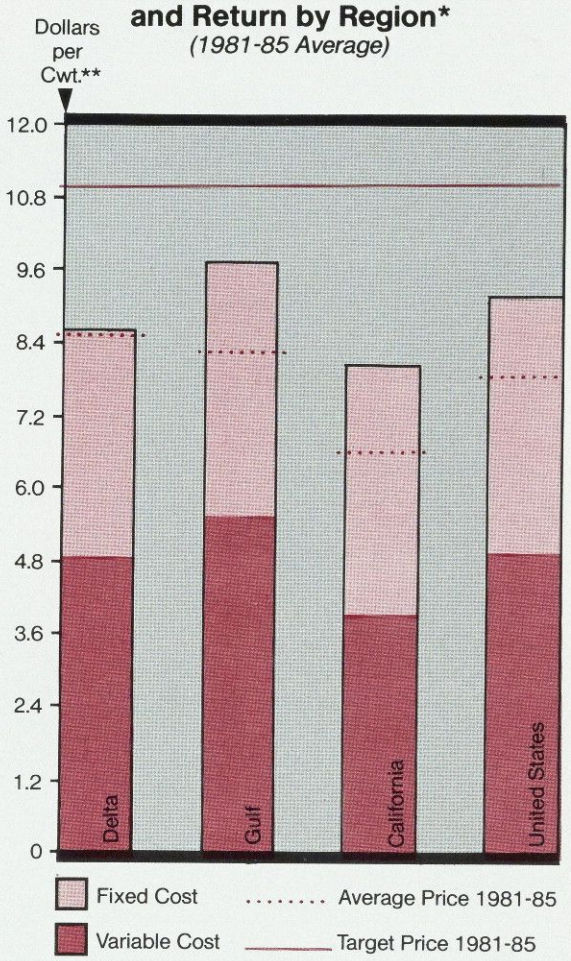
commercial acreage. However, the rigid price supports provided by government programs make peanuts one of the District's more valuable crops. Prices of peanuts grown within poundage quotas were supported at an average of 27 cents per pound in the 1981-85 period. Peanuts marketed in addition to quotas were supported at an average of 10 cents per pound. Because the average variable cost is approximately equal to the support price for additional production even in Georgia, the most efficient area, output above quotas has been limited. The effectiveness of the government peanut program in supporting prices and incomes of producers is indicated by the comparisons of prices and costs shown in Chart 5. In all regions, the support price and the average market price were well above the total cost per pound.

In Alabama, average county yields indicate that only 1 percent of the state's acreage failed to reach the break-even point on average during the five-year period from 1981 to 1985. All producing counties in Florida and Georgia recorded average yields above the levels needed to cover total costs. Hence, all counties throughout the peanut-growing region of the District states far exceeded the yield needed to cover variable costs and practically all covered fixed costs as well (see Table 5). Acreage in all states remains strictly governed by poundage marketing quotas.

Rice: Acreage Is Declining

California, the Delta, and the Gulf are the nation's three main rice-producing areas, as shown in Table 6. Total costs and yields per acre are highest in California, where about 16 percent of the acreage is located. Total costs are lowest in the Delta region, which produces about one-half of the nation's acreage. However, California has the lowest cost per hundredweight of rice produced, and the Gulf region has the highest cost, largely because of its relatively low yields. Average total costs have typically exceeded the average market price in all regions, and growers without the assistance of the target price have incurred heavy losses. In all regions, rice acreage declined both during the 1981-85 period and following 1985 in response to economic difficulties stemming from rising costs and waning international demand for U.S. rice.

Chart 6.
Rice: Per-Unit Production Cost and Return by Region*
(1981-85 Average)



* *For definition of regions, see Table 6.*

** *Hundredweight (100 pounds).*

Sources: See Chart 1.

Chart 6 compares costs and returns in each producing region with the U.S. average. In all cases, the revenue from the average market price covered all variable costs, but only the Delta region came close to covering all costs. However, an average target price of $11.35 per hundredweight available to producers participating in the government program during the 1981-85 period made rice production profitable in all areas.

Rice in the Sixth District. Louisiana and Mississippi are the only two rice-producing states in the Sixth District. Rice has long been an

important income-earning crop in the Gulf region of Louisiana. The delta areas of Mississippi and North Louisiana began producing rice more recently than the Gulf region.

During the first half of the 1980s, rice producers fell upon hard times as market prices declined from over $14 per hundredweight in 1981 to around $6.50 in 1985, reflecting shrinking export markets and surplus production. Average yields in the two states indicate that regional producers are not as efficient as their counterparts elsewhere in the nation. Even though the per-acre costs of producing rice are not as high as the nation's, primarily because of the region's lower costs for land and irrigation, the area's cost per hundredweight is typically substantially higher than the nation's average. Without program benefits, rice producers in both the District and the nation would have lost money (Table 6).

In neither Louisiana nor Mississippi did average parish or county yields reach the amount required to cover total costs (see Table 6). In both states, average county (parish) yields well exceeded the levels needed to cover variable costs, but the majority of fixed costs were covered only by Mississippi producers. Based on five-year average yields, farmers need a market price of about $11 per hundredweight to cover average total costs. However, with government payments set at an average target price of $11.35 per hundredweight, most participating producers realized a profit from their rice enterprise.

Summary: Productivity Is Crucial

It seems clear that for most of the crops considered here, the average farmer's profits depend heavily on government programs, especially support payments that raise per-unit revenue to the target price level. In the absence of these payments, many farmers would apparently be unable to cover their fixed costs. Indeed, based on average market prices for the 1981-85 period, average producers in most regions could not cover all of their fixed costs. The exceptions were peanut producers in all regions, corn producers in the Northeast, and soybean producers in the Northern Plains.

Even so, in a number of regions average producers attaining normal yields were not far from break-even levels. For example, with a 10 percent reduction in costs and a 10 percent increase in prices, corn production would have been profitable in all areas except the Southeast, where low average yields prohibit competitiveness. With similar price-cost adjustments, soybean production would be profitable in all areas; wheat would be profitable in all but the high-cost southwestern and northeastern areas; and cotton production would break even or return a profit except in the Southwest, where average production costs are highest. Because of the relatively high support prices for peanuts, production is profitable throughout the growing regions without price or cost adjustments. However, were the support price to be removed, it is doubtful that any areas could cover current costs, if the price for peanuts marketed above quota is an indication of the free market price. Rice producers, too, are quite dependent on the government support program. Even with a 10 percent adjustment in price and costs, average producers in all areas would still lose money.

Prices of several farm commodities did increase in 1987 as government-subsidized export programs and the lower price of the dollar against foreign currencies improved exports. Although average market prices for most commodities remain below break-even levels in most producing regions, early 1988's soybean prices—near $6.00 per bushel—restore a profit potential for that crop in almost all production areas outside the Southeast. Despite recent price advances, typical producers of the other five crops analyzed here must still depend on government programs for profitability.

From a different perspective, many farmers with low yields are pulling productivity averages down and consequently are pushing average costs up. Average yields by counties in southeastern states indicate that, indeed, without substantially higher prices or productivity many crop farmers will have to either shift to different products in the future or go out of business.

Most southeastern states also have efficient areas of production that far surpass the state's average performance. These areas can show profits, even while others are failing. Georgia's top soybean-producing counties, for example,

obtained yields more than three times higher than the lowest counties and nearly double the state's average.

Productivity, then, is one way farmers can affect their financial well-being and cost per unit of output. Overall, increasing productivity may call for implementing new technology, improving management styles, changing crops, or even idling marginal farmland. Farmers with insurmountable debts, poor soil, or other problems that limit productivity will probably have to leave farming because only those with a workable combination of high yields, low per-unit costs, and low fixed financial commitments are likely to survive.

Table 1.
Corn Production: Costs, Prices, and Productivity by Region[1]

	U.S. Department of Agriculture Regions[2]						Sixth Federal Reserve District States						
	North-east	South-east	Lake States/ Cornbelt	Northern Plains	South-west	United States	Ala-bama	Flor-ida	Geor-gia	Loui-siana	Missis-sippi	Tennes-see	District
Costs Per Acre:[3]													
Variable ($)	128	135	128	125	173	129	135	135	135	135	135	135	135
Fixed ($)	126	108	159	163	174	154	108	108	108	108	108	108	108
Total ($)	254	243	287	288	347	283	243	243	243	243	243	243	243
Yield Per Acre (Bu):													
Average 1981-85	95	78	110	105	109	106	64	64	75	95	64	83	74
Average Costs Per Bu Based on 5-Year Average Yields:													
Variable ($)	1.35	1.73	1.16	1.19	1.59	1.22	2.11	2.11	1.80	1.42	2.11	1.63	1.80
Fixed ($)	1.33	1.38	1.45	1.55	1.60	1.45	1.69	1.69	1.44	1.14	1.69	1.30	1.44
Total ($)	2.67	3.11	2.61	2.74	3.18	2.67	3.80	3.80	3.24	2.56	3.80	2.93	3.24
Average Price Per Bu 1981-85 ($)	2.94	2.92	2.66	2.38	3.11	2.80	2.87	2.94	2.94	3.07	3.15	2.87	2.97
Target Price 1981-85 ($)	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80	2.80
Yield (Bu per acre) Required to Cover:													
Total Cost	86	83	108	121	112	101	85	83	83	79	77	85	82
Variable Cost	44	46	48	53	56	46	47	46	46	44	43	47	45
Area Harvested (000 acres):													
Average 1981-85	2,000	6,390	46,256	11,018	1,582	69,176	385	212	978	83	89	650	2,397

[1] *Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Northeast includes Pennsylvania and New York. Southeast includes Alabama, the Carolinas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Tennessee, and Virginia. Lake States/Cornbelt includes Iowa, Minnesota, Michigan, Illinois, Missouri, Indiana, Ohio, and Wisconsin. Northern Plains includes Nebraska, South Dakota, Kansas, and Colorado. Southwest includes Texas and California.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

Sources: Information on costs per acre supplied by the U.S. Department of Agriculture (USDA), National Economics Division, Economic Research Service, *Economic Indicators of the Farm Sector: Costs of Production 1985* (August 1986); information on yield per acre and area harvested provided by the USDA, Agricultural Statistics Board, National Agricultural Statistics Service, *Crop Production* (annual summaries for 1981-86); data for prices per unit and target/support prices from the USDA, Agricultural Statistics Board, National Agricultural Statistics Service, *Agricultural Prices: 1986 Summary* (June 1987) and *Agricultural Prices: 1986* (1986); state data supplied by various state agricultural statistics services; other information computed by the authors.

Table 2.
Soybean Production: Costs, Prices, and Productivity by Region[1]

	U.S. Department of Agriculture Regions[2]					Sixth Federal Reserve District States						
	Lake States/ Cornbelt	Southeast	Delta	Northern Plains	United States	Ala-bama	Flor-ida	Geor-gia	Loui-siana	Missis-sippi	Tennes-see	District
Costs Per Acre:[3]												
Variable ($)	54	74	61	44	58	74	74	74	61	61	74	68
Fixed ($)	146	81	84	110	124	81	81	81	84	84	81	82
Total ($)	200	155	145	154	182	155	155	155	145	145	155	150
Yield Per Acre (Bu):												
Average 1981-85	34	24	24	29	30	23	25	22	24	23	25	24
Average Costs Per Bu Based on 5-Year Average Yields:												
Variable ($)	1.59	3.08	2.54	1.52	1.93	3.21	2.96	3.36	2.54	2.65	2.96	2.83
Fixed ($)	4.29	3.38	3.50	3.79	4.13	3.52	3.24	3.68	3.50	3.65	3.24	3.42
Total ($)	5.88	6.46	6.04	5.31	6.07	6.74	6.20	7.05	6.04	6.30	6.20	6.25
Average Price Per Bu 1981-85 ($)	6.02	6.15	5.68	5.90	6.02	6.06	6.24	5.99	6.16	6.17	6.12	6.12
Support Price 1981-85 ($)	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02
Yield (Bu per acre) Required to Cover:												
Total Cost	33	25	26	26	30	26	25	26	24	24	25	25
Variable Cost	10	12	11	7	10	12	12	12	10	10	12	11
Area Harvested (000 acres):												
Average 1981-85	36,884	18,408	9,710	4,875	65,270	1,584	336	2,020	2,606	3,234	1,986	11,589

[1] *Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Lake States/Cornbelt includes Illinois, Minnesota, Michigan, Iowa, Missouri, Indiana, Ohio, and Wisconsin. Southeast includes Alabama, the Carolinas, Florida, Georgia, Kentucky, Tennessee, and Virginia. Delta includes Arkansas, Mississippi, and Louisiana. Northern Plains includes Nebraska, South Dakota, and Kansas.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

Sources: See Table 1.

