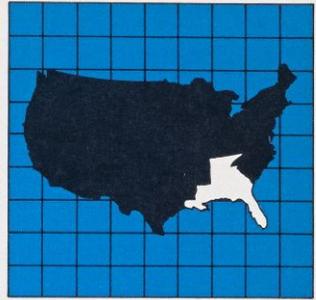


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RECESSION How Bad Will It Be?

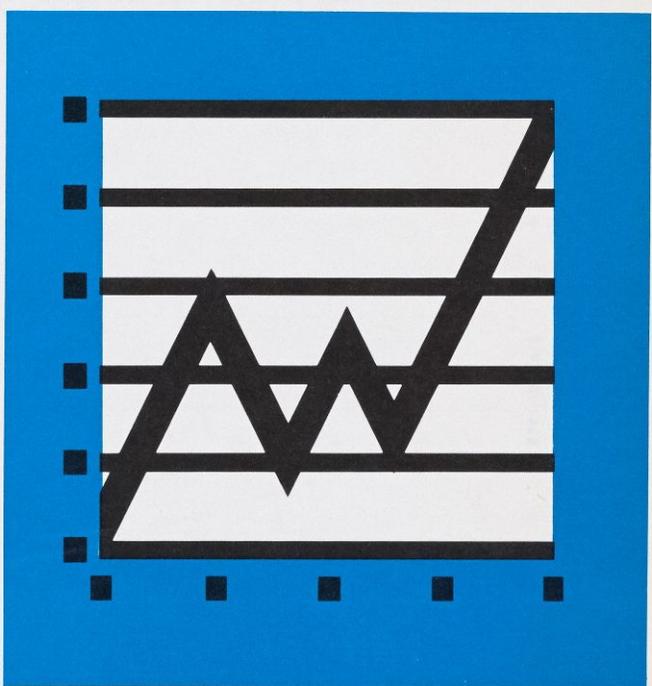
UNEMPLOYMENT Questions and Answers

CROPS Southeast Hit by Rising Energy Costs

BANKING Offshore Activity Expands

MONEY Interest Rates and Monetary Policy

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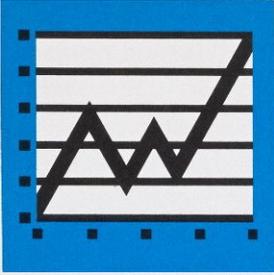


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**The Recession:
How Bad Will It Be? 4**

Based on past recessions and recent developments, how severe will the downturn be this time around? Harry Brandt and Charles J. Hauk compare our current experience with 1973-75, focusing on several key variables and structural changes in the economy.

**Questions and Answers
on Unemployment 12**

In our September/October 1979 issue, Charlie Carter analyzed the unemployment outlook based on his research on discouraged workers and part-time workers. In this question and answer format, he updates that outlook and discusses the impact of discouraged and part-time workers on unemployment figures.

**Rising Energy Costs Hit
Southeast Crop Production 16**

How have increased energy costs affected agriculture in the Southeast? Gene D. Sullivan examines energy's role in the cost of crop production, how energy costs will influence planting decisions, and how such costs will affect the Southeast's competitive position relative to other parts of the country.

**U.S. Banks Expand Offshore
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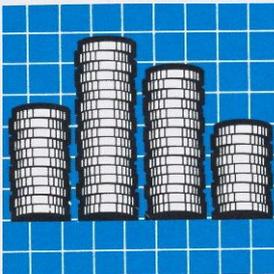
The rapid expansion of U.S. banking activity in the Caribbean has meant an economic surge for the offshore banking centers and more flexibility for U.S. banks. Stuart Hoffman describes the impact of this activity, the advantages for U.S. nonbank customers, and the effect on money supply measurements.

Monetary Policy and Interest Rates 26

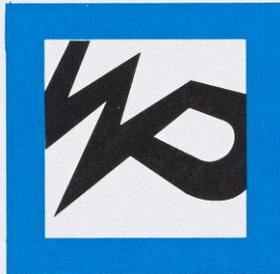
Much recent discussion in the press and among economists has focussed on the relationship between monetary policy and interest rates. In this issue's *Commentary*, Financial Economist Robert E. Keleher argues that interest rates can be misleading if they are taken as an indicator of monetary policy.

**Working Paper Review
Home Office Pricing:
The Evidence from Florida 30**

When Florida enacted limited branch banking legislation in 1976, researchers were presented with an unusual opportunity to examine how changes in the structure of a multibank holding company affect its pricing behavior. A review of David D. Whitehead's Working Paper.



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The Recession: How Bad Will It Be?

by Harry Brandt and Charles J. Haulk

Some characteristics of the current recession resemble the 1973-75 period, the longest and most severe recession since World War II. But several key differences suggest the downturn will be less deep than last time: much of the current inflation is demand-pull instead of supply-induced, the Federal budget is more stimulative this time, inventories have been better managed, employment has shifted toward less volatile industries and government transfer payments have increased sharply.

A Look at the Last Recession

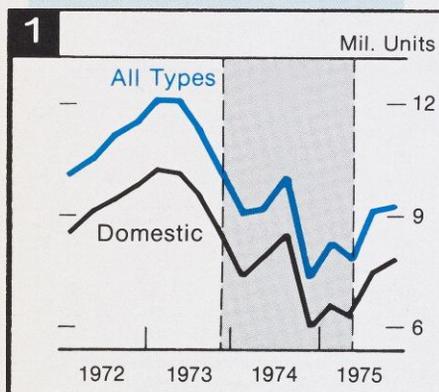
There have been six recessions since World War II (see Table). The '73-'75 business recession was the longest. It lasted sixteen months and also was the most severe of the six contractions.

RECESSIONS SINCE WORLD WAR II

	Length	Severity	
	No. of Mos.	Real GNP	Industrial Production
Nov. '48 - Oct. '49	11	-1.4%	- 7.5%
July '53 - May '54	10	-3.3	- 8.1
Aug. '57 - Apr. '58	8	-3.2	-11.3
Apr. '60 - Feb. '61	10	-1.2	- 7.5
Dec. '69 - Nov. '70	11	-1.1	- 5.6
Nov. '73 - May '75	16	-6.6	-13.9

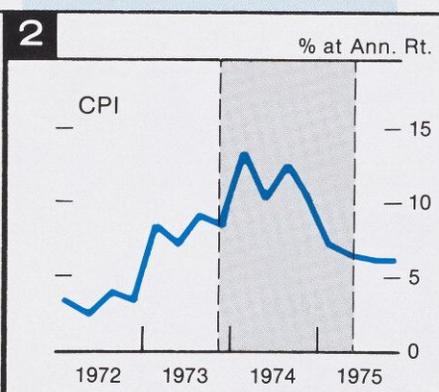
Last recession was long and severe because:

Auto Sales...



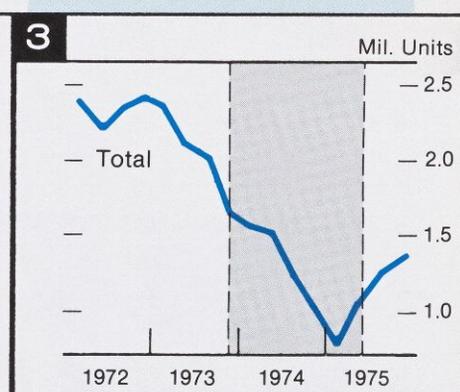
fell sharply in 1973 as...

Inflation Rate, led by oil prices...



climbed,

Housing Starts...



plummeted and...

Why was the '73-'75 recession so steep and long? The oil embargo which started in November '73 (the first recession month) was the straw that broke the economy's back. Auto sales, which had started to weaken even before the oil embargo, then fell sharply (Chart 1).

Another depressing influence was the rapid inflation, pinching consumer purchasing power (Chart 2). The inflation was fueled by: (1) demands that exceeded available supplies, (2) rising food prices (due partly to the '72 drought), (3) the quadrupling of oil prices, (4) off-again, on-again wage and price controls, and (5) the dollar devaluation in February '73 and further decline in the dollar's exchange rate that raised the prices of foreign goods sold in the United States.

Two developments intensified the last recession. One was the slump in residential construction, particularly apartments and condominiums. Housing starts fell from a 2.4-million peak to 1.0 million (Chart 3). The other was speculative buying and hoarding by businesses, which resulted in an enormous inventory buildup (Chart 4). The subsequent inventory liquidation

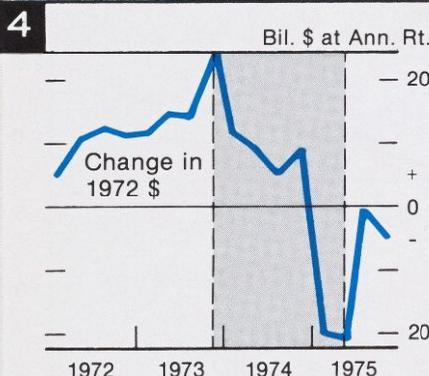
required sharp production cutbacks and huge layoffs. The unemployment rate, consequently, soared to 9 percent (Chart 5).

What was the monetary and fiscal policy response to this environment? The Federal Reserve initially moved to a less restrictive policy, and this relaxation along with the lower credit demands caused interest rates to fall (Chart 6). But because of rapid inflation, the Federal Reserve in early '74 retightened, despite the evidence of recession, and it was not until autumn '74 that it acted to stimulate the sagging economy. By early '75, Congress joined to pass a \$22-billion tax cut; and even though the recession ended in May '75, the Federal Reserve — concerned over high unemployment — continued on an expansive monetary policy well into '76.

The Current Recession: Will History Repeat?

