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ECONOMIC

PERSPECTIVES

The inflation-unemployment tradeoff

Urban mass transit—a major revival

Bank holding companies:
Competitive issues and policy



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ECONOMIC PERSPECTIVES

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The inflation-unemployment tradeoff

Thomas A. Gittings

Recent estimates of prices, production, and employment show the worst of all possible worlds—high inflation, declining production, and rising unemployment.

- The GNP deflator increased at an annual rate of 9.3 percent in the first half of the year.

- Real GNP declined at an annual rate of 2.3 percent in the second quarter, after an increase of only 1.1 percent in the first.

- The unemployment rate eased up to 6.0 percent in August, after months at or near 5.6 percent, and is expected to rise further.

These figures call into question one of the basic assumptions underlying decades of policy discussion—that there is an exploitable tradeoff between inflation and production (or unemployment).

Policymakers long took for granted that unemployment could be reduced if the country was willing to accept a higher rate of inflation. It was common through the early 1970s to hear policy discussed in terms of this tradeoff.

That some people still talk in these terms while others deny that such a tradeoff exists is not hard to explain. To some extent, this contrast reflects differences in the interpretation of data that are far from conclusive. But to a greater extent, it reflects differences in the time frames the two groups are considering.

Effects of a change in policy (fiscal or monetary) on production are felt quickly—in weeks, months, or quarters. Full effects on the price level, however, take at least two years, and it may take longer for the effects to work through the system. People looking at near horizons, therefore, emphasize the effects on production and employment. Those taking a longer view emphasize the effects on prices.

The neutrality of money

Early in the century, economists still customarily emphasized the long-run price effects of changes in monetary policy. Short-

term effects on production were either ignored or simply mentioned in passing. In fact, belief in the neutrality of money—the idea that in the long run money influences only prices and neither the level nor the composition of production—came to be a test of sound economic thinking.

Irving Fisher, who pretty well epitomized this view, wrote 70 years ago that a change in the quantity of money causes a proportional change in the level of prices with no effect on real production over the long run. Similarly, a change in the rate of monetary growth causes an equal change in the rate of inflation, with no permanent effect on real production or employment.

Although Fisher saw that a sudden change in the quantity of money would initially affect the volume of real output or trade, he believed the effect was temporary. In terms of long-run (ultimate) effects, he argued:

An inflation of the currency cannot increase the product of farms or factories, nor the speed of freight trains or ships. The stream of business depends on natural resources and technical conditions, not on the quantity of money.

Fisher's quantity theory of money focused on only one of the many factors that determine prices, interest rates, and real production. The effects of an increase in the amount of money, he said,

... are blended with the effects of changes in the other factors in the equation of exchange just as the effects of gravity upon a falling body are blended with the effects of the resistance of the atmosphere.

The Keynesian Revolution

In the 30 years after Fisher's publication of *The Rate of Interest* (1907) and *The Pur-*

chasing *Power of Money* (1911), the world saw the Great War, the Russian Revolution, German hyperinflation, Black Thursday, and worldwide depression. In response to the Great Depression, John Maynard Keynes wrote *The General Theory of Employment, Interest, and Money* in 1935. As the title suggests, Keynes presented a theory he believed was general enough to explain the relationships between money, interest rates, and employment in periods of both “involuntary” unemployment and “full” employment. Keynes and his *General Theory* have had a pervasive influence on economic policy ever since.

He severely criticized classical economists for assuming a world of full employment in which the quantity of money affects only prices and not production or employment. Looking around, he saw many people unable to find work. Seeing a world where normally “labor stipulates (within limits) for a money-wage rather than a real wage,” he wrote, “whether logical or illogical, experience shows that this is how labour in fact behaves.” Keynes had little patience with the idea that involuntary unemployment was not possible because wages always adjust to maintain full employment.

The drag on prosperity during the Depression, he said, was due to an “insufficiency of effective demand.” The government could stimulate aggregate demand through fiscal and monetary policies. By fiscal policy, he meant the deliberate manipulation of tax structures and expenditures.

Although Keynes did not refer explicitly to the tradeoff between inflation and unemployment, the idea is implicit in his discussion at several points, particularly in his analysis of the labor market. He agreed with classical economists that the demand for labor is such that “the wage of an employed person is equal to the value which would be lost if employment were to be reduced by one unit.” In the jargon of economics, that means the nominal wage rate is equal to the marginal revenue product of labor.

He disagreed with classical economists, however, on the nature of the supply of labor.

The supply, he said, is not solely a function of real wages. “Whilst workers will usually resist a reduction of money-wages, it is not their practice to withdraw their labour whenever there is a rise in the price of wage-goods.” In the terminology of today, the price of wage-goods can be interpreted as a consumer price index.