Table 3.
Wheat Production: Costs, Prices, and Productivity by Region[1]

	U.S. Department of Agriculture Regions[2]								Sixth Federal Reserve District States						
	North-east	South-east	Lake States/ Cornbelt	Northern Plains	Central Plains	Southern Plains	South-west	United States	Ala-bama	Flor-ida	Geor-gia	Loui-siana	Missis-sippi	Tennes-see	District
Costs Per Acre:[3]															
Variable ($)	81	73	71	44	39	51	168	52	73	73	73	73	73	73	73
Fixed ($)	117	68	97	87	83	64	177	85	68	68	68	68	68	68	68
Total ($)	198	141	168	131	122	115	345	137	141	141	141	141	141	141	141
Yield Per Acre (Bu):															
Average 1981-85	43	36	46	42	35	31	77	38	36	33	35	37	36	37	36
Average Costs Per Bu Based on 5-Year Average Yields:															
Variable ($)	1.88	2.03	1.54	1.05	1.11	1.65	2.18	1.37	2.03	2.21	2.09	1.97	2.03	1.97	2.03
Fixed ($)	2.72	1.89	2.11	2.07	2.37	2.06	2.30	2.24	1.89	2.06	1.94	1.84	1.89	1.84	1.89
Total ($)	4.60	3.92	3.65	3.12	3.49	3.71	4.48	3.61	3.92	4.27	4.03	3.81	3.92	3.81	3.92
Average Price Per Bu 1981-85 ($)	3.30	3.24	3.23	3.44	3.41	3.50	3.90	3.43	3.17	3.00	3.11	3.45	3.31	3.22	3.21
Target Price 1981-85 ($)	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18	4.18
Yield (Bu per acre) Required to Cover:															
Total Cost	60	44	52	38	36	33	88	40	44	47	45	41	43	44	44
Variable Cost	25	23	22	13	11	15	43	15	23	24	23	21	22	23	23
Area Harvested (000 acres):															
Average 1981-85	378	6,409	7,256	3,813	18,758	11,786	1,007	70,609	506	79	1,013	311	622	613	3,065

[1] *Costs are based on winter wheat production in each region and all wheat in the United States. Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Northeast includes Pennsylvania and New York. Southeast includes Alabama, Arkansas, the Carolinas, Florida, Georgia, Kentucky, Louisiana, Mississippi, Tennessee, and Virginia. Lake States/Cornbelt includes Missouri, Illinois, Indiana, Ohio, and Michigan. Northern Plains includes Idaho, Montana, and Wyoming. Central Plains includes Kansas, South Dakota, Nebraska, and Colorado. Southern Plains includes Texas, New Mexico, and Oklahoma. Southwest includes California and Arizona.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

Sources: See Table 1.

Table 4.
Cotton Production: Costs, Prices, and Productivity by Region[1]

	U.S. Department of Agriculture Regions[2]					Sixth Federal Reserve District States						
	South-east	Delta	Southern Plains	South-west	United States	Ala-bama	Flor-ida	Geor-gia	Loui-siana	Missis-sippi	Tennes-see	District
Costs Per Acre:[3]												
Variable ($)	265	231	131	435	212	265	265	265	231	231	231	238
Fixed ($)	172	187	117	385	180	172	172	172	187	187	187	183
Total ($)	436	418	248	820	392	436	436	436	418	418	418	421
Yield Per Acre (Lbs):												
Average 1981-85	660	651	358	1,095	605	640	677	619	639	730	508	660
Average Costs Per Lb Based on 5-Year Average Yields:												
Variable ($)	0.40	0.35	0.37	0.40	0.35	0.41	0.39	0.43	0.36	0.32	0.45	0.36
Fixed ($)	0.26	0.29	0.33	0.35	0.30	0.27	0.25	0.28	0.29	0.26	0.37	0.28
Total ($)	0.66	0.64	0.69	0.75	0.65	0.68	0.64	0.71	0.65	0.57	0.82	0.64
Average Price Per Lb												
1981-85 ($)	0.59	0.59	0.56	0.63	0.58	0.58	0.58	0.58	0.57	0.58	0.58	0.58
Target Price 1981-85 ($)	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Yield (Lbs per acre) Required to Cover:												
Total Cost	814	708	443	1,302	676	752	752	752	733	721	721	726
Variable Cost	449	392	234	690	366	457	457	457	405	398	398	410
Area Harvested (000 acres):												
Average 1981-85	677	2,458	5,407	1,781	10,317	301	17	175	595	999	287	2,377

[1] *Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Southeast includes Alabama, the Carolinas, Florida, and Georgia. Delta includes Mississippi, Missouri, Arkansas, Louisiana, and Tennessee. Southern Plains includes Texas, New Mexico, and Oklahoma. Southwest includes California and Arizona.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

Sources: See Table 1.

Table 5.
Peanut Production: Costs, Prices, and Productivity by Region [1]

	U.S. Department of Agriculture Regions[2]				Sixth Federal Reserve District States						
	North Carolina/ Virginia	South-east	Southern Plains	United States	Ala-bama	Flor-ida	Geor-gia	Loui-siana	Missis-sippi	Tennes-see	District
Costs Per Acre:[3]											
Variable ($)	319	307	204	285	307	307	307	—	—	—	307
Fixed ($)	285	227	215	234	227	227	227	—	—	—	227
Total ($)	603	534	420	519	534	534	534	—	—	—	534
Yield Per Acre (Lbs):											
Average 1981-85	2,776	3,033	1,747	2,691	2,830	2,990	3,110	—	—	—	3,033
Average Costs Per Lb Based on 5-Year Average Yields:											
Variable ($)	0.11	0.11	0.12	0.10	0.11	0.10	0.10	—	—	—	0.10
Fixed ($)	0.10	0.07	0.12	0.09	0.08	0.08	0.07	—	—	—	0.07
Total ($)	0.22	0.18	0.24	0.19	0.19	0.18	0.17	—	—	—	0.18
Average Price Per Lb:											
1981-85 ($)	0.26	0.25	0.26	0.25	0.25	0.25	0.24	—	—	—	0.25
Support Price 1981-85 ($)[4]											
Quota	0.27	0.27	0.27	0.27	0.27	0.27	0.27	—	—	—	0.27
Additional	0.10	0.10	0.10	0.10	0.10	0.10	0.10	—	—	—	0.10
Yield (Lbs per acre) Required to Cover:											
Total Cost	2,319	2,136	1,615	2,076	2,136	2,136	2,225	—	—	—	2,136
Variable Cost	1,226	1,228	784	1,140	1,228	1,228	1,279	—	—	—	1,228
Area Harvested (000 acres):											
Average 1981-85	254	830	320	1,426	200	64	567	—	—	—	830

[1] *Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Southeast includes Alabama, Florida, and Georgia. Southern Plains includes Texas and Oklahoma.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

[4] *Farmers received the quota support price for peanuts produced within the marketing quota. Peanuts marketed in addition to the quota qualified for the lower support price.*

Sources: See Table 1.

Table 6.
Rice Production: Costs, Prices, and Productivity by Region[1]

	U.S. Department of Agriculture Regions[2]				Sixth Federal Reserve District States						
	Delta	Gulf	California	United States	Alabama	Florida	Georgia	Louisiana	Mississippi	Tennessee	District
Costs Per Acre:[3]											
Variable ($)	224	265	284	247	—	—	—	265	224	—	253
Fixed ($)	169	193	284	203	—	—	—	193	167	—	185
Total ($)	393	457	568	450	—	—	—	457	393	—	438
Yield Per Acre (Lbs):											
Average 1981-85	4,552	4,692	7,076	4,914	—	—	—	4,110	4,442	—	4,209
Average Costs Per Cwt Based on 5-Year Average Yields:											
Variable ($)	4.92	5.65	4.01	5.03	—	—	—	6.45	5.04	—	6.01
Fixed ($)	3.71	4.11	4.01	4.13	—	—	—	4.70	3.76	—	4.40
Total ($)	8.63	9.74	8.03	9.16	—	—	—	11.12	8.85	—	10.41
Average Price Per Cwt 1981-85 ($)	8.61	8.35	6.54	8.02	—	—	—	8.35	8.66	—	8.51
Target Price 1981-85 ($)	11.35	11.35	11.35	11.35	—	—	—	11.35	11.35	—	11.35
Yield (Cwt per acre) Required to Cover:											
Total Cost	46	55	83	56	—	—	—	55	48	—	51
Variable Cost	26	33	44	31	—	—	—	32	27	—	30
Area Harvested (000 acres):											
Average 1981-85	1,494	950	464	2,908	—	—	—	528	224	—	752

[1] *Components have been rounded and therefore may not add to totals, which are based on actual figures.*

[2] *Delta includes Arkansas, Mississippi, and Missouri. Gulf includes Louisiana and Texas.*

[3] *The U.S. Department of Agriculture (USDA) does not provide average costs per acre for individual states. Cost estimates for states in the Sixth Federal Reserve District are costs for the USDA region that includes the state.*

Sources: See Table 1.

Notes

[1]Just how vulnerable have farmers been to failure? A U.S. Department of Agriculture (USDA) study completed in 1985 classified farmers by various measures of financial condition, resulting in four groupings—good, fair, stressed, and vulnerable. Farmers in good financial condition had a favorable combination of returns and equity so that they were under no stress to meet current expenses and make debt payments. Generally, as debt-equity ratios rose and returns deteriorated, farms dropped into lower classifications.

Overall, 70 percent of commercial farm operators were classified in good financial position, while 10 percent were classified as vulnerable, meaning that a highly adverse combination of returns and equity cushion threatened their survival. The vulnerable group held 10 percent of the operator-owned assets of commercial farmers and owed 23 percent of their total debt. These are the operators most likely to be found in the group that either exited from agriculture during the 1985-86 period or are still highly vulnerable to failure.

[2]U.S. Department of Agriculture (August 1986). Data on yields per acre are provided by state and national agricultural statistics services.

[3]The government has attempted to assist crop farmers through the provision of various forms of subsidies and price support mechanisms. When subsidies are tied to the number of units produced, as has most often been the case, the larger, more efficient producers tend to gain the greatest benefits, with the result that assistance programs can increase rather than reduce the disparity between high- and low-cost producers. For example, the most popular technique for providing governmental assistance to individual farmers has been the use of the target price system.

A price per unit determined to be sufficient to cover the costs of producing a commodity is referred to as a *target price*. When the return from the sale of the commodity in the open market falls below the target price, the government issues payments to program participants to bring the effective per-unit return up to the target price level. To participate in a program, a producer is required to have a historical base acreage or a substantiated record of having grown the relevant crop for a specified period. When acreage reduction provisions are in effect, the producer must also cut his acreage by specified amounts to qualify for program benefits.