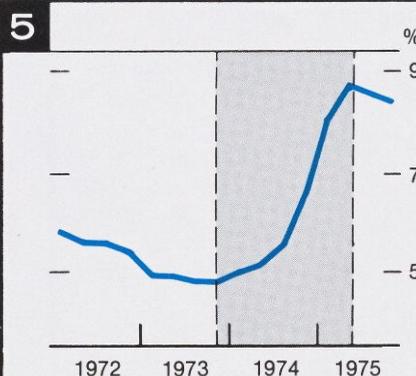
The economic variables which are most likely to shed light on the course of future developments are: inflation, the Federal deficit, interest rates, inventories, the savings rate, and the structure of the

Business Inventories



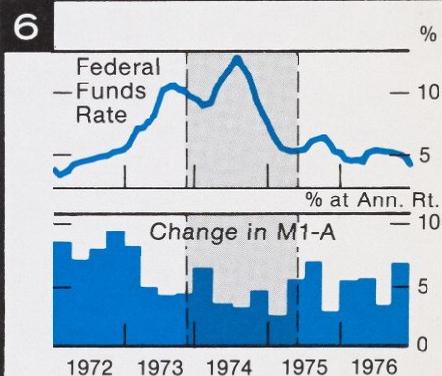
were too high, causing production cutbacks. Subsequently, the...

Unemployment Rate...



soared.

In response, the Fed eased, retightened on account of inflation...



but then eased further.

Gray area between dashed lines indicates recession.

economy. Since many people fear we could repeat our last recession, let us delineate differences and similarities with the 1973-75 experience.

Inflation Is Mostly Demand-Pull This Time

On the surface, the 1979-80 inflation appears to be as bad as, if not worse than, the inflation of 1974-75; so we might expect the downturns to be similar. While it is true that consumer price inflation — that most publicly visible rate of inflation — has exceeded rates of 1974, the broader rate as measured by the GNP deflator has not achieved the 1974 rates (at least as of May 1980).

Inflation continued to climb in the recession of 1974 and did not peak until the recession was three quarters old. Consumer price inflation bounced around 12 percent until fourth quarter 1974, thereafter showing marked improvement (Chart 7).

Inflation was worsening rather than improving, largely because of the tremendous worldwide commodity inflation in 1972-73, which was still feeding into final products throughout most of 1974

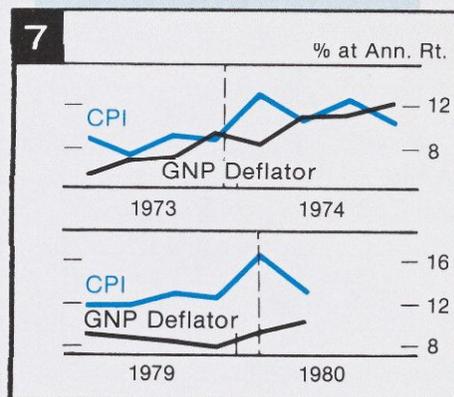
despite the contraction of real activity through 1974. However, the contraction in final sales through the first three quarters was not sufficient to force postponement or cancellation of cost passthrough into prices. Not until the full effect of the credit crunch of July and August took hold did sales collapse. After that, prices moderated slightly.

Our recent inflation experience is different from 1974. The '74 inflation was in large part a supply phenomenon, with shortages, oil price hikes, and world commodity inflation imposed on the U.S. The inflation of 1979-80 — although also significantly influenced by oil price hikes — is, on the other hand, more of a demand-pull phenomenon combined with changes in the structure of the economy which make it increasingly biased toward inflation.

Internal demand-pull inflation should be more responsive to demand restraints than inflation induced by external supply factors. Only in two recessions since World War II (1957-58 and 1973-75) has inflation not yielded quickly to weakening demand either before or at the onset of recession. Both were bad recessions.

Some people fear we could repeat our last recession...

While '79-'80 inflation was initially higher than '74...



it yielded faster to weakening demand.

One final point: The Consumer Price Index was propelled to the 18-percent rate of the first quarter, partly by the rapid rise in mortgage interest rates. More recent softening in these rates could begin to show up as early as July. (Changes in conventional mortgage rates are not reflected for a month or more in the index.) Some price relief, in fact, has already occurred. The index in April and May rose at an 11-percent rate.

Federal Budget More Stimulative in 1980

In 1973, Federal expenditures contracted in inflation-adjusted terms and remained flat in 1974. Combined Federal, state, and local budgets moved into surplus, thereby acting as a drag on the economy, even though real activity was contracting. The Federal budget dropped from a \$20-billion-a-year deficit in late 1972 to a \$5- to \$7-billion deficit through most of 1973 and 1974. The fall in receipts in fourth quarter 1974 and first quarter 1975 produced a deficit of \$50 billion (Chart 8). The combined budgets finally moved to a stimulative position in fourth quarter 1974, after being mildly

restrictive for the first three quarters of the recession.

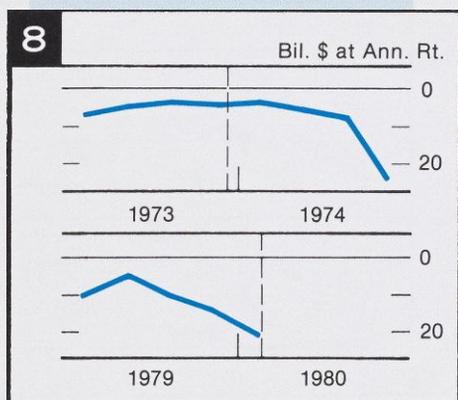
After moving toward restraint in the first half of 1979, the Federal budget became increasingly stimulative for the last three quarters, with expenditures increasingly outpacing receipts. State and local budgets have maintained a \$20- to \$25-billion surplus but will probably move toward balance over the next quarters, as receipts fall.

In sum, the fiscal policy of 1974-75 was one of too much restraint during the early part of the recession and then perhaps too much stimulus after recovery was under way. In contrast, in 1979-80, the move toward more stimulus came prior to the onset of recession. Automatic fiscal stabilizers are now under way to relieve some recession-induced hardships.

Drop in Interest Rates May Mean Quick Recovery

The typical pattern of interest rates would be for Treasury bill rates to peak almost coincidentally with a business cycle peak. During 1974, the bill rate did the unusual. After peaking in late 1973, which was

Federal Deficit held steady far into last recession, but...



this time a spending increase created earlier stimulus.

Dashed line indicates beginning of recession.

FEDERAL RESERVE BANK OF ATLANTA

...but key variables suggest a repeat is not likely.

almost coincidental with the onset of recession, the bill rate fell for a few months before rising to another peak in August 1974, nine months after the start of recession. With the current recession dated as starting in February, we have a near coincidence of the peak in Treasury bill rates and the peak in real activity. Long-term government bond rates typically also peak coincidentally with a real activity peak. Again, we have a typical pattern in long-term rate behavior — if not in degree, at least in timing (Chart 9).

In 1974, we were subjected to double peaks in short rates and a long lag after recession-onset to the second peak in rates. The rising rates during the recession undoubtedly contributed to the extreme severity of the late 1974-early 1975 drop in activity. After short rates peaked in July, they fell less than a point per month through the end of 1974. The Federal funds rate dropped from 12.92 percent in July to 8.53 percent in December. Rates on conventional mortgages continued to rise slowly for several months after July, before falling slowly in early 1975.

In 1980, we have seen rates climb to unprecedented levels and we have seen

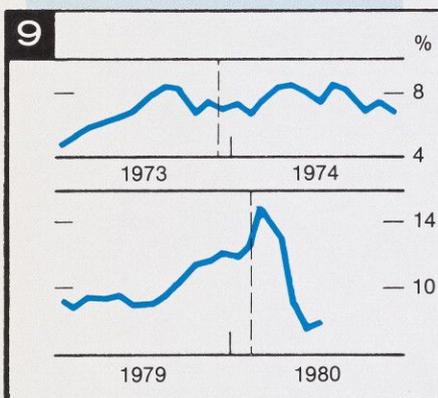
rates fall by 8 to 9 percentage points in a matter of weeks; even mortgage rates have dropped 3 to 4 percent. This sharp drop, while indicative of falling activity, is setting the stage for a quick recovery, especially in housing (Chart 10). Less — rather than more — monetary growth has accompanied the decline in interest rates; however, since April, growth in the aggregates has picked up (Chart 11).

Inventories Safer This Time

Business inventories grew very rapidly in late 1973 and early 1974. As a result of slowing sales, the ratio of inventories to sales rose throughout 1973 and then sharply in late 1974, as sales collapsed. Despite massive cutbacks in output in late 1974 and early 1975, inventories continued to climb through first quarter 1975. Both durables and nondurables inventories surged relative to sales during 1974.

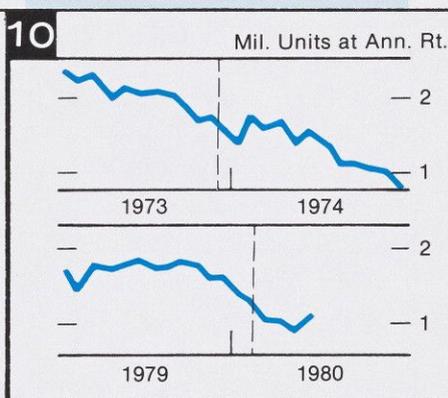
In 1979, on the other hand, durables inventories rose relative to sales but were at reasonably safe levels in first quarter 1980. Further declines in sales in the second quarter could push that ratio higher, but it would appear that the rapid output declines in April and May may be sufficient

Rise in 3-Month Treasury Bill Rate during last recession was unusual, but...



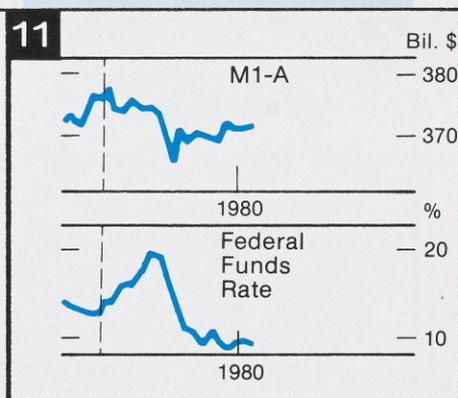
sharp '80 drop may mean quick business recovery.

Housing starts...



will benefit from lower interest rates and...

increased monetary growth since April.



to prevent inventories from rising rapidly (Chart 12).

The key will be in the pace of sales. At this point, it would appear that durable goods production is in for a period of some retrenchment as manufacturers try to avoid further inventory buildup. Nondurables inventories went into the downturn basically in check. Overall, inventories have declined in real terms since the third quarter of 1979 and do not seem to be as seriously out of balance as in late 1974. Lower interest rates could encourage inventory building.