Keynes defined three categories of unemployment—frictional, voluntary, and involuntary. He considered this third category of unemployment inconsistent with classical theory *but* consistent with unemployment in the real world. By involuntary unemployment, he did not mean “the mere existence of an unexhausted capacity to work.” He meant that,

Men are involuntarily unemployed if, in the event of a small rise in the price of wage-goods relatively to the money-wage, both the aggregate supply of labour willing to work for the current money-wage and the aggregate demand for it at that wage would be greater than the existing volume of employment.

Given this definition and assumptions about the labor market, Keynes thought employment would increase when prices increased more than wages.

Regarding monetary policy, Keynes considered the “quantity of money as determined by the action of the central bank” to be one of the “ultimate independent variables” in an economy. Furthermore, the “primary effect of a change in the quantity of money on the quantity of effective demand is through its influence on the rate of interest.”

By lowering the rate of interest, the central bank can stimulate investment and raise effective demand. Keynes observed that “the increase in effective demand will, generally speaking, spend itself partly in increasing the quantity of employment and partly in raising the level of prices.”

This implicit tradeoff depends, however, on resource utilization. Keynes said that it is probable

... that the general level of prices will not rise very much as output increases, so long as there are available efficient unemployed resources of every type. But as soon as output has increased sufficiently to begin to reach the 'bottlenecks', there is likely to be a sharp rise in the prices of certain commodities.

When the economy reaches full employment, where there is no involuntary unemployment, an increase in the quantity of money causes a fully proportionate increase in prices and wages without any further increase in production. At that point, the economy undergoes what Keynes called true inflation.

A decrease in the quantity of money, however—and thereby a reduction in effective demand—causes a reduction in employment. The reason, Keynes figured, is that,

... the factors of production, and in particular the workers, are disposed to resist a reduction in their money-rewards, and that there is no corresponding motive to resist an increase.

The Phillips curve

Although Keynes' analysis of the relationship between prices and unemployment had a profound influence on economic thinking, the idea of a stable tradeoff was given an enormous boost in 1958 by an article by A. W. Phillips. Using annual data from the United Kingdom from 1861 to 1913, he estimated a nonlinear equation that related the rate of change of money wages to the unemployment rate.

When the data were plotted in a scatter diagram, Phillips obtained a series of counterclockwise loops. The annual rate of increase in money wages tended to be high when the unemployment rate was low. The rate of increase in money wages tended to be low, even negative, when the unemployment rate was high. The equation he estimated was intended to approximate this inverse relationship.

The curve he fitted to 1861-1913 data also

fits fairly well data from 1948 to 1957. The Phillips curve, then, seemed to confirm that there was a stable tradeoff between increases in wages and unemployment—a fact with enormous implications for policy.

In 1960, Paul A. Samuelson and Robert M. Solow made their "best guess" of a Phillips curve for the United States. By allowing for some wage increases to reflect gains in productivity, they translated the tradeoff question into a relationship between inflation and unemployment. This modified Phillips curve showed "the menu of choice between different degrees of unemployment and price stability" or "the different levels of unemployment that would be 'needed' for each degree of price level change."

According to Samuelson and Solow's estimates, an unemployment rate of 5 to 6 percent "would appear to be the cost of price stability in the years immediately ahead." For an unemployment rate of 3 percent, they estimated that the price index might have to rise as much as 4 to 5 percent a year. The increase in prices, they said, "would seem to be the necessary cost of high employment and production in the years immediately ahead."

They cautioned that the menu could change since "what we do in a policy way during the next few years might cause it to shift in a definite way." But they could not offer any conclusive or suggestive evidence on the direction or magnitude of the shift that was to be expected.

The natural rate hypothesis

Working independently, Milton Friedman and Edmund S. Phelps developed theories in 1967 predicting a long-run shift in the Phillips curve. According to their theories, there is no long-run tradeoff between inflation and unemployment.

Friedman argued in his presidential address to the American Economic Association that monetary policy "cannot peg the rate of unemployment for more than very limited periods." While "there is always a temporary tradeoff between inflation and unemployment; there is no permanent trade-off."

The logic of his conclusion lies beyond the immediate effects of monetary policy in an examination of the “delayed consequences of such a policy.” In the employment market at any time, Friedman said,

... there is some level of unemployment which has the property that it is consistent with equilibrium in the structure of real wage rates. At that level of unemployment, real wage rates are tending on the average to rise at a ‘normal’ secular rate, i.e., at a rate that can be indefinitely maintained so long as capital formation, technological improvements, etc., remain on their long-run trends.

This natural rate of unemployment is a function of such real forces as “market imperfections, stochastic variability in demands and supplies, the cost of gathering information about job vacancies and labor availabilities, the cost of mobility, and so on.” Among the policy-made determinants that affect its level, Friedman mentioned legal minimum wage rates, the Walsh-Healy and Davis-Bacon Acts, and the strength of labor unions.

He used the word natural, he said, not to suggest that there was something normal or desirable about this rate of unemployment but simply to separate “real” forces from monetary forces.