If, for example, the target price for corn is set at $3.03 per bushel and the season average market price is $2.23 per bushel, a payment of $0.80 per bushel is made to bring the producer's return up to the target price level. An individual with 10,000 bushels of corn would receive a payment of $8,000. Payments grow larger with increasing output until a payment limitation level for individual producers is reached. Some argue that fragmentation of large farming operations among separate family members can effectively circumvent such limitations on payments. Payments reached a total of $7.7 billion in 1985. The majority went to the grain-producing states in the Midwest and the Plains.

[4]Although data are available for the 1986 crop year, portions of the country, particularly the Southeast, were stricken with severe drought that seriously distorted 1986 production levels and costs per unit. Using data from 1986 would therefore result in atypical comparisons between crops and regions.

[5]In the analysis of District states' performance, figures encompass the entire area of all states even though portions of three states lie outside official administrative boundaries.

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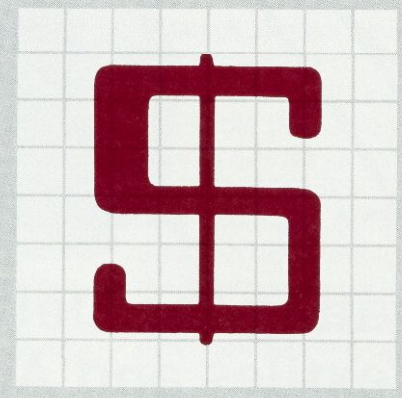

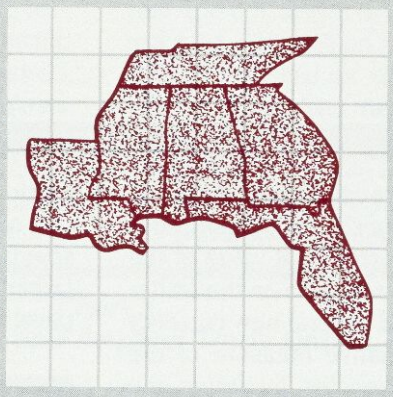

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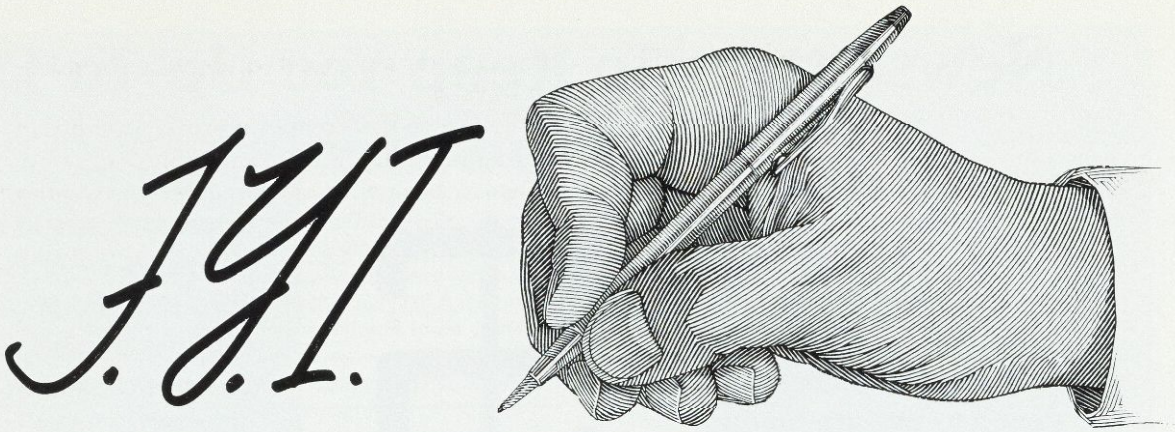


Disaggregating the Dollar Index: Trade in Textiles and Apparel

Shannon B. Mudd

Massive U.S. trade deficits have fostered much recent discussion of the relationship between trade and the international value of the dollar. From the spate of research on the trade-dollar link have emerged several new currency indexes, each an informative measure of the dollar vis-a-vis other currencies, including one developed by the Federal Reserve Bank of Atlanta.[1]

However, all of these indexes are constructed with weights based on aggregate trade flows. The trade pattern of a particular industry may differ substantially from that of total U.S. trade flows since different countries predominate in international trade patterns of particular industries. Hence, an index weighted according to an industry's trade patterns may behave in a different manner from existing indexes based on aggregate trade flows. As suggested by Jeffrey Rosensweig (1986) as well as Jack L. Hervey and William A. Strauss (1987), this note examines an index constructed on the trade pattern of one particular industry and compares its behavior to that of the traditional indexes. Owing both to its special significance for the Southeast and to its larger role in world trade, the textile and apparel industry is the focus of discussion.

The author is an economic analyst in the macropolicy section of the Atlanta Fed's Research Department. He would like to thank George Wino, chief economist at the American Textile Manufacturers Institute, Inc., for suggesting this project initially and for subsequent assistance in obtaining data; Jeffrey Rosensweig for helpful comments and guidance throughout the article's development; and Tien Nguyen for her diligent and creative research assistance.

Selecting an Index

A currency index attempts to summarize the international value of a particular currency. Since 1973, when the Bretton Woods system of pegged, or officially administered, exchange rates ended, currencies of the major industrialized nations have been allowed to fluctuate against each other in the foreign exchange markets. Although governments continue to influence the levels of their own currencies, free swings in the relative values of currencies have been significant—sometimes impressive. Because the dollar trades simultaneously against a multitude of currencies, appreciating against one while depreciating relative to others, there are various ways to summarize its value. These may sometimes generate conflicting information. As pointed out by Rosensweig (1987) and Gerald H. Anderson, Nicholas V. Karamouzis, and Peter D. Skaperdas (1987), appropriate selection of a dollar index is evaluated by the purpose to be served. In the case of industry-

specific trade analysis, the criterion should be how well the index reflects a given industry's pattern of international trade.

Selecting an Industry

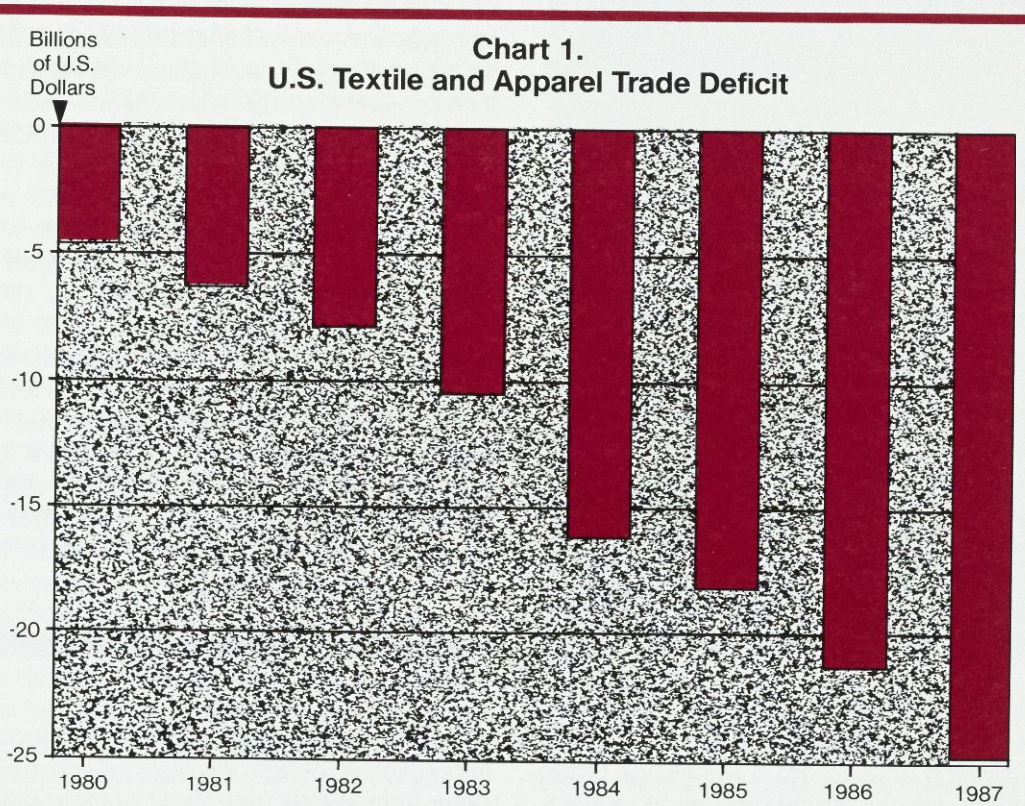
The choice of an industry grouping for the focus of study is equally important. The textile and apparel industry presents an interesting case due to its local and global significance. In the Southeast, textile and apparel employment commands nearly 19 percent of total manufacturing jobs.[2] In addition, the region is home to 24 percent of the nation's textile and apparel employment.

Considered in a worldwide context, the textile and apparel industry is likewise a fitting selection for a dollar index. An established domestic sector manufactures the industry's products, which are widely traded and subject to strong foreign competition in markets both here and abroad. In fact, roughly 35 percent of all textile and apparel products consumed in the United States are imported, according to industry sources.

The reason that competition is so vigorous in this industry lies in its means of production. Although apparel production is relatively more labor-intensive than textile production, to a large extent both employ standardized, easily accessible production technology. Thus, countries as diverse as Italy and Pakistan export to the United States from mature domestic industries. While such competition does not in itself establish the relevance of the dollar's value to the determination of trade flows, a recent study demonstrated that our currency's value is a significant determinant of the level of textile and apparel imports into this country.[3] Last year, the U.S. deficit in textile and apparel trade reached $25 billion, meaning that industry alone accounted for 16 percent of the nation's 1987 merchandise trade deficit (see Chart 1). This sizable share further supports the appropriateness of a textile and apparel dollar index.

Like the Atlanta Fed dollar index, the new textile and apparel index is geometrically trade-

Chart 1.
U.S. Textile and Apparel Trade Deficit



Source: U.S. Department of Commerce, FT-135, FT-140, SITC groups 65 and 84.

Table 1.
Real Textile and Apparel Dollar Index
Country Weights

Country	Totals (Three-Year Average)
Hong Kong and Macao	0.16229
Taiwan	0.14954
South Korea	0.11547
Mainland China	0.08491
Japan	0.06660
Italy	0.05375
Canada	0.03662
Mexico	0.03162
Philippines	0.02549
United Kingdom	0.02524
India	0.02495
Singapore	0.02014
Dominican Republic	0.01958
France	0.01940
West Germany	0.01681
Thailand	0.01624
Indonesia	0.01500
Belgium and Luxembourg	0.01309
Sri Lanka	0.01291
Malaysia	0.01232
Brazil	0.01161
Pakistan	0.01114
Haiti	0.00990
Costa Rica	0.00967
Turkey	0.00861
Portugal	0.00643
Bangladesh	0.00580
Saudi Arabia	0.00531
Jamaica	0.00517
Australia	0.00438
	1.00000

Source: Computed by the Federal Reserve Bank of Atlanta from data supplied by the American Textile Manufacturers Institute, Inc., Washington, D.C.

weighted based on bilateral textile and apparel trade flows with the United States.[4] A country was included in the index if it met one of two conditions over the period 1984-86: its total U.S. trade (exports plus imports) in textiles and apparel was at least 0.5 percent of all textile and apparel trade with the United States, or its imports from the United States in this industry composed at least 2 percent of total U.S. exports of textiles and apparel. Although selection of a single time period is somewhat arbitrary, these three years frame a meaningful interval that encompasses periods of both dollar appreciation and depreciation. This method of index construction yielded a sample of 32 countries, a diverse group including industrial nations, developing Latin American nations, and, of course, Asia's important newly industrializing countries (see Table 1). Together, the sample countries accounted for more than 80 percent of the total U.S. textile and apparel trade from 1984 to 1986.