Savings Rate Differs

The behavior of savings is obviously very crucial at this time. This may be the single most important item in the real economy to watch. It holds the key to the depth and length of the recession, since inventories were generally in check at the onset of recession, but that was also true in 1970, when an increase in the savings rate led to a sharp rise in the inventory-to-sales ratio.

In 1973, as well, the consumer was becoming more cautious. The savings rate began climbing in the third quarter of 1972 from just under 6 percent and continued to

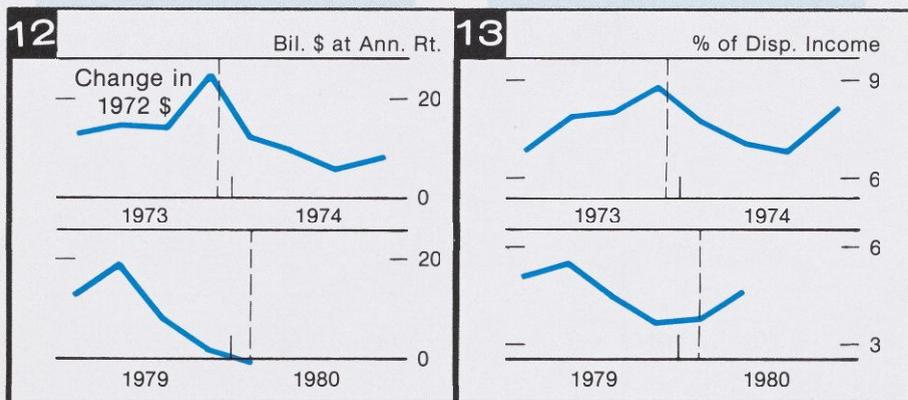
rise throughout 1973 (Chart 13), hitting 8.5 percent in the fourth quarter (the quarter the recession started).

For the next three quarters, the savings rate fell back rather sharply as disposable income contracted, thus preventing real final sales from dropping appreciably despite weakness in durable goods and construction. Real GNP was declining slowly during the period as the rate of inventory accumulation dropped. The savings rate jumped upward in the fourth quarter of 1974 and dropped back before climbing to nearly 10 percent in the second quarter of 1975 as a result of the tax rebate program.

This time we have a somewhat different pattern. By summer 1979, most observers had concluded that a recession was under way, based on April and May data that showed clear signs of contracting activity. But as we are aware now, the consumer was having none of it and quickened the pace of consumption outlays by reducing dramatically the portion of income saved. The savings rate, instead of climbing several quarters prior to the recession, rose only briefly in the first half of 1979 before dropping to record low levels for the next

Business Inventories, high in '73...

Low Personal Savings Rate at current recession's onset...



were at safer levels this time.

holds key to this recession's depth and length.

Dashed line indicates beginning of recession.

three quarters. The drop in the savings rate kept final sales growing in real terms despite no growth in real disposable income. Durable goods sales remained steady at just above the second-quarter 1979 level for three quarters. Meantime, inventory accumulation declined to zero by the first quarter.

We have seen some movement toward a higher savings rate in March and April of this year. An increase in the savings rate from 3.5 percent of disposable income (its first-quarter level) to 5.5 percent would entail a \$35-billion cut in consumer expenditures. That large a decrease in spending would be a blow to an already contracting economy. A rise to a more traditional savings level of 6.0 or 6.5 percent would be an even bigger shock to the economy. Most likely, however, any consumer retrenchment will be fairly short-lived and not of the magnitude that would send the economy into a long nose dive. Over the long run, as inflation subsides, higher rates of saving should be expected and desired.

The Structure of the Economy

Any attempt to draw inferences about the current business cycle by examining

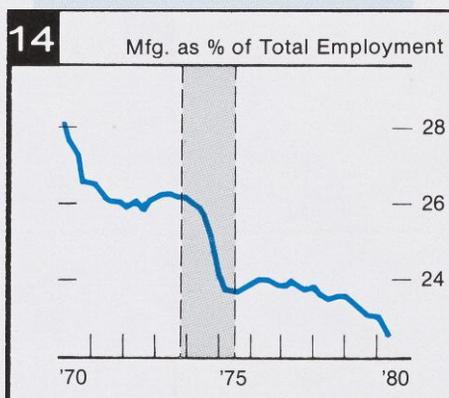
previous cycles must also consider the important structural changes that occur over time. These changes can create some uncertainty in our comparisons and inferences.

Three important structural changes in our economy over the past two decades have been: (1) the declining share of manufacturing employment and the growth of service and government employment, (2) the increasingly large role government plays in the economy, and (3) the growth of what is called the underground economy.

The shift in composition of employment has been moving toward a smaller share of manufacturing employment (both durables and nondurables) for many years (Chart 14). The share of manufacturing employment has dropped from 35 to 24 percent since 1952. This decrease has been about evenly split between durables and nondurables. The share of construction employment has also drifted slightly lower since 1960. These decreases in share have been matched by increased service and government shares.

Manufacturing, particularly durable goods, and construction are by far the most

Declining share of Manufacturing Employment reflects...



shift to recession-resistant service and government sectors.

Gray area between dashed lines indicates recession.

cyclically volatile due to their sensitivity to interest rates. As their share of total employment declines, the economy becomes more resistant to downturns than in the 1950s, when durable goods manufacturing plus construction represented 26 percent of total employment, compared to 19.5 percent in 1980. This tendency is further enhanced by the fact that the employment share lost by manufacturing and construction is now in the service and government sectors, which tend to be much less sensitive to interest rate changes.

Another important structural change is government's role in the economy. This can be seen most readily by the share of government transfer payments in total income. In 1965, they amounted to 7.6 percent. By 1979, they were 13.3 percent, nearly doubling in 14 years. The share of transfer payments increases during a recession. The point here is that government's role in the economy has tended to create built-in resistance to downturns and to create stimulus during a downturn.

These two structural changes have been under way for about two decades and have continued since the 1973-75 recession. The

upshot is that the economy is harder to push into recession and has a built-in tendency toward a quick recovery.

The role of the underground economy in producing an inflationary bias has been discussed elsewhere and need not be reviewed here.¹ Since the underground economy is heavily service-oriented and aims principally to avoid taxes, the underground economy is arguably a stabilizing factor (i.e., it has a counter-cyclical effect on downside forces in a recession).

It appears, then, that we may have seen the worst part of the slide already, and the inflation during the second half of 1980 may be lower than in the first. If so, the recession will most likely be less deep than in '73-'75. The unemployment rate, however, could conceivably go to 9 percent even under those circumstances. Although that would be as high as in 1975, the unemployment rate at the start of this recession was 6.0 percent, compared to 4.8 percent in 1973; so 9 percent would not represent as much increase as in 1973-75. 

¹See Charles J. Haulk, "Thoughts on the Underground Economy," this *Review*, March/April 1980, pp. 23-27.

“It appears...that we have seen the worst of the slide already, and the inflation during the second half of 1980 should be lower than the first.”

Questions and Answers

Accompanying the rising unemployment rate during the current recession are public uncertainties about the measurement and meaning of the unemployment rate. Based on his research on discouraged workers and part-time workers, Business Economist Charlie Carter responds to questions about the measurement of unemployment and its outlook for the rest of the year.

on Unemployment

with Charlie Carter

Q

In our September/October 1979 *Review*, you predicted that, based on the data for discouraged

workers and part-time workers, unemployment would rise from then until the end of 1980. How does the situation look now?

A

Those predictions are turning out to be quite accurate. The national unemployment rate reached a low point of 5.6 percent in June of last year, gradually rose through March 1980, and has increased noticeably thereafter. I see no reason to alter my prediction from last fall that the national unemployment rate could easily get above 9 percent before the recession is over.

Q

Do you see any special characteristics in the unemployment pattern of the current recession?

Some analysts, for instance, are saying that the U.S. auto industry will be depressed for much longer than the rest of the economy.

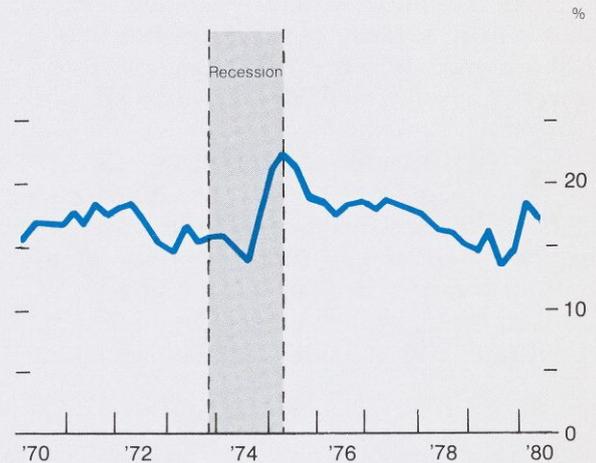
A

Unemployment in the automobile industry is largely attributable to its inability to adjust to the sharp increase in the relative price of energy and the shift in consumer preferences to smaller fuel-efficient automobiles. This is likely to plague the automobile industry with under-utilization of capital and workers for a period well after repercussions of the current recession are over.

Q You say the number of discouraged workers (people who are not currently seeking work because they think they cannot find a job) increases during economic contractions. How long after the low point of a recession does it usually take for discouragement to decline?

A The lags are short. My research indicates that discouraged workers begin to reenter the job market within one quarter after the recession is over (see chart for the pattern of discouragement during the last recession).

Discouragement typically drops within one quarter after the recession ends.



People who want a job but are not looking for work are categorized by the Bureau of Labor Statistics according to their reasons for not looking: (1) school attendance, (2) home responsibilities, (3) ill health, (4) think they cannot find a job (discouraged), and (5) other reasons. Since the number of discouraged workers fluctuates with changes in the working-age population, a more reliable measure is the ratio of reason (4) to reasons (1-5). This percentage provides a measure of discouragement of those people who want a job but are not currently seeking work.

Q Some economists say that discouraged workers should *not* be included in the labor force because they are not really “available” for work. Yet, their inclusion would have raised the 1978 unemployment rate from 6.0 to 6.8 percent. What other effects result from excluding discouraged workers from the labor force?

A Discouraged workers are presently considered neither employed nor unemployed but simply not in the labor force. One effect of this exclusion is that many discouraged workers move from not in the labor force directly to employment without ever entering the “unemployed” category. Therefore, economic upswings may not produce immediate improvement

in measured unemployment. For example, the entry of women into the labor force during the past few years occurred with only gradual reduction in the overall unemployment rate, since many of them came from outside the measured labor force. This experience is likely to be repeated in 1982-85 as we recover from the 1980-81 recession.

Q Are there other factors (availability of welfare payments, unemployment insurance, etc.) besides the severity of the recession that put a worker into the “discouraged” category?

A The empirical findings generally support the view that liberalization of welfare benefits and expanded coverages under the unemployment insurance program have had an upward effect on the official unemployment rate. The availability of welfare pay-

ments, for instance, means that people will not enter the labor force until market wages reach at least that level. Because this “reservation wage” has risen with increased public assistance programs, more people will stay out of the labor force when they lose their jobs. However, work registration requirements probably have had a small upward effect on the *full-employment unemployment rate* (the lowest rate of unemployment which will not result in increased inflation) and is one important reason for the downward rigidity (resistance to decline) of the unemployment rate.

Q In your September/October article, you said part-time workers might be an important clue to when unemployment will start to rise. How does the “part-time employment ratio” behave as the economy comes out of a recession?

A The part-time employment ratio measures the number of part-time workers who would not work full time even if full-time jobs were available (voluntary part-time workers) in relation to part-time workers who would like full-time work but cannot find it (involuntary part-time workers). Hours of full-time workers are usually reduced in response to falling demand (actual or anticipated). Therefore, at the early stages of business downturns, full-time workers become involuntary part-time workers faster than voluntary part-time workers increase, thereby reducing the part-time employment ratio. Such involuntary part-time workers are treated by the Bureau of

Labor Statistics in some of its definitions of unemployment as “partly unemployed.” Typically, hours of full-time workers are reduced before layoffs. As a result, the part-time employment ratio (the ratio of voluntary to involuntary part timers) usually declines sharply preceding and during recessions, as involuntary part-time workers (the denominator of the ratio) increase more rapidly than do voluntary part-time workers (the numerator of the ratio). The 1980-81 recession is no exception. While voluntary part timers outnumbered involuntary part timers by a four-to-one margin in December 1979, there were less than three voluntary part-time workers for each involuntary part-time worker in May 1980. Based on the behavior of this ratio in past recessions, the magnitude of this decline suggests that the unemployment rate will continue to rise for the remainder of 1980 and into the first half of 1981. The behavior of real output in 1980 and 1981, of course, will be a very important determinant of what happens to unemployment.

Q

Do these part-time workers show up in the unemployment rate we usually see quoted?

A

Involuntary part-time workers are considered unemployed in some BLS statistics, but the rate usually quoted in the press does not include them. By not including these workers (who want full-time work but cannot find it), the generally quoted unemployment rate understates the full extent of unemployment.

Q

Do you think the apparent expansion of the “underground economy” could be distorting the official unemployment rate?

A

That unmeasured economic activity is providing direct and indirect income and employment for a large fraction of the population is unquestionably true. But the degree to which this is occurring is still uncertain.

Q

Could the recent influx of refugees have a significant impact on the unemployment rate in the Southeast?

A

The influence of Cuban and Haitian refugees coming into the country on the national unemployment rate is negligible — probably no more than one-tenth of one percent. The effect on some cities and demographic groups, especially in South Florida, is likely to be considerably greater.

FR

Rising Energy Costs Hit Southeast Crop Production

by Gene D. Sullivan

That energy costs have risen rapidly is not news to most people. However, the potential impact of rising petroleum prices on southeastern agriculture is probably not immediately apparent to the majority of the public. If increased energy costs should stimulate shifts in agricultural enterprises, the economy of rural areas could be sharply changed. One needs only to recall the changes in community infrastructure that accompanied the shift from cotton to pine tree production in the hilly areas of the Southeast three or four decades ago to realize the importance that major changes in agricultural enterprises can have on the economy of the region.

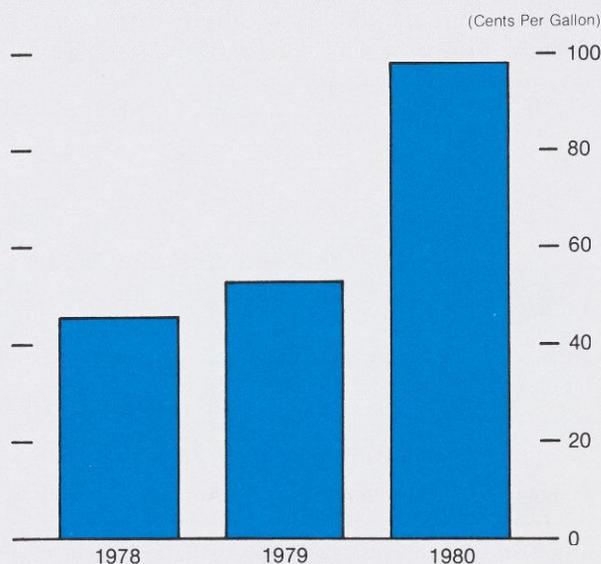
Evidence that energy costs of farmers have indeed risen abruptly is provided by a comparison of average prices paid by farmers for diesel fuel during March of the past three years (see Chart 1). The price has doubled since 1978, and most of that change has occurred within the past year.

Many other items used by farmers in crop production are dependent upon petroleum, and the price increase in petroleum fuels should eventually spread to those other products as well. The index of prices paid by farmers for the broad category of fuels and energy, which includes diesel, gasoline, electricity, and other energy sources, has risen about three-fourths since 1978.

Prices of fertilizers and agricultural chemicals, though heavily dependent on petroleum products in the manufacturing process, have not yet risen as much as the

Chart 1

Diesel fuel prices doubled since 1978.



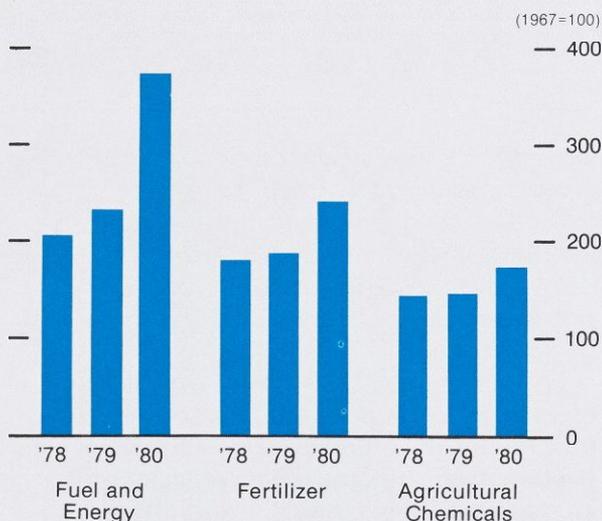
fuels and energy group. Excess manufacturing capacity and the relatively large supplies marketed in 1978 and 1979 may explain the lag in price increases in these products. However, as production capacity becomes more fully utilized, it is likely that prices of fertilizers and chemicals will also rise to reflect rising energy costs as well as changes in availabilities and demands in international markets; data through the first half of 1980 suggest that more rapid price increases have indeed already set in (see Chart 2).

Note: This article's data reflect "normal" expectations. This summer's drought, however, has materially affected yields and returns for the 1980 crop year.

The cost of energy, especially diesel, gasoline, and electricity, is a factor of rapidly increasing significance in planting decisions and crop production in the Southeast. Because agricultural costs in the region include a higher proportion of energy-sensitive items than the rest of the country, energy costs could eventually diminish the Southeast's competitive position.

Chart 2

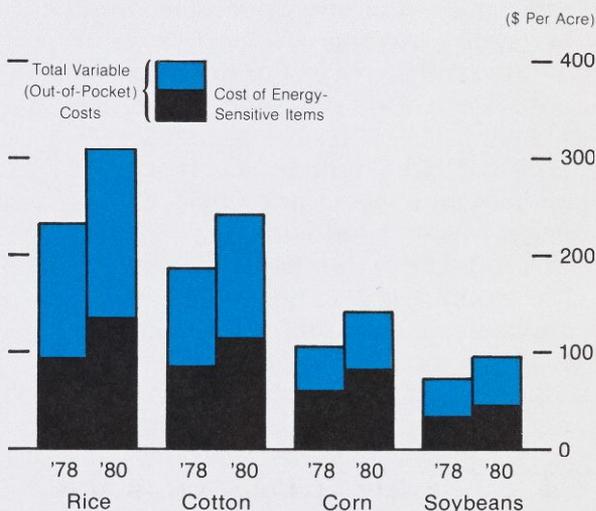
Fertilizer and chemicals costs lagged behind fuels, but may see more rapid increases.



Index of Prices Paid for Energy-Sensitive Farm Inputs, March of Each Year.

Chart 3

Energy costs increased most for rice, but corn used highest proportion of energy.



Variable Cost of Production: Selected Crops in Southeast.

Energy Costs Could Affect Crop Choices

The impact on southeastern crop production from these rising costs for energy-sensitive items depends largely on (1) how much of the cost of producing each crop is accounted for by energy-sensitive items and (2) how that proportion varies from one crop to another. If energy costs should push up variable costs the same amount for all crops, there would not

necessarily be an impact on crop production decisions. But if some crops are more heavily dependent on energy-related inputs than others, then with other factors remaining unchanged, farmers would have an incentive to switch to crops using less energy.

Crops are indeed not equal with regard to the energy required for their production (see Chart 3). Rice production uses less energy-sensitive products as a proportion of total variable costs than do other types of southeastern crops, but because that

usage is dominated by fuels to operate irrigation pumps, the proportion of energy costs changed most for rice production between 1978 and 1980.

Corn production uses the highest total proportion of energy-sensitive items of all southeastern crops because of its heavy dependence on supplemental applications of nitrogen fertilizer. Yet, because price increases for fertilizers were less than those for fuels, the increase in energy-related costs of producing corn between 1978 and 1980 is not as great as that for producing rice.