Many of the nations embraced by the sample have undergone notably different experiences with inflation in recent years. For example, Brazil's consumer prices rose over 75 percent from the fourth quarter of 1985 through the fourth quarter of 1986, whereas the comparable figure for Japan fell 0.2 percent. In order to correct for distortions that variant inflation rates can introduce when a currency is evaluated, the sample countries' exchange rates were deflated by using the values of the consumer price indexes of the individual countries relative to the U.S. consumer price index.[5] This procedure differentiates the textile and apparel index from the Atlanta Fed dollar index, which is not adjusted for inflation. In other words, the textile and apparel index is a "real" index, while the Atlanta Fed dollar index is "nominal." Unfortunately, consumer price information is not always available in a timely manner, especially for some of the developing countries included in the index. Given this problem, to lay the basis for an ongoing, up-to-date index, a separate, unadjusted, or "nominal," textile and apparel index was constructed covering only the 21 countries with inflation experiences comparable to this country's.

Results

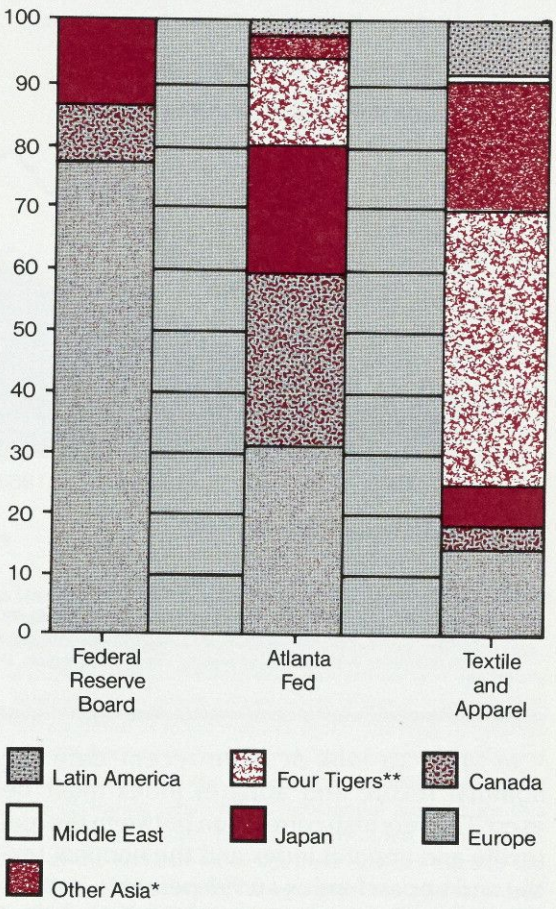
The approach outlined above produces an index whose geographic subdivision weights differ dramatically from those of other indexes (see Chart 2). These variations underline how the trade pattern in textiles and apparel di-

verges markedly from the aggregate U.S. trade flows, particularly owing to the importance of Asian trade. In the Federal Reserve Board's index, the most commonly used series, Asia's total weight is 13.6 percent, partly because Japan is the only Asian country in that index.[6] The Atlanta Fed dollar index adds China and Asia's "Four Tigers"—the newly industrializing countries of Taiwan, South Korea, Singapore, and Hong Kong—for a total Asian currency weight of 38.9 percent. Of course, Asian countries are key in U.S. trade in textiles and apparel, and so it is not surprising that their total weight in the real textile and apparel index is 72.7 percent. The Four Tigers by themselves compose 43.6 percent of the index.

The weighting scheme of an index wields a pronounced influence on its behavior (see Chart 3). From 1980 to early 1985, the Federal Reserve Board index, the Atlanta Fed index, and both the nominal and real versions of the textile and apparel index rose fairly consistently, indicating that dollar appreciation was a general phenomenon. However, after the dollar's peak in early 1985, the various indexes diverged. Neither the Atlanta Fed's real textile and apparel index nor its nominal index exhibited as much dollar depreciation as did the Atlanta Fed or the Board overall indexes. In contrast to the earlier trend of universal appreciation, the dollar's more recent depreciation clearly has not fully extended to this country's main textile and apparel trading partners.

This inconsistency in movements of the dollar can be illuminated by the construction of replacement ratios—that is, indicators of the extent to which an index retraces its earlier course.[7] As used here, the replacement ratio simply shows the ratio of the logarithmic change from a trough to a peak to the logarithmic change from the peak to the latest date. (Using logarithms avoids the problem of asymmetry that attends use of simple percentage changes, whereby a rise from 100 to 150 is a 50 percent increase, yet a fall from 150 to 100 marks only a 33 percent decline.) From February 1980 to March 1985, the peak month on all four indexes, the Atlanta Fed dollar index advanced 35 percent while the Atlanta Fed textile and apparel index moved ahead 34 percent. From March 1985 to February 1987, however, the Atlanta Fed dollar index dropped 27 percent while the real textile and apparel index fell only 9 percent. These movements yield replacement ratios of just 9/34 for the textile and apparel index versus 27/34 for the Atlanta Fed dollar index. In other words, over these years the Atlanta Fed dollar index retraced more than 75 percent of its earlier increases, while its textile and apparel index recaptured less than 25 percent of its previous gains.

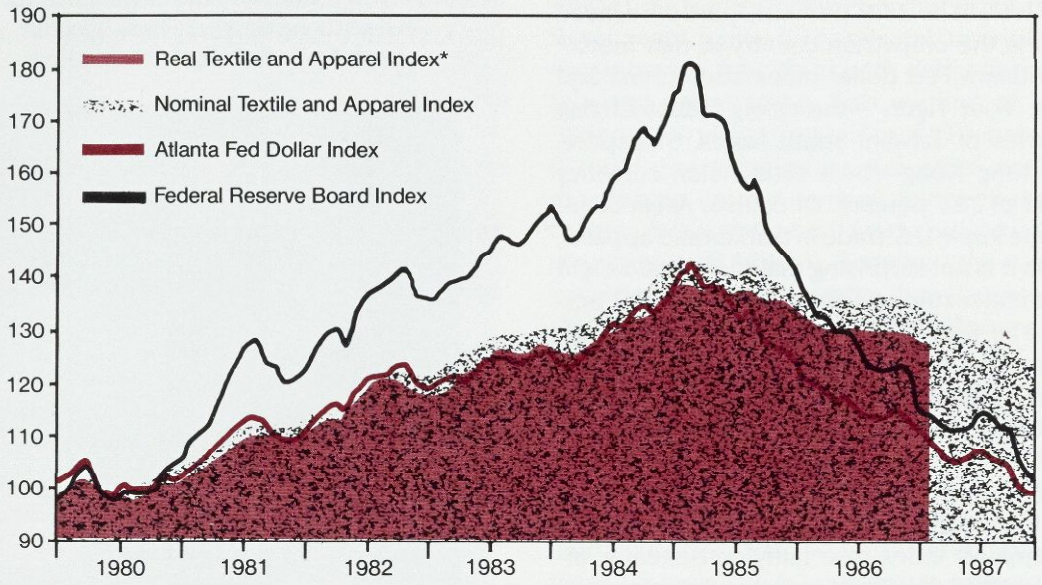
Chart 2.
Distribution of Weights in the Federal Reserve Board, Atlanta Fed, and Real Textile and Apparel Dollar Indexes



* Includes Australia.
** Hong Kong, Singapore, South Korea, and Taiwan.

Source: Federal Reserve Bank of Atlanta and Board of Governors of the Federal Reserve System; the real textile and apparel dollar index was computed by the Federal Reserve Bank of Atlanta from trade weights supplied by the American Textile Manufacturers Institute, Inc., Washington, D.C.

Chart 3.
Comparative Behavior of Four Dollar Indexes, 1980-87
(1980=100)



* Data available through February 1987.

Source: Federal Reserve Bank of Atlanta and Board of Governors of the Federal Reserve System; the real and nominal textile and apparel dollar indexes were computed by the Federal Reserve Bank of Atlanta from trade weights supplied by the American Textile Manufacturers Institute, Inc., Washington, D.C., and from consumer price information and foreign exchange rates found in *International Financial Statistics,* International Monetary Fund, Washington, D.C.

In order to look at more recent data the nominal textile and apparel index must be used. The very high correlation between the real textile and apparel index and the nominal textile and apparel index—0.998 percent—implies that the nominal index should provide a good proxy for movements in the real index.[8] Extending the time frame from January 1980 to December 1987, the replacement ratio for the Atlanta Fed dollar index is 37/35. The index has completely reversed the appreciation from 1980 to 1985 and is now actually lower than in January 1980. Although the nominal textile and apparel index also fell further in 1987, its replacement ratio is 18/36. It has recovered only 50 percent of the rise from 1980 to 1985.

Low replacement ratios for the textile and apparel indexes reflect the behavior of the exchange rates of Asia's newly industrializing countries. These important textile and apparel producers weigh more heavily in these industry-specific indexes than they do in the general Atlanta Fed dollar index. Their currencies behaved like most others as the dollar rose from 1980 to 1985, but they have appreciated at a much slower rate as the dollar has fallen.

Conclusions

The exercise of constructing a textile and apparel dollar index reveals that the traditional dollar indexes, which are based on aggregate trade flows, are not always the most useful indicators of currency values that are relevant to a particular industry. By using the present data series and similar series based on trade flows in other industries, economists may focus their research on a more disaggregated level, and thus achieve a clearer understanding of the impact of currency movements on trade.

This study also has implications for the textile and apparel industry. The benefits of the real dollar depreciation since March 1985 have not

been shared by all industries. In particular, the textile and apparel industry's trade pattern differs to such an extent from the aggregate U.S. trade pattern that it has only experienced half of the depreciation of an industry whose trade pattern more closely parallels total U.S. trade flows. The current vigor in the textile and apparel industry must be attributed to other factors, such as productivity enhancements. However, the more recent trend of dollar depreciation evinced in the textile and apparel dollar index may further improve the competitive position of the domestic textile and apparel industry in the near future.

Notes

[1]See Rosensweig (1986).

[2]In this article, the Southeast is defined as the area encompassed in the Sixth Federal Reserve District, namely Alabama, Florida, Georgia, and parts of Louisiana, Mississippi, and Tennessee.

[3]See Chmura (1987).

[4]Key considerations for construction of a currency index are well documented in Rosensweig (1987).

[5]See Ott (1987) for a description of this methodology.

[6]The Federal Reserve Board's dollar index appears monthly in the *Federal Reserve Bulletin*. The Morgan Guaranty Trust's dollar index, another popular index which gives little weight to less developed countries, is published in *World Financial Markets*.

[7]This method was employed in Hervey and Strauss (1987).

[8]Two possible explanations exist for this strong correlation. First, movements in the currencies of the major Asian countries, which are common to both indexes, almost completely dominate the currency movements of those countries that are excluded from the nominal index. The high correlation of 0.971 percent between the Atlanta Fed real textile and apparel index and the Atlanta Fed regional subindex for Asia excluding Japan offers substantial support for this explanation. Second, because many of the countries left out of the nominal index set their currency rates to the dollar in order to maintain a constant real exchange rate with the United States, their currency movements do not affect the levels of the real index anyway.

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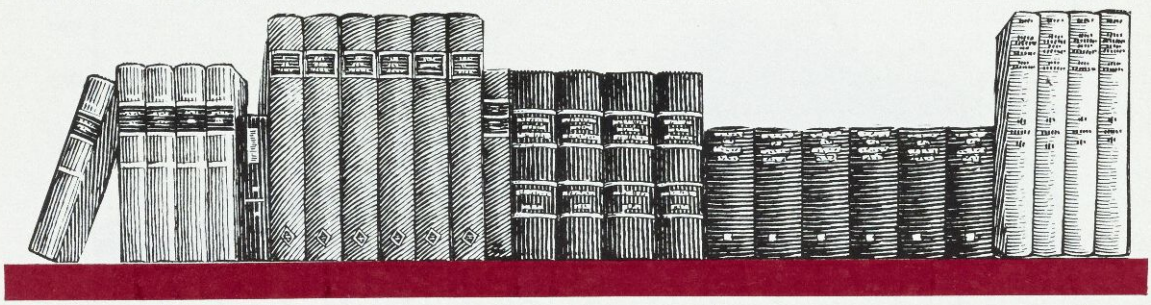
463 pages. $18.95.



Recent events in Central and South America are directing ever more attention to the large amount of underground economic activity occurring in "problem" debtor nations. Such countries must devote a sizable portion—perhaps all—of their foreign exchange earnings to debt service. They also need to purchase foreign capital goods to further their development process. Yet they simply do not have a sufficient legitimate trade surplus to meet both needs. Exacerbating the problem may be capital flight, as domestic residents seek to invest abroad in search of a higher or safer rate of return.

At the same time, however, some of these countries are the source of billions of dollars worth of illegal drugs exported to the United States. Obviously, if their drug-generated foreign exchange earnings, combined with fleeing domestic capital, could help ease the external debt burden of these nations, their debt problem would be substantially reduced.

R.T. Naylor's *Hot Money and the Politics of Debt* purports to explore the link between illegally acquired or laundered money and the debt crisis in many developing countries. *Hot Money* consists of seven parts with a total of twenty-two chapters, each ingeniously titled. (Chapter one, for example, is headed "Capital Flight in the Jet Age.") The first six parts treat various events revolving around the "hot money" theme, while the final part focuses on problem debtor countries. The text is written in a breezy style; a wealth of thoroughly indexed facts and sequences of events is set forth in considerable detail. Unfortunately, there is little by way of analysis.

The notion of drug exports paying off loans to industrialized economies holds a certain titillation; conceptually, it accommodates all sorts of legally and morally reprehensible goings-on. Unquestionably, the book's title is meant as a teaser of just such ideas. Imagine an unveiling of how money-center banks profit from illicit activities, perhaps even applying political pressure to see that these efforts continue unfettered. Indeed, the book might be the sort of exposé that results in fundamental reforms or felling of the high and mighty and unprincipled.

Unfortunately, *Hot Money* fails to deliver on any such promise. The prose embodies far too little substantive analysis and far too much anecdote and innuendo to convey a real understanding of the problems of hot money or debt, much less of their potential interrelation.

Much to the detriment of his work, Naylor gives the reader scant framework for com-

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This book review is based on the reviewer's earlier comments in The Bankers Magazine *(January/February 1988).*

prehending the world of nefarious international transactions. Thus, before considering the substance of his enticingly titled book, it is useful to devise a taxonomy for "hot money." Generally, three rather different types of hot money, distinguished by their motivation, suggest themselves.

The first type of hot money is simple capital flight. For whatever reason, wealthy individuals might no longer wish to hold their wealth in a particular country, and so they move it elsewhere. Because local authorities usually try to erect legal barriers to capital flight, such a transfer may violate some exchange control laws. Otherwise, however, the capital originates legally, and it leaves the country essentially owing to economic considerations. In principle, this hot money movement does not differ from any other international capital flow, except that once beyond the exchange controls the capital, or its return, is unlikely ever to be repatriated.

Seemingly, the problem of capital flight is most acute in precisely those economies where it creates the greatest turmoil. Heavily indebted Third World countries need whatever domestic capital and hard currency they can secure. Of course, capital flight deprives them of both.

The second type of hot money is currency that requires laundering. When the operators of an illegal enterprise want to spend their profits domestically, they need to remove the taint of crime so that these ill-gotten gains look legitimate. A simple example of laundered funds which begins *Hot Money* is that of the unlawful profits sent abroad by Meyer Lansky to a bank that lent these same funds back to him. Not only could Lansky then use this laundered money as he would the proceeds of a legitimate loan, but he also could deduct from his taxes whatever interest he paid to himself through the foreign bank.

Despite its illegality, money laundering results in a net benefit to the originating nation. While the ruse usually entails some foreign financial agent, whatever money is laundered ultimately stays in its home country, where it moves aboveground into the legitimate, and taxed, portion of the economy.

The final type of hot money comes from purely underground capital movements. Since these illegally generated funds never surface in the domestic economy, they cannot really "flee," though their movements may otherwise closely resemble capital flight. Examples abound in part three of *Hot Money*, "High Finance in Cocaine Country," which focuses on the pelf cocaine barons channel into investments outside the Andean countries. As is often the case when countries suffer from aboveground capital flight, these nations could use some of this hard currency to service their external debt. The problem is that once the authorities find the money's source, which is illegal domestic activity, they have some obligation to "kill the goose that lays the golden egg." The alternative of legalizing the drug production industry to get to its cash is something the United States has strongly discouraged.

To sum: in the eyes of the receiving country capital flight and underground capital movements may appear very similar—with the exception of the account holder's moral character. Both types of hot money wield much the same effect on the economy of the originating nation, but only in the standard capital flight case does the government ever have any access to or firm knowledge of the capital. Finally, money laundering just moves capital up from the subterranean to the aboveground portion of one country's economy. In so doing, however, it may be forced to employ the international facilities used by other forms of hot money.

Naylor's book offers no intellectual grounding like this typology, either for its discussion of hot money or of the politics of international debt. Instead, the reader is left with a bare, though sometimes amusing, set of anecdotes. The text relates the course of events rather well, yet it is bereft of any explanation that would promote understanding of why things happened as they did. How is income systematically laundered? (The foreign-loan scheme certainly would draw suspicion if it were an on-going affair.) How are large amounts of wealth moved out of a country with tight exchange controls in amounts so large as to render over- and under-invoicing ploys too awkward? Is it possible to bring extensive underground capital movements to the surface without the complicity of a government? Without some theory, questions cannot really be addressed, even though they purport to be the book's central themes.

One could conceivably write a similar book by searching a news data base for any story that

bore on shady international capital movements or international debt and then organizing the output on a geographic basis. The result of this process, like Naylor's text, could be densely footnoted and not too easily read. While it would heavily emphasize people and organizations and how they tend to be continuously entwined, the effort would fail, as does this book, to supply a fundamental understanding of why this facet of the world works the way it does.

Aside from these shortcomings vis-a-vis its basic purpose, *Hot Money* contains a disturbing amount of innuendo, and the author plays fast and loose with the abundance of facts, though not to any apparent end. For example, immediately following a paragraph discussing Cuba, Nicaragua, Robert Vesco, and a scheme to export Colombian cocaine to the United States comes the sentence: "Whether the major traffickers also planned, during their alleged meetings at the Vitoshi Hotel in Sofia, to finish the job Ali Agca left uncompleted has not yet been revealed." The rest of the paragraph discusses Nicaragua in the context of sending cocaine to the United States. Are cocaine traffickers intending to kill the Pope? The only reason to believe so seems to be their meeting in Bulgaria, which must be the source of the author's non sequitur. This is innuendo on a grand scale indeed.

Accounts of events surrounding high-stakes illegal and semi-legal transactions sprawl over the book's first 300 pages. Most of this sort of anecdotal material, taken in small and discrete doses, can be quite fascinating. The book suffers, however, from shoddy editing, in that the anecdotes tend to run into one another as each chapter progresses. Rather than developing points, by the end of most chapters paragraphs merely add bits to the stories. When all the facts are relayed, the chapters, like the paragraphs, abruptly come to a halt.

The same names recur throughout the book, a fact which should thrill some grand conspiracy fans. In this instance, though, the author is careful not to imply too much. It seems more likely that these people appear repeatedly because the text tends to focus on underground-capital movements, a relatively small component of total international capital transactions. Obviously, acting as an investment banker for a cocaine dealer entails immense risks that comparatively few international financial organizations are willing to shoulder. Thus, the bankers for the Latin American cocaine traffickers come from the same pool as those for the Pacific Basin heroin agents. It is no surprise that these people are all somehow affiliated with each other.

By the same token, one is not astonished that every major financial institution eventually is portrayed as being somehow involved with hot money. The whole point of both money laundering and underground capital movements is to take ill-gotten gains and put them to *legitimate* use. If U.S. Treasury securities are an attractive investment, then we should *expect* that erstwhile dirty, but untraceable, money will ultimately end up financing this country's deficit, along with other capital from around the world. To say that the Treasury or Citibank or General Motors benefits indirectly from hot money tells the readers nothing more than the fact that the laundering process was successful.

While the major banks show up frequently in Naylor's work as putative beneficiaries of the various forms of dirty money, they are portrayed even more negatively in the closing discussion of less developed countries' (LDC) debt. Again, the writing in this section is disjointed and anecdotal, jumping about both chronologically and geographically. Once more, the author provides disappointingly little explanation of the true state of affairs.

Overall, *Hot Money and the Politics of Debt* is quite disappointing. Because the author never establishes any intellectual foundation for analysis, he simply flits from anecdote to anecdote, factoid to factoid, in a manner that is immediately amusing but ultimately unsatisfying. The book is best suited for students writing papers on corrupt capital who do not want to find and read the original newspaper articles. Readers who wish to learn something about debt and about the manner in which the seamy side of international capital markets affects LDCs will have to look elsewhere.

Thomas J. Cunningham

The reviewer, a specialist in macroeconomics and monetary theory, is an economist in the Atlanta Fed's Research Department.