Cotton and soybean production are intermediate in the proportion of their costs made up of energy-sensitive items. The relative increase in energy costs for cotton was the smallest of the major crops because of cotton's heavy dependence on the chemical group (insecticides and herbicides) which, by the spring of 1980, had increased less in price than other energy-related products.

It should be noted that soybean production might be one of the more attractive crops available to producers in 1980 from a cost perspective, even though it uses a substantially higher proportion of energy-related inputs per acre than does rice. Its attraction comes from the fact that during the recent period of record-high interest rates, the total variable cost per acre for producing soybeans is estimated to be less than one-third as much as that for rice production. The effort to economize on interest charges for borrowed production expenditures could offset the effects of rising energy costs on soybean production during 1980.

Which of several alternative crops an individual farmer chooses to produce in a given year depends heavily on the crop that offers the greatest margin of return per acre above variable or out-of-pocket costs. Because of highly specialized equipment or other special restrictions regarding crops that can be grown, the alternative choices for a particular grower may be strictly

TABLE 1
PROJECTED COSTS AND RETURNS
SELECTED SOUTHEASTERN CROPS, 1980
(\$ Per Acre)

	Total Variable Cost	Total Return	Return Over Variable Cost
Cotton	241	392	151
Corn	141	153	12
Grain Sorghum	85	82	- 3
Wheat	76	124	48
Soybeans	95	147	52
Peanuts	394	606	212
Rice	310	423	113
Tobacco	1,334	2,887	1,553

Note: Cost projections were made from data published by the U.S. Department of Agriculture and agricultural colleges within the District. Projected returns reflect average yields obtained from 1977-79 and average prices for crops during January, February, and March of 1980.

limited. In the typical situation, however, growers may switch freely between soybeans, corn, and cotton. Rice may be included in the choices for some farmers, but land that is adaptable to rice production is more restricted than for other crops.

Projections for 1980, based on estimates of variable costs per acre and total returns that reflect (1) average yields across the six states within the District and (2) prices for crops prevailing during the first three months of the year, show that the per acre returns above variable costs are greater for tobacco and peanuts (see Table 1). But these crops carry strict acreage allotments and cannot be produced by all growers. The next best alternatives are cotton, which promises \$151 per acre, and rice, which offers \$113 per acre above variable cost. Wheat and soybeans also offer attractive rewards for expansion, particularly when considered in combination. Many producers who grow winter wheat can immediately follow that crop with soybeans if weather cooperates and thereby obtain returns from two crops within the same year.

TABLE 2

**PROSPECTIVE PLANTINGS, SELECTED CROPS,
SIXTH DISTRICT STATES, 1980
AND PRIOR YEAR COMPARISONS**

(1,000 Acres)

	<u>1978</u>	<u>1979</u>	<u>Indicated 1980</u>	<u>Percent Change 1980/1979</u>
Cotton	2,399	2,253	2,512	11.5
Corn	3,870	3,663	3,727	1.7
Grain				
Sorghum	290	288	365	26.7
Wheat	740	938	1,410	50.3
Soybeans	13,491	15,060	15,342	1.9
Peanuts	816	815	814	0.0
Rice	810	770	805	4.5
Tobacco	142	128	134	4.7

Source: **Prospective Plantings**, U.S. Department of Agriculture, April 1980.

Corn offers relatively little incentive for expansion, since, on average, only \$12 per acre would be available to apply toward fixed costs. For the average producer, grain sorghum provides a negative return over variable cost. One should recognize, however, that the actual expectations of farmers may differ from the averages indicated here, especially for those producers who rank well above average in production techniques utilized and in yields obtained.

1980 Planting Intentions

Surveys are made of farmers' planting intentions in January and April of each year. The results of the April survey showed that southeastern farmers were planning to expand acreage of cotton, wheat, soybeans, and rice, as the analysis indicated they would (see Table 2). The moderate growth in tobacco acreage probably reflects the slight expansion that can be accommodated by the 1980 marketing quota. Growth in soybean acreage is small in percentage terms but relatively large in actual acreage because of the large base of land that has

been planted to soybeans in preceding years.

A moderate expansion was planned for corn acreage in spite of its limited offer of returns. However, most growers probably anticipate higher yields than were actually obtained during the past three years, when production in some areas was restricted by severe droughty conditions.

The planned expansion in grain sorghum acreage runs sharply counter to the indications of the analysis. Compared with most other crops, however, the actual expansion in acreage is rather small and is almost totally accounted for by farmers in Georgia, where acreages of crops produced under irrigation have expanded rapidly in the last year or so. The yields from irrigated production would be sharply higher than the average yields for the whole District.

The ability to cover variable costs with some return to apply toward fixed costs will keep production going for a while, but eventually, fixed costs must also be covered or producers will find themselves without the means to replace machinery and equipment when it wears out. Also, their production techniques may not keep up with technological changes because they are unable to make the expenditures required for modernization. So it is the ability to cover total costs that determines what farmers will produce over the long run.

The rapid rise in costs of energy-sensitive items has been a major cause of the recent increases in the average total cost of producing major southeastern crops. At the same time, prices of most commodities have fallen, so that for all crops examined except tobacco, the projected total cost per unit exceeded the price available to producers at planting time. But costs and returns per unit of output again confirm that, in the short run, farmers should not cease production because they can more than cover the average variable costs and the amount by which price exceeds variable costs is available to repay some of

TABLE 3

**PROJECTED COSTS AND RETURNS
SELECTED SOUTHEASTERN CROPS, 1980**

	(\$ Per Unit)		
	Expected Return	Total Cost	Variable Cost
Cotton (lb.)	\$.73	\$.78	\$.45
Corn (bu.)	2.91	4.98	2.68
Grain Sorghum (bu.)	2.23	5.01	2.28
Wheat (bu.)	3.71	5.06	2.26
Soybeans (bu.)	6.22	8.53	4.00
Peanuts (lb.)	.20	.23	.13
Rice (cwt.)	10.86	12.62	7.95
Tobacco (lb.)	1.42	1.36	.66

Note: See Table 1 for sources of costs and returns projections.

the fixed costs that would remain totally uncovered if no production occurred (see Table 3).

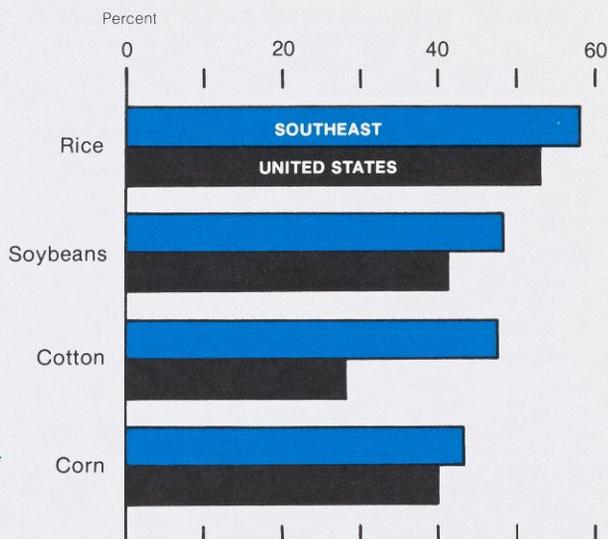
Southeast Especially Vulnerable to Rising Energy Costs

The competitive position of southeastern farmers with farmers in the country as a whole can be affected by rising energy costs. Because of a heavy dependence on chemicals for pest control and commercial fertilizers, energy-related items make up a higher proportion of the variable costs of producing most crops in the Southeast than in the rest of the United States (see Chart 4). As energy costs rise relative to other farm inputs, southeastern crop production becomes more costly relative to national production.

In the final analysis, it is not the special whims and preferences of farmers but the relationship between the total costs of producing crops in the Southeast as opposed to the U.S. that determines long-run cropping patterns. Farmers tend to concentrate on those crops in which they have an absolute advantage (the lowest cost per unit) or in which their comparative disadvantage is least (the excess of cost per

Chart 4

Energy costs higher in Southeast than U.S.



Energy Sensitive Items as a Proportion of Variable Production Costs

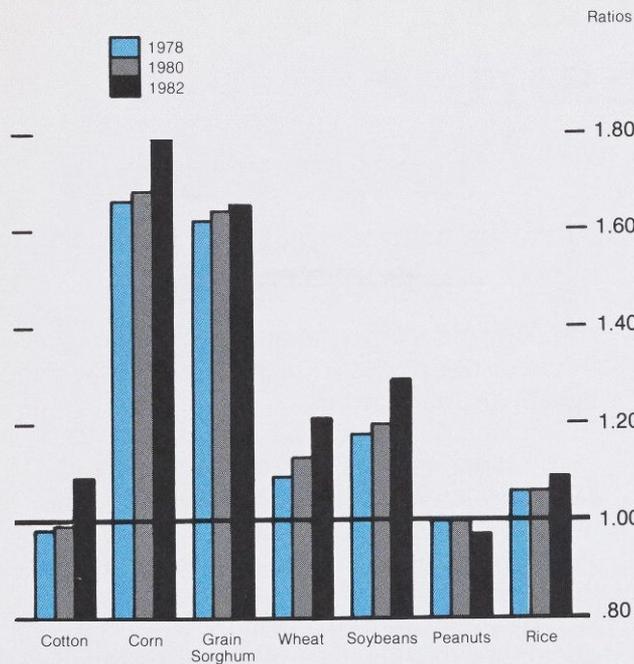
unit in the Southeast over the nation is smallest).

The ratio of southeastern to U.S. costs shows that in 1978 and 1980, the Southeast's only advantage (among six crops compared) is in production of cotton (see Chart 5). For that crop, the cost per unit is slightly lower in the Southeast than in the U.S. (ratio less than 1.0). The cost of producing peanuts is equal to the national average (ratio is 1.0). The Southeast's disadvantage is greatest in production of corn. The cost of producing a bushel of corn in the Southeast in 1978 was 1.66 times the U.S. average. That disadvantage is projected to rise slightly with the increase in costs from 1978 to 1980. If the costs of energy-sensitive items should double between 1980 and 1982, the Southeast's cost disadvantage in corn production would increase to 1.79.

In 1980, the Southeast's least disadvantage apparently lies in the production of rice,

Chart 5

In 1980, Southeast's crop production costs...



were lower than U.S. only for cotton. (Above black line, S.E. costs exceed U.S. costs.)

followed in relatively close order by wheat and soybeans. That is to say that, although these crops can be produced at lower costs per unit elsewhere in the country, the total volume of agricultural products is greater if other areas concentrated in producing crops in which their advantage is greatest (e.g., corn in the Midwest), and the Southeast concentrates in production of crops in which it comes closest to being competitive with other areas (rice, soybeans, and wheat). Of course, if the Southeast could expand its production of cotton and peanuts without limits, that would be the preferable alternative. But for these crops, the acreage on which expansion can occur is relatively limited, particularly if the comparative advantage is to be retained. Thus, to utilize the majority of the cultivatable land in the Southeast,

producers must turn to crops in which their comparative disadvantage is least.

With a doubling of costs of energy-related items from 1980's level (and with other costs holding steady), it is estimated that the Southeast's comparative disadvantage would grow worse and spread to cotton, where an absolute advantage now occurs. Only with peanuts would there be little change, since costs in the Southeast are about the same as costs in the rest of the peanut-producing areas of the country.

In summary, the sharp rise in energy costs since 1978 has impacted costs of crop production in the Southeast and, along with changes in commodity prices, has encouraged expansion of acreage in crops that use relatively low proportions of energy-sensitive farm inputs (cotton and rice). The proportion of variable costs made up of energy-sensitive items has increased most, thus far, for those crops that make heaviest use of fuels in the production process.

Rising energy costs have pushed total production costs above the expected price per unit for most farm products in 1980. Most farmers are attempting to minimize their losses by expanding acreages of those crops which offer the greatest margin of return over the variable "out-of-pocket" cost of production (cotton, rice, wheat, and soybeans).

The higher proportion of costs made up of energy-sensitive items in the Southeast as compared with the U.S. average will cause an erosion of the competitive position of southeastern producers as energy costs continue to rise. The Southeast's advantage in the production of cotton would be lost if costs of energy-sensitive items should double from their 1980 levels while other crop production costs remained unchanged. The continuation of the rapid rise in energy costs relative to other expenses could significantly alter cropping patterns in the Southeast.

ER

U.S. Banks Expand Offshore Banking in Caribbean Basin

by Stuart G. Hoffman

During the past decade, more and more U.S. banks have found it useful to establish banking offices in the Caribbean Basin. What this growth means depends on one's perspective:

□ To the banks, these Caribbean Basin branches provide an environment almost entirely free of local taxes, central bank reserve requirements, currency conversion limitations, and with relatively simple requirements for licensing and regulation.

□ To host countries in the Caribbean Basin, these "offshore" banking facilities offer jobs, limited income from fees, the prestige of being an international banking center, and the hope of related investments in their countries.

□ To U.S. nonbank customers (pension funds, large corporations, etc.), offshore banking affords greater cash management flexibility and higher interest rates than domestic arrangements.

□ To the Federal Reserve, quite aside from regulatory concerns, Caribbean Basin branches are of increasing interest because deposits held with them by U.S. residents belong, conceptually at least, in the U.S. money supply and it is desirable to try to measure them as such.

Rapid Asset Growth

First, a few statistics on the rapid growth of the Caribbean Basin activity of U.S. banks — from 1973 to 1979, total assets of U.S. bank branches increased ninefold in the Cayman Islands, eightfold in Panama,

and fourfold in the Bahamas. Still, two-thirds of the dollar volume resides in Bahamian branches.

Between 1973 and 1976, U.S. bank assets in the Bahamas, the Cayman Islands, and Panama increased from 21 percent to 32 percent of such assets worldwide. Since 1976, the figure has remained at about one-third. Another third, roughly, resides in U.S. branches in Great Britain; the remaining third is dispersed worldwide (Table 1).

The growth in the number of offshore branches of U.S. parent banks in each of the three major Basin centers has been uneven (Table 2). In Panama, the number of U.S. branches remained unchanged during the 1973-79 period. The number of U.S. branches in the Bahamas actually declined during that period as some parent banks moved their offices to the Cayman Islands. Bahamian offices tend to be the largest: Assets per office in 1979 averaged \$1,082 million in the Bahamas, \$363 million in Panama, and \$391 million in the Cayman Islands. How does this growth look from the different perspectives of the major participants?

Advantages to U.S. Banks

Caribbean Basin branches of U.S. banks deal almost entirely with deposit and loan customers outside the host country. To some extent, the transactions on the books of these branches could be accomplished at any number of locations.

Offshore banking by U.S. banks in the Caribbean Basin grew almost five-fold from 1973 to 1979. This expansion has proved advantageous to U.S. banks, their nonbank customers, and the host countries. Since this activity affects the U.S. money supply, it is also of increasing interest to the Federal Reserve.

TABLE 1
MAJOR CENTERS' SHARE OF U.S. FOREIGN BRANCH ASSETS
 (U.S. \$ Millions)

	<u>Bahamas</u>	<u>Cayman Islands</u>	<u>Panama</u>	<u>Total (B, CI, P)</u>	<u>Total U.S. Foreign Branch Assets</u>	<u>Percent of Assets in Major Caribbean Centers</u>	<u>U.K.</u>	<u>Percent of Assets in U.K.</u>
1973	20,684	3,088	1,525	25,297	121,866	.21	61,732	.50
1974	27,313	4,420	2,691	34,424	151,905	.23	69,804	.46
1975	38,302	6,900	3,713	48,915	176,493	.28	74,883	.42
1976	54,784	11,990	3,829	70,603	219,420	.32	81,466	.37
1977	62,789	16,623	4,901	83,953	258,897	.32	90,933	.35
1978	73,414	18,321	7,667	99,402	306,795	.32	106,593	.35
1979	82,292	26,619	11,979	120,890	364,165	.33	130,873	.35

Source: Board of Governors, Federal Reserve System.

Since 1973, U.S. bank assets have increased in the Caribbean and declined in the United Kingdom.

TABLE 2
NUMBER OF BRANCHES OF U.S. BANKS¹ IN MAJOR BASIN OFFSHORE BANKING CENTERS

(December)

	<u>Bahamas</u>	<u>Cayman Islands</u>	<u>Panama</u>
1973	91	32	33
1975	80	49	33
1977	74	58	33
1979*	76	68	33

*June.

¹Member banks of the Federal Reserve System.

The three primary offshore centers in the Basin (the Bahamas, the Cayman Islands, and Panama) all have courted foreign

banking activity to some degree, employing the following six ingredients relative to other countries: (1) the absence of host-country income or asset taxation and reserve requirements on deposits; (2) liberal rules for conversion and transfer of foreign currencies; (3) flexible and simple banking regulations; (4) modern communications facilities linked to other financial centers around the world; (5) similar time zones, and, hence, business hours, as major U.S. banks; and (6) the prospect of stable political environments. In the Bahamas and the Cayman Islands, many of the branches are pure "booking centers," having no substantial physical presence where loans and deposit

transactions are accomplished. These branches are passive shell offices, whose books reflect, almost entirely, decisions made at parent banks in the U.S. or at branches elsewhere around the world.

Advantages to the Host Countries

Host governments are very much aware of the limited and passive nature of most of the banking activity going through their offices, but they nevertheless encourage offshore banking activity because they expect its benefits to outweigh its costs. Direct benefits include additional governmental revenue from limited taxes and license fees, and additional residents' income from rental of branch facilities and employment of personnel. Indirect benefits—which are very difficult to quantify—include prestige and the prospect of additional investments in the host country's economy as its advantages become more

familiar to international investors and financiers.

There are direct costs to the host country, including expenditures for enhanced telecommunications and airport facilities, education and training of residents, and limited licensing and regulatory activity. Of course, these are difficult to attribute solely to banking, and exact calculation of costs versus benefits is difficult. Nevertheless, the three Basin offshore banking centers have obviously concluded that, for them, the benefits exceed the costs. Barbados recently arrived at a similar conclusion and has initiated an offshore banking center this year.

In particular, Panama is trying to develop a regional financial center with full banking facilities, where employees conduct business "face to face" with customers. Still, Panama is also a booking center.

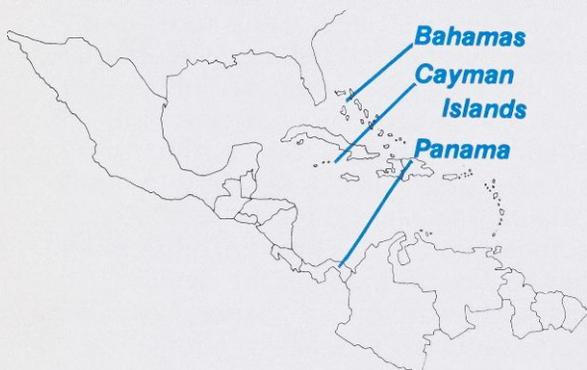
Advantages to Domestic Customers

A recent development of particular interest is the growing popularity of "overnight Eurodollar" liabilities with domestic customers of Caribbean branches of U.S. banks. Through a series of accounting entries, the U.S. customer winds up with an interest-bearing, one-day claim, which is often more attractive than a domestic repurchase agreement (RP) because the overnight Eurodollar interest rate is generally slightly above the domestic RP, and because the "overnight Eurodollar" claim transaction can be arranged later in the business day than an RP. This enables U.S. banks to give the customers an extra dimension of cash management flexibility.

Implications for Fed

Many experts believe that "overnight Eurodollar" claims function as money and should be measured and included in U.S. money supply calculations. According to

**The Three Major Caribbean Basin
Offshore Centers**



THE CARIBBEAN BASIN is here defined to include the following economies: Mexico, Colombia, and Venezuela; Central America, including Belize and Panama; the Caribbean Islands; Guyana, Surinam, and French Guiana.

data collected by the Federal Reserve, an estimated \$3 billion of "overnight Eurodollars" were owed by Caribbean Basin branches to U.S. nonbank customers in early June 1980. At the end of last year, such overnight Eurodollar claims represented one-quarter of the total liabilities owed to U.S. nonbank residents by U.S. branches in the Bahamas, the Cayman Islands, and Panama at that time.