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EMPLOYMENT

	JAN. 1988	DEC. 1987	JAN. 1987	ANN. % CHG		JAN. 1988	DEC. 1987	JAN. 1987	ANN. % CHG
UNITED STATES									
Civilian Labor Force - thous.	119,742	120,206	117,703	+ 2	Nonfarm Employment - thous.	102,348	104,373	99,511	+ 3
Total Employed - thous.	112,139	113,679	109,084	+ 3	Manufacturing	19,251	19,388	18,803	+ 2
Total Unemployed - thous.	7603	6526	8620	-12	Construction	4,044	5,044	4,620	-12
					Trade	24,195	24,964	23,510	+ 3
Unemployment Rate - % SA	5.8	5.8	6.7		Government	17,238	17,538	16,927	+ 2
					Services	24.228	24,514	23,268	+ 4
Mfg. Avg. Wkly. Hours	41.0	41.8	40.8	+ 0	Fin., Ins. & Real Est.	6,623	6,654	6,422	+ 3
Mfg. Avg. Wkly. Earn. - $	413	421	401	+ 3	Trans., Com. & Pub. Util.	5,426	5,510	5,245	+ 3
SOUTHEAST									
Civilian Labor Force - thous.	16,265	16,412	15,928	+ 2	Nonfarm Employment - thous.	13,673	13,819	13,156	+ 4
Total Employed - thous.	15,153	15,402	14,685	+ 3	Manufacturing	2,379	2,393	2,307	+ 3
Total Unemployed - thous.	1,162	1,096	1,249	- 7	Construction	765	794	748	+ 2
					Trade	3,122	3,495	3,288	- 5
Unemployment Rate - % SA	6.7	6.2	7.0		Government	2,389	2,405	2,328	+ 3
					Services	3,051	3,051	2,874	+ 6
Mfg. Avg. Wkly. Hours	41.4	42.2	41.1	0	Fin., Ins. & Real Est.	816	819	784	+ 4
Mfg. Avg. Wkly. Earn. - $	374	374	360	+ 3	Trans., Com. & Pub. Util.	756	764	729	+ 4
ALABAMA									
Civilian Labor Force - thous.	1,874	1,904	1,866	+ 0	Nonfarm Employment - thous.	1,505	1,528	1,465	+ 3
Total Employed - thous.	1,725	1,769	1,691	+ 2	Manufacturing	371	373	355	+ 4
Total Unemployed - thous.	135	134	175	-22	Construction	71	74	70	+ 1
					Trade	334	345	322	+ 4
Unemployment Rate - % SA	7.2	6.8	9.4		Government	302	302	299	+ 1
					Services	276	279	263	+ 5
Mfg. Avg. Wkly. Hours	41.4	41.7	41.4	0	Fin., Ins. & Real Est.	69	70	70	- 1
Mfg. Avg. Wkly. Earn. - $	372	372	362	+ 3	Trans., Com. & Pub. Util.	72	72	71	+ 1
FLORIDA									
Civilian Labor Force - thous.	5,917	5,998	5,666	+ 4	Nonfarm Employment - thous.	5,023	5,037	4,728	+ 3
Total Employed - thous.	5,622	5,70,	5,338	+ 5	Manufacturing	543	541	522	+ 4
Total Unemployed - thous.	250	297	327	-22	Construction	347	349	331	+ 5
					Trade	1,371	1,390	1,286	+ 7
Unemployment Rate - % SA	4.9	5.2	5.8		Government	764	770	727	+ 1
					Services	1,360	1,348	1,255	+ 5
Mfg. Avg. Wkly. Hours	41.0	42.0	41.0	0	Fin., Ins. & Real Est.	367	367	349	- 1
Mfg. Avg. Wkly. Earn. - $	339	348	334	+ 1	Trans., Com. & Pub. Util.	259	263	249	+ 4
GEORGIA									
Civilian Labor Force - thous.	3,026	3,069	2,994	+ 1	Nonfarm Employment - thous.	2,765	2,808	2,696	+ 3
Total Employed - thous.	2,883	2,922	2,813	+ 2	Manufacturing	569	577	559	+ 2
Total Unemployed - thous.	193	147	181	+ 7	Construction	141	155	145	- 3
					Trade	689	707	679	+ 2
Unemployment Rate - % SA	6.2	4.9	5.6		Government	483	484	476	+ 3
					Services	541	544	513	+ 5
Mfg. Avg. Wkly. Hours	41.1	42.4	41.6	- 1	Fin., Ins. & Real Est.	155	156	151	+ 3
Mfg. Avg. Wkly. Earn. - $	354	366	349	+ 1	Trans., Com. & Pub. Util.	174	177	170	+ 2
LOUISIANA									
Civilian Labor Force - thous.	1,913	1,922	1,957	- 2	Nonfarm Employment - thous.	1,485	1,504	1,461	+ 2
Total Employed - thous.	1,683	1,740	1,673	+ 1	Manufacturing	165	168	159	+ 4
Total Unemployed - thous.	230	269	235	- 1	Construction	77	80	77	0
					Trade	364	372	357	+ 2
Unemployment Rate - % SA	11.5	10.1	14.3		Government	311	315	314	- 1
					Services	324	326	312	+ 4
Mfg. Avg. Wkly. Hours	42.3	42.7	41.2	+ 3	Fin., Ins. & Real Est.	84	84	84	0
Mfg. Avg. Wkly. Earn. - $	461	460	447	+ 3	Trans., Com. & Pub. Util.	104	104	108	- 0
MISSISSIPPI									
Civilian Labor Force - thous.	1,163	1,171	1,148	+ 1	Nonfarm Employment - thous.	875	885	846	+ 3
Total Employed - thous.	1,050	1,045	1,005	+ 4	Manufacturing	232	233	219	+ 6
Total Unemployed - thous.	113	125	143	-21	Construction	33	34	32	+ 3
					Trade	186	192	183	+ 2
Unemployment Rate - % SA	9.8	9.1	11.5		Government	198	198	194	+ 2
					Services	139	140	135	+ 3
Mfg. Avg. Wkly. Hours	40.3	41.3	40.0	+ 1	Fin., Ins. & Real Est.	39	39	38	+ 3
Mfg. Avg. Wkly. Earn. - $	311	315	304	+ 2	Trans., Com. & Pub. Util.	42	42	39	+ 8
TENNESSEE									
Civilian Labor Force - thous.	2,368	2,370	2,297	+ 3	Nonfarm Employment - thous.	2,021	2,057	1,960	+ 3
Total Employed - thous.	2,203	2,222	2,165	+ 2	Manufacturing	498	502	493	+ 1
Total Unemployed - thous.	165	148	187	-12	Construction	92	101	93	- 1
					Trade	476	490	460	+ 3
Unemployment Rate - % SA	5.8	6.2	7.0		Government	383	336	323	+19
					Services	408	414	394	+ 4
Mfg. Avg. Wkly. Hours	42.4	43.0	41.4	+ 2	Fin., Ins. & Real Est.	101	102	93	+ 9
Mfg. Avg. Wkly. Earn. - $	378	383	364	+ 4	Trans., Com. & Pub. Util.	104	105	97	+ 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.

	FEB 1988	JAN 1988	FEB 1987	ANN. % CHG		FEB 1988	JAN 1988	FEB 1987	ANN. % CHG
UNITED STATES									
Civilian Labor Force - thous.	119,942	119,742	117,967	+ 2	Nonfarm Employment - thous.	102,924	102,348	99,792	+ 3
Total Employed - thous.	112,460	112,139	109,464	+ 3	Manufacturing	19,287	19,251	18,803	+ 3
Total Unemployed - thous.	7,482	7,603	8,503	-12	Construction	4,624	4,644	4,506	+ 3
					Trade	23,664	24,195	23,351	+ 1
Unemployment Rate - % SA	5.7	5.8	6.6		Government	17,592	17,238	17,205	+ 2
					Services	24,550	24,228	23,474	+ 5
Mfg. Avg. Wkly. Hours	40.7	41.0	40.8	- 0	Fin., Ins. & Real Est.	6,614	6,623	6,438	+ 3
Mfg. Avg. Wkly. Earn. - $	410	413	401	+ 2	Trans., Com. & Pub. Util.	5,431	5,426	5,252	+ 3
SOUTHEAST									
Civilian Labor Force - thous.	16,331	16,266	16,014	+ 2	Nonfarm Employment - thous.	13,741	13,673	13,217	+ 4
Total Employed - thous.	12,212	15,101	14,751	+ 3	Manufacturing	2,385	2,379	2,318	+ 3
Total Unemployed - thous.	1,136	1,152	1,224	- 7	Construction	767	765	748	+ 3
					Trade	3,126	3,122	3,285	- 5
Unemployment Rate - % SA	6.5	6.7	7.6		Government	2,413	2,389	2,347	+ 3
					Services	3,081	3,051	2,912	+ 6
Mfg. Avg. Wkly. Hours	40.9	41.4	41.3	- 1	Fin., Ins. & Real Est.	818	816	787	+ 4
Mfg. Avg. Wkly. Earn. - $	363	369	360	+ 1	Trans., Com. & Pub. Util.	757	756	732	+ 3
ALABAMA									
Civilian Labor Force - thous.	1,872	1,877	1,866	+ 0	Nonfarm Employment - thous.	1,511	1,507	1,468	+ 3
Total Employed - thous.	1,728	1,726	1,696	+ 2	Manufacturing	371	371	359	+ 3
Total Unemployed - thous.	143	151	170	-16	Construction	72	71	69	+ 4
					Trade	332	334	320	+ 4
Unemployment Rate - % SA	7.0	7.3	8.5		Government	304	302	301	+ 1
					Services	278	276	267	+ 4
Mfg. Avg. Wkly. Hours	40.7	41.4	41.3	- 1	Fin., Ins. & Real Est.	70	70	70	0
Mfg. Avg. Wkly. Earn. - $	366	372	358	+ 2	Trans., Com. & Pub. Util.	72	72	71	+ 1
FLORIDA									
Civilian Labor Force - thous.	5,959	5,917	5,722	+ 4	Nonfarm Employment - thous.	5,056	5,020	4,772	+ 6
Total Employed - thous.	5,666	5,622	5,422	+ 5	Manufacturing	543	543	526	+ 3
Total Unemployed - thous.	298	295	300	- 1	Construction	346	346	332	+ 4
					Trade	1,380	1,373	1,295	+ 7
Unemployment Rate - % SA	5.3	4.9	5.6		Government	773	762	734	+ 5
					Services	1,378	1,362	1,276	+ 8
Mfg. Avg. Wkly. Hours	40.8	41.0	40.9	- 0	Fin., Ins. & Real Est.	369	366	351	+ 5
Mfg. Avg. Wkly. Earn. - $	336	337	332	+ 1	Trans., Com. & Pub. Util.	259	259	250	+ 4
GEORGIA									
Civilian Labor Force - thous.	3,057	3,027	3,005	+ 4	Nonfarm Employment - thous.	2,778	2,765	2,708	+ 3
Total Employed - thous.	2,875	2,832	2,823	+ 5	Manufacturing	572	569	561	+ 2
Total Unemployed - thous.	195	182	183	+ 7	Construction	146	145	146	0
					Trade	689	689	677	2
Unemployment Rate - % SA	5.7	6.2	5.8		Government	487	483	473	+ 3
					Services	545	542	522	+ 4
Mfg. Avg. Wkly. Hours	41.6	41.3	41.2	+ 1	Fin., Ins. & Real Est.	155	155	151	+ 3
Mfg. Avg. Wkly. Earn. - $	355	357	347	+ 2	Trans., Com. & Pub. Util.	174	174	170	+ 2
LOUISIANA									
Civilian Labor Force - thous.	1,901	1,906	1,961	- 3	Nonfarm Employment - thous.	1,491	1,486	1,459	+ 2
Total Employed - thous.	1,671	1,673	1,680	- 1	Manufacturing	166	166	159	+ 4
Total Unemployed - thous.	230	233	242	- 5	Construction	77	77	77	0
					Trade	364	365	355	+ 3
Unemployment Rate - % SA	11.6	11.7	13.8		Government	314	311	316	- 1
					Services	327	324	312	+ 5
Mfg. Avg. Wkly. Hours	42.1	42.3	41.7	+ 1	Fin., Ins. & Real Est.	85	85	84	+ 1
Mfg. Avg. Wkly. Earn. - $	456	460	456	0	Trans., Com. & Pub. Util.	104	104	103	+ 1
MISSISSIPPI									
Civilian Labor Force - thous.	1,163	1,171	1,152	+ 1	Nonfarm Employment - thous.	877	875	844	+ 4
Total Employed - thous.	1,050	1,046	1,009	+ 4	Manufacturing	233	232	221	+ 5
Total Unemployed - thous.	113	125	143	-21	Construction	33	33	32	+ 3
					Trade	185	186	182	+ 2
Unemployment Rate - % SA	8.8	9.8	11.3		Government	199	198	195	+ 2
					Services	140	139	137	+ 2
Mfg. Avg. Wkly. Hours	39.5	40.3	40.1	- 2	Fin., Ins. & Real Est.	39	39	38	+ 3
Mfg. Avg. Wkly. Earn. - $	306	312	303	+ 1	Trans., Com. & Pub. Util.	42	42	40	+ 5
TENNESSEE									
Civilian Labor Force - thous.	2,379	2,368	2,308	+ 3	Nonfarm Employment - thous.	2,028	2,020	1,965	+ 3
Total Employed - thous.	2,223	2,202	2,120	+ 5	Manufacturing	494	498	493	+ 1
Total Unemployed - thous.	156	166	188	-17	Construction	94	93	92	+ 2
					Trade	473	475	456	+ 4
Unemployment Rate - % SA	5.3	5.8	7.0		Government	337	332	328	+ 3
					Services	412	409	399	+ 3
Mfg. Avg. Wkly. Hours	40.9	42.6	41.5	- 1	Fin., Ins. & Real Est.	102	101	94	+ 9
Mfg. Avg. Wkly. Earn. - $	360	380	366	- 2	Trans., Com. & Pub. Util.	105	105	97	+ 8

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.