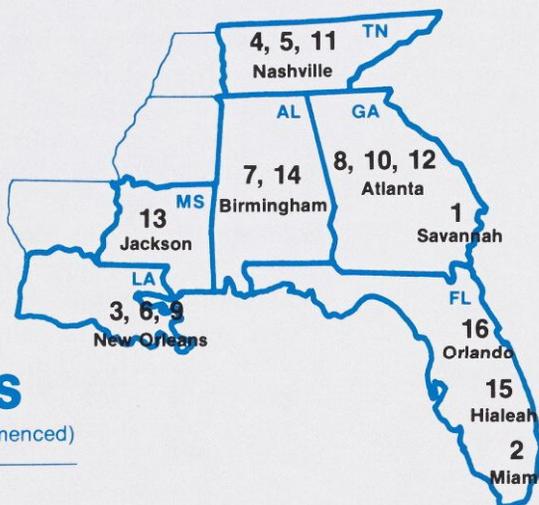
Accordingly, within the Federal Reserve System's new scheme of monetary aggregate measures, "overnight

Eurodollars" are included in the broader M-2 definition of money (as are the domestic overnight repurchase agreements they replace). They are not included in the Fed's narrower money definitions (M-1A and M-1B); however, to permit their inclusion in M-2, the Federal Reserve System has recently initiated a new bank report for daily data on the overnight Eurodollar deposits of U.S. nonbank customers at the Caribbean Basin branches of 27 member banks active in such transactions.



Sixth District Banks with Foreign Branches

(with date business commenced)



NASSAU BRANCHES

- 1 The Citizens and Southern National Bank (5/1/69)
- 2 Southeast First National Bank of Miami (4/1/71)
- 3 Whitney National Bank of New Orleans (12/15/72)

*transferred operations from Nassau Branch

CAYMAN ISLANDS BRANCHES

- 4 First American National Bank (2/1/73)
- 5 Third National Bank (2/23/73)
- 6 The Hibernia National Bank in New Orleans (10/18/73)

- 7 First National Bank of Birmingham (10/23/73)
- 8 Trust Company Bank* (1/2/74)
- 9 First National Bank of Commerce* (12/28/73)
- 10 The First National Bank of Atlanta* (2/1/74)
- 11 Commerce Union Bank* (5/15/74)
- 12 Fulton National Bank of Atlanta (7/23/79)
- 13 Deposit Guaranty National Bank (3/3/80)
- 14 Birmingham Trust National Bank (4/29/80)
- 15 First National Bank of Greater Miami (1/15/80)
- 16 **APPLICATION PENDING**
Sun First National Bank of Orlando

Monetary Policy and Interest Rates

by Robert E. Keleher

Recently a good deal of discussion has occurred in the press and among economists about the relationship between monetary policy — both domestically and internationally — and the movement of interest rates. Do falling interest rates, for example, imply an easing of monetary policy? In this commentary, the relationship between movements in interest rates and domestic and international monetary policy will be discussed.¹

Domestic Monetary Policy and Interest Rates

To many people, monetary policy has traditionally meant a policy relating to interest rates. Consequently, changes in interest rates have often been closely associated with and sometimes even equated with changes in monetary policy. Some analysts have regarded interest rates as indicators and even targets of monetary policy. To some extent, this orientation was a holdover from periods of stable prices.² During periods of stable prices, an interest rate orientation is misleading, but not nearly as misleading as during unstable price periods, i.e., during periods of inflation or deflation. During periods of unstable prices, an interest rate orientation

can lead to *procyclical* swings in the money supply (increasing the money supply in booms and decreasing or slowing it down during recessions) and, hence, to unstable monetary growth.

In the *inflationary* environment in which we find ourselves today, the factors affecting or determining interest rates are somewhat different than they are in stable price periods. This contributes to making interest rates misleading and confusing as guides or indicators of policy. Specifically, in an inflationary environment, inflationary expectations play a large role in the determination of interest rates. Indeed, in such an environment, inflationary expectations become much more important relative to other determinants of interest rates. This contributes to making interest rates much more volatile and unpredictable during inflationary periods (see Chart 1).

Thus, in an inflationary environment, changes in interest rates are determined by changes in *many factors*, the most important of which are: (1) changes in inflationary expectations, (2) changes in the supplies and demands for credit (which often reflect changes in business activity), and (3) Fed-controlled changes in bank reserves. The point to emphasize here is that reserve changes are only one of several factors determining interest rates. Hence, interest rate changes often reflect changes in determinants other than monetary policy. Therefore, interest rates can be very misleading as either indicators

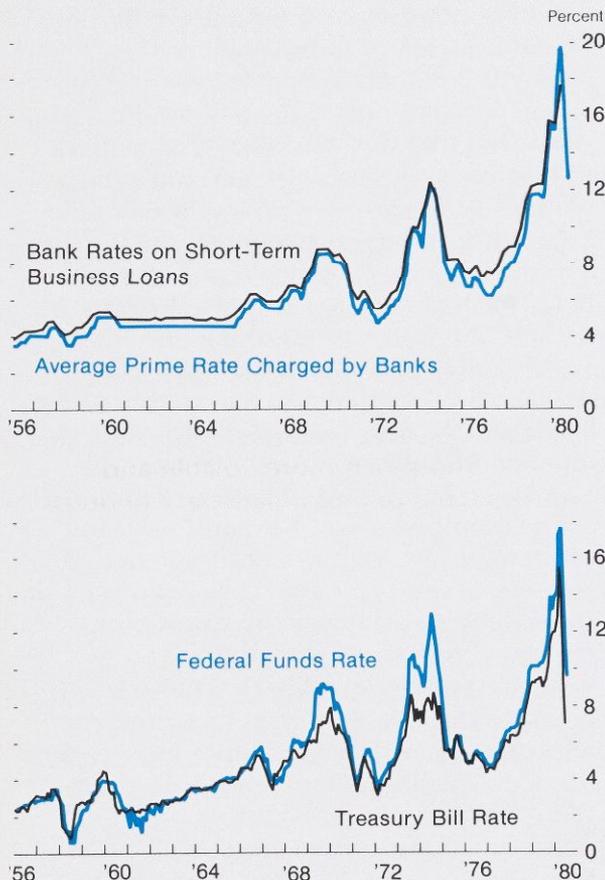
¹In accordance with recent changes in the focus of Federal Reserve policy, "changes in monetary policy" is here defined to signify changes in the supply of reserves to the banking system.

²Actually, this orientation stems from a long-lasting confusion between money and credit. Classical monetary theorists held that money and credit were two distinct entities. Accordingly, they held that each had a distinguishable price. Whereas the price of credit was viewed as the rate of interest, the inverse of the general price level was held to be the price of money.

ER's *Commentary* section presents personal opinion on economic topics of current interest: in this issue, what is the relationship between monetary policy and interest rates? Interest rates, the author maintains, can be misleading when used as an indicator of domestic and international monetary policy.

Chart 1

Interest rates become more volatile in an inflationary environment.



Sources: *Handbook of Cyclical Indicators*, May 1977; *Annual Statistical Digest*, 1974-78; *Business Conditions Digest*, September 1978, September 1979, April 1980.

or as targets of monetary policy. All of this suggests that the money supply is a more reliable policy guide.

Indeed a great deal of empirical evidence accumulated over the years has established that the common view equating high interest rates with "tight money" and low interest rates with "easy money" is misleading and incorrect. The facts indicate, rather, that rapid monetary expansion is associated with high interest rates and slow monetary growth with low interest rates. This point was recently voiced by Paul Volcker, Chairman of the Board of Governors of the Federal Reserve System:

The linkage in the popular mind between monetary discipline and high interest rates, as an historical generalization, is simply wrong. Look around the world: it is the countries that have been most successful in curbing monetary growth and inflation that have the lowest interest rates. In Switzerland, to take the extreme, mortgage money in this inflationary age is still available at 4.15 percent and the money supply has been growing hardly at all.³

As a further illustration of this, consider the recent sharp decline in short-term interest rates during April and May. This fall in interest rates did *not* mean that monetary policy has eased, particularly in

³Remarks of Paul Volcker before the 60th Annual Conference of the National Association of Mutual Savings Banks, Lake Buena Vista, Florida, May 14, 1980.

view of the concurrent sharp deceleration in the growth of the money supply (however measured). If the Federal Reserve had focused on interest rates and consequently decided to push rates back up, this action would have had the effect (all other things being equal) of further exacerbating the deceleration in the growth of money. The point to be made here, then, is that interest rates can be misleading when they are used either as an indicator or as a guide to *domestic* monetary policy.

International Monetary Policy and Interest Rates

Interest rates can also be misleading policy guides or indicators in *international* monetary policy. For example, some economists and journalists have contended that falling interest rates are causing the dollar to depreciate. In their view, then, *falling interest rates are associated with a depreciating dollar; hence, low interest rates are associated with a weak dollar and high interest rates with a strong dollar.* Consequently, it is suggested that the Federal Reserve should resist this fall in interest rates in order to protect the dollar. While this relationship between interest and exchange rates sometimes holds over short periods, it does not necessarily apply in a longer run time frame and therefore can be misleading.⁴

This view, too, has its historical roots in the operation of (international) monetary policy under conditions of price stability.⁵

⁴The arguments presented in this section are those of the monetary (or asset market) approach to exchange rates. See, for example, Jacob Frenkel, "Flexible Exchange Rates in the 1970s," and discussion by David Laidler in **Stabilization Policies: Lessons from the '70s and Implications for the '80s**, Center for the Study of American Business, April 1980; and Douglas Mudd, "Do Rising U.S. Interest Rates Imply A Stronger Dollar?," **Review**, Federal Reserve Bank of St. Louis, June 1979.

⁵Specifically, in the role performed by the central bank discount rate under a gold standard regime (i.e., a fixed exchange rate system). Under these conditions, monetary growth rates, as well as movements in general prices, were importantly determined by the growth rate of the *world* gold stock. Although this growth rate was not always steady and smooth (because of new gold discoveries), over periods of time it was steady, on average. General prices, then, were typically more stable than they are today. This argument follows that given by David Laidler, "Flexible Exchange Rates and Monetary Policy: A Discussion of the Frenkel and Heller Papers," in **Stabilization Policies**, *op. cit.*, p. 286.

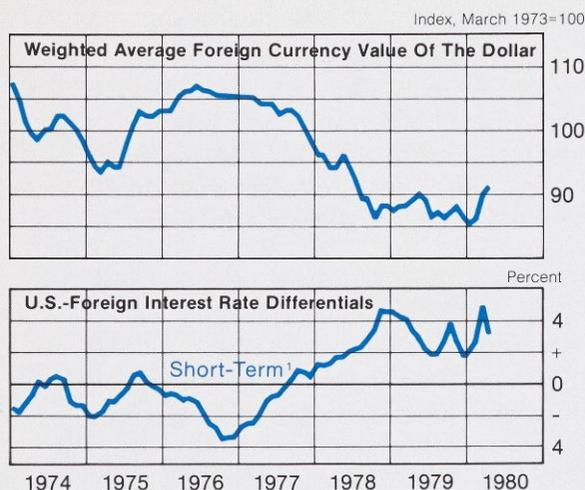
As a consequence of this stability, changes in the anticipated or expected inflation rate were not an important factor affecting interest rates. Under these conditions, a decrease in the central bank's discount rate represented a decrease in the real cost of borrowing and therefore led to an expansion of domestic credit. This, in turn (because of increased spending on imports), led to a balance of payments deficit and, hence, was associated with a "weak" currency (e.g., a "declining" dollar). In short, in these circumstances, interest rate decreases were correctly associated with "weak" currencies.

The circumstances of the last ten years, however, have been quite different. Exchange rates have been allowed to float (and the dollar is no longer convertible into gold). Moreover, the period has witnessed high growth rates of money as well as high rates of inflation. Under this new set of circumstances, a different theoretical framework is appropriate. This alternative view contends that fundamental determinants of a country's exchange rate include the growth rate of its own money supply (relative to money demand) and, hence, its own inflation rate relative to the analogous growth rates of money and inflation elsewhere.

For example, a rapid expansion in the money supply in one country relative to others will tend to raise the inflation rate in that country and lower the value of its currency. Moreover, inflationary expectations will quickly affect and soon begin to dominate interest rate movements in such a country (i.e., driving interest rates up with inflation). During such episodes, then, both high interest rates and depreciated currencies are caused by the same forces; namely, rapid monetary growth and inflation. Under such circumstances, high interest rates are associated with "weak" or depreciated currencies and low interest rates with

Chart 2

1976-78 period showed that falling interest rates do not always accompany a depreciating dollar.



Sources: Federal Reserve Statistical Release H.13; **Federal Reserve Bulletin**; International Monetary Fund, **International Financial Statistics**

¹Secondary market rates for 90-day large certificates of deposit in the United States less the weighted average of foreign three-month money market rates.

“strong” or appreciated currencies (i.e., the opposite of the view outlined earlier).

As with the domestic case discussed at the outset, recent evidence does not always support the commonly held views of the relationship between interest rates and exchange rates.

In particular, the experience of recent years suggests that high interest rates have been associated with weak currencies and low interest rates with strong currencies.⁶

Over the entire 1976-78 period, for example, rising interest rates in the U.S.

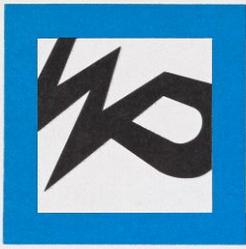
(relative to foreign interest rates) were associated with a depreciating U.S. dollar (see Chart 2).⁷ During this period, the interest rate-exchange rate relationship was the opposite of the view outlined above and currently being voiced in newspapers and by some economists.

What does all this mean for monetary policy? First, it suggests that in an inflationary environment, interest rates can be misleading as guides or indicators of policy in the international dimension as well as domestically. In particular, movements in interest rates in one country relative to other countries may be associated with a depreciating currency in some circumstances and with an appreciating currency in other circumstances (see Chart 2). In short, the relationship is confusing and unreliable. As a consequence, interest rates may be a misleading guide or indicator of (international) monetary policy. Second, it implies that attention, certainly over longer periods, must be basically focused on the monetary aggregates for both domestic and international policy. That is, a gradual deceleration of U.S. monetary growth (relative to foreign monetary growth) ultimately will bring about less inflation, a stronger dollar, and lower interest rates.

To repeat, the message to be conveyed here is that in an inflationary environment, it is difficult and often misleading to draw inferences from particular levels of interest rates about whether monetary policy is “easy” or “tight.” In this environment, interest rates are often misleading and can lead to mistakes in assessing domestic and international monetary policy. 

⁶See, for example, Michael Mussa, “Empirical Regularities in the Behavior of Exchange Rates and Theories of the Foreign Exchange Market,” **Policies for Employment, Prices, and Exchange Rates**, Carnegie-Rochester Conference Series on Public Policy, Vol. II, 1979, p. 25.

⁷See Douglas Mudd, *op. cit.*



Working Paper Review

The following article is a staff review of a more complete study in the Federal Reserve Bank of Atlanta Working Paper series.

David D. Whitehead

Home Office Pricing: The Evidence from Florida

A survey of Florida multibank holding companies before and after branch banking legislation sheds light on the relationship between the structure of a banking market and the degree of competition in that market by examining how and where pricing decisions are made. It also assesses from a regulatory standpoint how home office pricing may affect the geographic delineation of banking markets.

For a good number of years, researchers have been seeking to establish what the relationship is between market structure (the number and relative size of banks in a market) and competitive performance (the degree of competition in a market) in the banking industry. Studies have generally concluded that the relationship is statistically significant (i.e., we should be able to predict changes in the degree of competition from changes in the market's concentration) but operationally weak (partly because it takes such a large change in market concentration to make an impact on market price). One possible reason why competitive performance is not as strongly related to market structure as we would expect is that the relationship also involves a bank's market behavior or conduct.

Performance could be predicted if all the banks in a market always tried to maximize their profits. For a variety of reasons,

however, pricing decisions may not always be based on short-run profit maximization. Since market behavior is difficult to measure, it has received little attention in the literature. In his Working Paper, David Whitehead addresses this gap in the literature by investigating one aspect of market behavior — how pricing decisions are formulated by individual banks.

Under a holding company umbrella, pricing decisions may be made at any one or a combination of four levels: the holding company or its lead bank, a committee representing a number of subsidiary banks, the home office of the bank in question, or at the branches. The term "home office pricing" applies when a multi-office firm establishes a single price for all of its offices based on supply and demand conditions existing either at the location of the home office or on an average of these conditions at all locations of the firm.

In his study, Whitehead investigates the extent to which multibank holding companies in Florida utilized home office pricing prior to and following the 1976 enactment of limited branch banking legislation. Prior to this legislation, each office of each holding company was a separately chartered bank — presumably making its own pricing decisions. Following enactment, each holding company was able to consolidate all of its separately chartered subsidiaries within a single county into one charter with an equal number of branch offices. The change created a unique opportunity to examine how changes in a firm's organizational structure affect its pricing behavior. Whitehead conducted a survey with a two-fold purpose: (1) to observe the pricing behavior of MHCs in order to develop

testable hypotheses concerning the relationship between market structure and competitive performance and (2) to assess from a regulatory standpoint how home office pricing may have affected the geographic delineation of banking markets in Florida.

Findings

The survey, which included a wide range of geographic coverage and organization size, found that pricing decisions emanate from several levels: the holding company, its lead bank, regional lead banks, regional committees of subsidiary banks, and individual subsidiaries prior to and after merger. Whitehead concludes that multibank holding companies are not as homogenous as they have been treated in the literature. Some specific observations from the survey include:

1. After branching, all MHCs used some type of home office pricing to gain consistency among their branches.
2. Florida MHCs tend to exercise more control over the pricing decisions of their subsidiaries than one would expect. The largest MHCs decentralized their pricing mechanism somewhat, letting regional groups establish prices. The smaller holding companies maintained more central control.
3. In general, the larger the geographic area in which a holding company was represented, the less central control exercised by the holding company.
4. In establishing targets for the subsidiaries, the MHCs generally recognized the necessity to gain market shares before maximizing profits. Thus, smaller subsidiaries were assigned lower target prices or rates of return than larger subsidiaries with larger market shares.
5. The larger the geographic area covered by the MHC, the more likely it is to distinguish between markets.

The question of home office pricing also has important implications for regulatory purposes. If home office pricing for offices located in different geographic markets causes prices to equalize among those markets, it effectively integrates

these areas into a single market. Price equalization among markets due to home office pricing suggests that banks in these areas are reacting to the same set of supply and demand conditions and hence are in the same market. Therefore, counties which were defined to encompass two or more banking markets may effectively be joined into a single county-wide market through home office pricing. As the geographic market expands, the relative size of any given bank within that market is reduced. The impact of this change on regulatory agencies is significant, since the major criterion for judging the probable competitive consequences of a merger or acquisition is the relative size of the resulting organization in its market.

Survey Suggests Further Research

The survey revealed several factors which should be considered in future research. First, holding company subsidiaries in a given market may face two competitive stimuli, one from market forces and the second from other subsidiaries within its holding company competing for targeted profits, etc. Second, researchers should investigate the propensity for holding companies to use regional committees to price and set targets, especially with regard to its potential impact on local market competition. Third, if Whitehead's sample is typical and MHCs tend to assign profit targets differently to large and small subsidiaries, then not all competitors should be viewed as short-run profit maximizers. As a result, instead of large banks leading price reductions, small banks — attempting to build up market share prior to maximizing short-run profits — may initiate price competition. Thus, a large number of small competitors in a market may be more important in predicting market performance than a few large competitors. Fourth, not only will the organization's market conduct affect the market's competitive performance, but it may also affect the geographic extent of the market and (for regulatory purposes) the measure of the market's structure. 

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