GENERAL

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.
UNITED STATES					
Personal Income ($ bil. - SAAR)	Q3	3,757.7	3,705.2	3,548.3	+ 6
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)		N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)	JAN	8,134.0	8,179.0	8,437.4	- 4
Consumer Price Index 1967=100	JAN	346.7	345.7	333.1	+ 4
Kilowatt Hours - mils.	NOV	190.0	196.6	180.4	+ 5
SOUTHEAST					
Personal Income ($ bil. - SAAR)	Q3	461.8	455.2	435.6	+ 6
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	5,401.3	5,611.2	5,201.3	+ 4
Petroleum Prod. (thous.)	JAN	1,341.0	1,342.0	1,422.0	- 6
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	29.8	33.1	28.0	+ 6
ALABAMA					
Personal Income ($ bil. - SAAR)	Q3	48.8	48.0	46.3	+ 5
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	137.7	158.0	122.8	+12
Petroleum Prod. (thous.)	JAN	52.0	53.0	54.0	- 4
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	4.1	4.3	3.9	+ 5
FLORIDA					
Personal Income ($ bil. - SAAR)	Q3	185.6	182.7	172.6	+ 8
Taxable Sales - $ bil.					
Plane Pass. Arr. (thous.)	JAN	2,899.5	2,902.1	2,727.2	+ 6
Petroleum Prod. (thous.)	JAN	21.0	21.0	25.0	-16
Consumer Price Index		JAN	NOV	JAN	
1977=100 MIAMI		184.6	183.4	174.6	- 4
Kilowatt Hours - mils.	NOV	9.0	10.5	9.4	- 4
GEORGIA					
Personal Income ($ bil. - SAAR)	Q3	87.8	86.8	82.7	+ 6
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	1,777.1	1,933.8	1,795.4	- 1
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.	
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	5.0	5.2	5.0	0
LOUISIANA					
Personal Income ($ bil. - SAAR)	Q3	51.1	50.2	50.2	+ 2
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	277.0	273.8	270.2	+ 3
Petroleum Prod. (thous.)	JAN	1,196.0	1,196.0	1,265.0	- 5
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	4.3	5.4	2.7	+59
MISSISSIPPI					
Personal Income ($ bil. - SAAR)	Q3	26.6	26.4	25.6	+ 4
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	34.2	38.7	35.2	- 3
Petroleum Prod. (thous.)	JAN	72.0	72.0	78.0	- 8
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	2.0	2.3	2.0	0
TENNESSEE					
Personal Income ($ bil. - SAAR)	Q3	61.9	61.1	58.2	+ 6
Taxable Sales - $ bil.		N.A.	N.A.	N.A.	
Plane Pass. Arr. (thous.)	JAN	275.8	304.8	250.5	+10
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.	
Consumer Price Index 1967=100		N.A.	N.A.	N.A.	
Kilowatt Hours - mils.	NOV	5.4	5.4	5.0	+ 8

	FEB. 1988	(R) JAN. 1988	FEB. 1987	ANN. % CHG.
UNITED STATES				
Agriculture				
Prices Rec'd by Farmers Index (1977=100)	130	131	122	+ 7
Broiler Placements (thous.)	89,928	91,520	87,077	+ 3
Calf Prices ($ per cwt.)	93.10	86.20	70.60	+32
Broiler Prices (¢ per lb.)	25.70	27.10	30.10	-15
Soybean Prices ($ per bu.)	5.90	5.90	4.69	+26
Broiler Feed Cost ($ per ton)	(Q1)195	(Q4)193	(Q1)174	+12
SOUTHEAST				
Agriculture				
Prices Rec'd by Farmers Index (1977=100)	117	121	111	+ 5
Broiler Placements (thous.)	38,429	38,852	36,147	+ 6
Calf Prices ($ per cwt.)	93.45	84.67	67.94	+38
Broiler Prices (¢ per lb.)	23.99	24.86	28.45	-16
Soybean Prices ($ per bu.)	6.15	6.08	4.83	+27
Broiler Feed Cost ($ per ton)	(Q1)190	(Q4)187	(Q1)168	+13
ALABAMA				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,944.4		1,945.0	- 0
Broiler Placements (thous.)	14,135	13,933	12,799	+10
Calf Prices ($ per cwt.)	89.20	82.10	66.50	+34
Broiler Prices (¢ per lb.)	24.00	24.00	28.00	-14
Soybean Prices ($ per bu.)	6.05	6.04	4.88	+24
Broiler Feed Cost ($ per ton)	194	189	175	+11
FLORIDA				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	4,690.5		5,109.6	+ 9
Broiler Placements (thous.)	2,382	2,539	2,209	+ 8
Calf Prices ($ per cwt.)	103.00	91.70	70.40	+46
Broiler Prices (¢ per lb.)	24.20	25.10	28.00	-14
Soybean Prices ($ per bu.)	6.05	6.04	4.88	+24
Broiler Feed Cost ($ per ton)	194	189	175	+11
GEORGIA				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	3,175.9		2,971.4	- 6
Broiler Placements (thous.)	14,932	15,162	14,526	+ 3
Calf Prices ($ per cwt.)	89.20	81.60	65.10	+37
Broiler Prices (¢ per lb.)	23.00	24.50	27.50	-16
Soybean Prices ($ per bu.)	6.13	5.92	4.88	+26
Broiler Feed Cost ($ per ton)	194	189	175	+11
LOUISIANA				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,361.7		1,448.5	+ 6
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	98.00	87.00	68.40	+43
Broiler Prices (¢ per lb.)	24.20	25.10	30.30	-20
Soybean Prices ($ per bu.)	6.18	6.08	4.67	+32
Broiler Feed Cost ($ per ton)	175	178	147	19
MISSISSIPPI				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,746.7		1,906.3	+ 9
Broiler Placements (thous.)	6,980	7,217	6,614	+ 6
Calf Prices ($ per cwt.)	94.30	85.50	71.00	+33
Broiler Prices (¢ per lb.)	25.70	26.80	30.30	-15
Soybean Prices ($ per bu.)	6.16	6.12	4.91	+25
Broiler Feed Cost ($ per ton)	175	178	147	+19
TENNESSEE				
Agriculture				
Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,833.4		2,044.0	+11
Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Calf Prices ($ per cwt.)	87.50	80.20	65.70	+33
Broiler Prices (¢ per lb.)	24.20	25.10	30.30	-20
Soybean Prices ($ per bu.)	6.18	6.18	4.83	+30
Broiler Feed Cost ($ per ton)	224	202	187	+20

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.

	LATEST DATA	CURR. PERIOD	PREV. PERIOD	YEAR AGO	ANN. % CHG.		MAR. 1988	(R) FEB. 1988	MAR. 1987	ANN. % CHG.
UNITED STATES										
Personal Income ($ bil. - SAAR)	Q3	3,757.7	3,705.2	3,548.3	+ 6	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Prices Rec'd by Farmers Index (1977=100)	130	130	121	+ 7
Plane Pass. Arr. (thous.)		N.A.	N.A.	N.A.		Broiler Placements (thous.)	94,014	89,928	89,107	+ 6
Petroleum Prod. (thous.)	FEB	8,168.0	8,133.0	8,277.2	- 1	Calf Prices ($ per cwt.)	92.30	93.10	72.50	+27
Consumer Price Index 1967=100	FEB	347.4	346.7	334.4	+ 4	Broiler Prices (¢ per lb.)	27.50	25.70	29.10	- 5
Kilowatt Hours - mils.	DEC	205.0	190.0	199.5	+ 3	Soybean Prices ($ per bu.)	5.93	5.90	4.73	+25
						Broiler Feed Cost ($ per ton)	(Q1)195	(Q4)193	(Q)174	+12
SOUTHEAST										
Personal Income ($ bil. - SAAR)	Q3	461.8	455.2	435.6	+ 6	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Prices Rec'd by Farmers Index (1977=100)	116	116	113	+ 3
Plane Pass. Arr. (thous.)	FEB	N.A.	6,353.1	5,713.2		Broiler Placements (thous.)	39,819	38,429	36,761	+ 8
Petroleum Prod. (thous.)	FEB	1,328.0	1,336.0	1,419.0	- 6	Calf Prices ($ per cwt.)	90.90	93.45	70.43	+29
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	25.82	23.99	27.80	- 7
Kilowatt Hours - mils.	DEC	31.2	29.8	31.0	+ 1	Soybean Prices ($ per bu.)	6.16	6.15	4.86	+27
						Broiler Feed Cost ($ per ton)	(Q1)190	(Q4)187	(Q1)168	+13
ALABAMA										
Personal Income ($ bil. - SAAR)	Q3	48.8	48.8	46.3	+ 5	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,944.1		1,945.0	- 0
Plane Pass. Arr. (thous.)	FEB	144.5	137.7	130.6	+11	Broiler Placements (thous.)	14,498	14,135	13,061	+11
Petroleum Prod. (thous.)	FEB	51.0	52.0	53.0	- 4	Calf Prices ($ per cwt.)	91.80	89.20	69.70	+32
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	25.50	24.00	27.00	- 6
Kilowatt Hours - mils.	DEC	4.4	4.1	4.2	+ 5	Soybean Prices ($ per bu.)	6.13	6.05	4.87	+26
						Broiler Feed Cost ($ per ton)	194	189	175	+11
FLORIDA										
Personal Income ($ bil. - SAAR)	Q3	185.6	182.7	172.6	+ 8	Agriculture				
Taxable Sales - $ bil.						Farm Cash Receipts - $ mil. Dates: DEC., DEC.	4,690.5		5,109.6	+ 9
Plane Pass. Arr. (thous.)	FEB	N.A.	2,899.5	3,061.5		Broiler Placements (thous.)	2,558	2,382	2,213	+16
Petroleum Prod. (thous.)	FEB	19.0	21.0	24.0	-21	Calf Prices ($ per cwt.)	100.00	103.00	73.50	+36
Consumer Price Index		JAN	NOV	JAN		Broiler Prices (¢ per lb.)	26.10	24.20	27.00	- 3
1977=100 MIAMI		184.6	183.4	174.6	+ 6	Soybean Prices ($ per bu.)	6.13	6.05	4.87	+26
Kilowatt Hours - mils.	DEC	9.2	9.0	9.5	- 3	Broiler Feed Cost ($ per ton)	194	189	175	+11
GEORGIA										
Personal Income ($ bil. - SAAR)	Q3	87.8	86.8	82.7	+ 6	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Farm Cash Receipts - $ mil. Dates: DEC., DEC.	3,175.9		2,971.4	- 6
Plane Pass. Arr. (thous.)	FEB	1,864.4	1,777.1	1,891.6	- 1	Broiler Placements (thous.)	15,491	14,932	14,683	+ 6
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.		Calf Prices ($ per cwt.)	86.10	89.20	67.60	+27
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	25.00	23.00	27.00	- 7
Kilowatt Hours - mils.	DEC	5.4	5.0	5.3	+ 2	Soybean Prices ($ per bu.)	6.03	6.13	4.74	+27
						Broiler Feed Cost ($ per ton)	194	189	175	+11
LOUISIANA										
Personal Income ($ bil. - SAAR)	Q3	51.1	50.2	50.2	+ 2	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,361.7		1,448.5	+ 6
Plane Pass. Arr. (thous.)	FEB	307.5	277.0	305.2	+ 1	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)	FEB	1,184.0	1,188.0	1,265.0	- 6	Calf Prices ($ per cwt.)	92.00	98.00	70.70	+30
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	26.10	24.20	29.90	-13
Kilowatt Hours - mils.	DEC	4.3	4.3	4.3	0	Soybean Prices ($ per bu.)	6.30	6.18	4.91	+28
						Broiler Feed Cost ($ per ton)	175	178	147	+19
MISSISSIPPI										
Personal Income ($ bil. - SAAR)	Q3	26.6	26.4	25.6	+ 4	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,746.7		1,906.3	+ 9
Plane Pass. Arr. (thous.)	FEB	35.1	34.2	38.5	- 9	Broiler Placements (thous.)	7,259	6,980	6,804	+ 7
Petroleum Prod. (thous.)	FEB	74.0	75.0	77.0	- 4	Calf Prices ($ per cwt.)	92.30	94.30	73.60	+25
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	27.70	25.70	29.90	- 7
Kilowatt Hours - mils.	DEC	2.1	2.0	2.1	0	Soybean Prices ($ per bu.)	6.10	6.16	4.80	+27
						Broiler Feed Cost ($ per ton)	175	178	147	+19
TENNESSEE										
Personal Income ($ bil. - SAAR)	Q3	61.9	61.1	58.2	+ 6	Agriculture				
Taxable Sales - $ bil.		N.A.	N.A.	N.A.		Farm Cash Receipts - $ mil. Dates: DEC., DEC.	1,833.4		2,044.0	+11
Plane Pass. Arr. (thous.)	FEB	288.7	275.8	285.8	+ 1	Broiler Placements (thous.)	N.A.	N.A.	N.A.	
Petroleum Prod. (thous.)		N.A.	N.A.	N.A.		Calf Prices ($ per cwt.)	83.10	87.50	67.20	+24
Consumer Price Index 1967=100		N.A.	N.A.	N.A.		Broiler Prices (¢ per lb.)	26.10	24.20	29.90	-13
Kilowatt Hours - mils.	DEC	5.8	5.4	5.6	+ 4	Soybean Prices ($ per bu.)	6.18	6.18	4.94	+25
						Broiler Feed Cost ($ per ton)	224	202	187	+20

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.

CONSTRUCTION

(12-month cumulative rate)

	JAN 1988	DEC 1987	JAN 1987	ANN. % CHG.		JAN 1988	DEC 1987	JAN 1987	ANN. % CHG.
UNITED STATES									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	50,233	50,780	47,164	+ 7	Value - $ Mil.	93,760	94,808	94,691	- 1
Industrial Bldgs.	7,202	7,336	8,669	-17	Residential Permits - Thous.				
Offices	13,244	13,557	13,895	- 5	Single-family units	1,017.1	1,028.8	1,067.2	- 5
Stores	13,011	13,052	11,945	+ 9	Multifamily units	478.1	494.1	656.3	-27
Hospitals	2,357	2,405	2,494	- 5	Total Building Permits				
Schools	1,078	1,064	1,163	- 7	Value - $ Mil.	140,699	142,294	141,864	- 1
SOUTHEAST									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	7,683	7,732	7,826	- 2	Value - $ Mil.	15,642	15,837	15,708	- 0
Industrial Bldgs.	839	873	1,125	-25	Residential Permits - Thous.				
Offices	1,744	1,726	1,931	-10	Single-family units	201.6	204.7	203.9	- 1
Stores	2,435	2,440	2,342	+ 4	Multifamily units	103.4	106.6	135.2	-24
Hospitals	518	534	457	+13	Total Building Permits				
Schools	271	270	159	+70	Value - $ Mil.	23,184	23,428	23,533	- 1
ALABAMA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	554	558	598	- 7	Value - $ Mil.	621	636	680	- 9
Industrial Bldgs.	30	32	77	-61	Residential Permits - Thous.				
Offices	195	210	148	+32	Single-family units	10.2	10.5	11.1	- 8
Stores	195	181	176	+11	Multifamily units	3.6	4.0	8.2	-56
Hospitals	19	13	21	-10	Total Building Permits				
Schools	29	26	18	+61	Value - $ Mil.	1,175	1,194	1,277	- 8
FLORIDA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	3,718	3,694	3,795	- 2	Value - $ Mil.	9,047	9,132	8,628	+ 5
Industrial Bldgs.	360	364	421	-14	Residential Permits - Thous.				
Offices	770	711	938	-18	Single-family units	110.3	111.6	105.7	+ 48
Stores	1,099	1,114	1,123	- 2	Multifamily units	73.7	75.6	85.7	-14
Hospitals	214	238	288	-26	Total Building Permits				
Schools	95	95	43	+121	Value - $ Mil.	12,765	12,826	12,423	+ 3
GEORGIA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,769	1,769	1,748	+ 1	Value - $ Mil.	3,507	3,521	3,717	- 6
Industrial Bldgs.	249	256	342	-27	Residential Permits - Thous.				
Offices	434	445	427	+ 2	Single-family units	47.1	47.8	50.9	- 7
Stores	560	571	515	+ 9	Multifamily units	16.6	16.4	23.5	-29
Hospitals	121	102	29	+317	Total Building Permits				
Schools	102	102	40	+155	Value - $ Mil.	5,276	5,318	5,466	- 3
LOUISIANA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	399	403	497	-20	Value - $ Mil.	418	435	550	-24
Industrial Bldgs.	14	14	43	-67	Residential Permits - Thous.				
Offices	67	70	121	-45	Single-family units	6.8	7.0	8.3	-18
Stores	169	164	150	+13	Multifamily units	0.5	0.6	2.4	-79
Hospitals	104	103	37	+181	Total Building Permits				
Schools	16	18	40	-60	Value - $ Mil.	816	838	1,046	-22
MISSISSIPPI									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	220	226	246	11	Value - $ Mil.	295	301	333	-11
Industrial Bldgs.	22	25	30	-27	Residential Permits - Thous.				
Offices	54	57	62	-13	Single-family units	4.9	5.0	5.5	-11
Stores	68	67	79	-14	Multifamily units	1.1	1.1	2.1	-48
Hospitals	16	17	22	-27	Total Building Permits				
Schools	12	12	8	+50	Value - $ Mil.	515	527	578	-11
TENNESSEE									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,024	1,056	942	+ 9	Value - $ Mil.	1,754	1,812	1,801	- 3
Industrial Bldgs.	164	183	212	-23	Residential Permits - Thous.				
Offices	224	234	235	- 5	Single-family units	22.3	22.9	22.4	- 0
Stores	344	343	298	+15	Multifamily units	7.9	8.9	13.4	-41
Hospitals	43	42	60	-28	Total Building Permits				
Schools	16	16	9	+78	Value - $ Mil.	2,637	2,726	2,743	- 4

NOTES: Data supplied by the U. S. Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts, C-40. Nonresidential data exclude the cost of construction for publicly owned buildings. The Southeast data represent the total of the six states.

(12-month cumulative rate)	FEB. 1988	JAN. 1988	FEB. 1987	ANN. % CHG.		FEB. 1988	JAN. 1988	FEB. 1987	ANN. % CHG.
UNITED STATES									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	50,447	50,233	46,693	+ 8	Value - $ Mil.	93,676	93,760	95,114	- 2
Industrial Bldgs.	7,264	7,202	8,445	-14	Residential Permits - Thous.				
Offices	13,297	13,244	13,644	- 3	Single-family units	1010.7	1017.1	1075.6	- 6
Stores	13,076	13,011	11,875	+10	Multifamily units	476.4	478.1	639.5	-26
Hospitals	2,356	2,357	2,481	- 5	Total Building Permits				
Schools	1,089	1,078	1,170	- 7	Value - $ Mil.	140,829	140,699	141,806	- 1
SOUTHEAST									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	7,729	7,683	7,798	- 1	Value - $ Mil.	15,648	15,642	15,652	- 0
Industrial Bldgs.	849	839	1,109	- 23	Residential Permits - Thous.				
Offices	1,755	1,744	1,925	- 9	Single-family units	201.0	201.6	205.2	- 2
Stores	2,439	2,435	2,337	+ 4	Multifamily units	102.5	103.4	139.5	-27
Hospitals	523	518	442	+ 18	Total Building Permits				
Schools	274	271	161	+ 70	Value - $ Mil.	23,349	23,184	23,450	- 0
ALABAMA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	507	554	614	- 17	Value - $ Mil.	627	621	682	- 8
Industrial Bldgs.	29	30	75	- 61	Residential Permits - Thous.				
Offices	160	195	176	- 9	Single-family units	10.2	10.2	11.3	-10
Stores	182	195	193	- 6	Multifamily units	3.9	3.6	7.8	-50
Hospitals	16	19	24	- 33	Total Building Permits				
Schools	31	29	18	+ 72	Value - $ Mil.	1,134	1,175	1,296	-12
FLORIDA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	3,776	3,718	3,771	+ 0	Value - $ Mil.	9,038	9,047	8,501	+ 6
Industrial Bldgs.	358	360	421	- 15	Residential Permits - Thous.				
Offices	793	770	906	- 12	Single-family units	110.3	110.3	106.2	+ 4
Stores	1,122	1,099	1,115	+ 1	Multifamily units	72.7	73.7	80.4	-10
Hospitals	219	214	281	- 22	Total Building Permits				
Schools	95	95	39	+144	Value - $ Mil.	12,814	12,765	12,272	+ 4
GEORGIA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,813	1,769	1,761	+ 3	Value - $ Mil.	3,527	3,507	3,739	- 6
Industrial Bldgs.	266	249	334	- 20	Residential Permits - Thous.				
Offices	454	434	439	+ 3	Single-family units	47.0	47.1	51.1	- 8
Stores	565	560	518	+ 9	Multifamily units	16.2	16.6	23.4	-31
Hospitals	122	121	21	+481	Total Building Permits				
Schools	104	102	44	+136	Value - $ Mil.	5,340	5,276	5,500	- 3
LOUISIANA									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	398	399	467	- 15	Value - $ Mil.	411	418	537	-23
Industrial Bldgs.	13	14	43	- 70	Residential Permits - Thous.				
Offices	65	67	104	- 37	Single-family units	6.6	6.8	8.0	-17
Stores	169	169	141	+ 20	Multifamily units	0.5	0.5	2.3	-78
Hospitals	104	104	36	+188	Total Building Permits				
Schools	14	16	42	- 67	Value - $ Mil.	809	816	1,004	-19
MISSISSIPPI									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	217	220	245	- 11	Value - $ Mil.	294	295	330	-11
Industrial Bldgs.	25	22	24	+ 4	Residential Permits - Thous.				
Offices	52	54	62	- 16	Single-family units	4.9	4.9	5.4	- 9
Stores	62	68	85	- 27	Multifamily units	1.0	1.1	2.0	-50
Hospitals	18	16	22	- 18	Total Building Permits				
Schools	13	12	7	+ 86	Value - $ Mil.	510	515	575	-11
TENNESSEE									
Nonresidential Building Permits - $ Mil.					Residential Building Permits				
Total Nonresidential	1,018	1,024	940	+ 8	Value - $ Mil.	1,753	1,754	1,864	- 6
Industrial Bldgs.	159	164	212	- 25	Residential Permits - Thous.				
Offices	231	224	239	- 3	Single-family units	22.1	22.3	23.2	- 5
Stores	339	344	286	+ 19	Multifamily units	8.2	7.9	13.6	-40
Hospitals	45	43	59	- 24	Total Building Permits				
Schools	17	16	9	+ 89	Value - $ Mil.	2,742	2,637	2,804	- 2

NOTES: Data supplied by the U. S. Bureau of the Census, Housing Units Authorized By Building Permits and Public Contracts, C-40. Nonresidential data exclude the cost of construction for publicly owned buildings. The Southeast data represent the total of the six states.

Federal Reserve Bank of Atlanta
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Address Correction Requested

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