The actual or reported rate of unemployment Friedman called the market rate. Changes in the quantity of money were assumed to have only a temporary effect on this market rate. Suppose, he said, that the monetary authority increases the rate of monetary growth when prices have been stable.

This will be expansionary. By making nominal cash balances higher than people desire, it will tend initially to lower interest rates and in this and other ways to stimulate spending. Income and spending will start to rise. To begin with, much or most of the rise in income will take the form of an increase in output

and employment rather than in prices. People have been expecting prices to be stable, and prices and wages have been set for some time in the future on that basis. It takes time for people to adjust to a new state of demand. Producers will tend to react to the initial expansion in aggregate demand by increasing output, employees by working longer hours, and the unemployed by taking jobs now offered at former nominal wages.

Friedman considered this part of his scenario pretty standard doctrine, even Keynesian in spirit. But the second part carries the story beyond these initial effects into Fisher’s view of the long run.

Because selling prices of products typically respond to an unanticipated rise in nominal demand faster than prices of factors of production, real wages received have gone down—though real wages anticipated by employees went up, since employees implicitly evaluated the wages offered at the earlier price level.

According to Friedman, this decline in real wages will soon affect expectations.

Employees will start to reckon on rising prices of the things they buy and to demand higher nominal wages for the future. “Market” unemployment is below the “natural” level. There is an excess demand for labor so real wages will tend to rise toward their initial level. Even though the higher rate of monetary growth continues, the rise in real wages will reverse the decline in unemployment, and then lead to a rise, which will tend to return unemployment to its former level.

The theory predicts that the short-run Phillips curve will systematically shift upward as workers anticipate increases in prices. The fundamental assumption, described by Phelps, is that “the quantities of employment and production are invariant to the rate of in-

flation when that inflation is expected and thus already properly 'discounted.' ”

If the government tries through changes in the rate of monetary growth to keep the unemployment rate below the natural rate, the results will be unstable. This is because an increase in the rate of money growth increases aggregate demand and inflation. The unemployment rate is reduced for a while, but as workers learn to anticipate the higher rate of inflation, they will bargain for even greater increases in nominal wages in an effort to regain their previous level of real wages. Employers will begin cutting back on employment, and the unemployment rate will begin returning to its natural level.

To maintain the lower rate of unemployment, the government must step up the rate of growth of money. But this rule for monetary policy leads eventually to continually accelerating rates of monetary growth and inflation.

This long-run instability is called the accelerationist hypothesis. To the extent that it holds in the real world, policies designed to hold unemployment below the natural rate—as opposed to policies, such as retraining programs, designed to shift the natural rate itself—are doomed to failure.

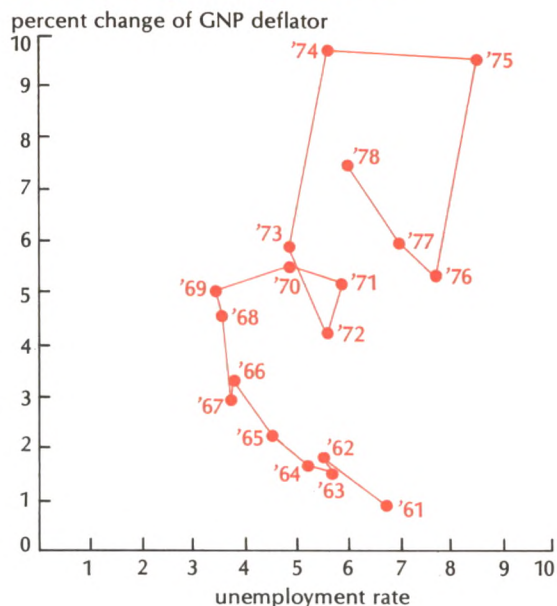
Evidence from the 1960s and 1970s

Review of some of the developments in the United States over the past two decades helps put these theories in perspective. A scatter diagram of the rate of increase in the GNP price deflator and the unemployment rate shows two distinct patterns in the line connecting the data points for successive years.

From 1961 to 1969, the country had generally declining unemployment and increasing inflation. The GNP implicit price deflator, for example, was increasing at an annual rate of 0.9 percent in 1961 and 5.0 percent in 1969. The unemployment rate averaged 6.1 percent in 1961 and only 3.5 percent in 1969.

This period was the heyday of Phillips curve fitters. With nearly any inflation series and unemployment variable, it was easy to es-

The shifting Phillips Curve



estimate a seemingly stable Phillips curve. Models fitted the data well and did a reasonably good job in predicting in the near term.

In the 1970s, however, “stagflation” has been the rule. Plots of inflation and unemployment rates for 1970 to 1978 show two clockwise loops corresponding to the two recessions. In the first, unemployment reached an annual average rate of 6.1 percent in 1971. In the second, it reached a high of 8.7 percent in 1975.

In terms of Phillips curves, the lesson of the past decade has been that changing conditions can shift the short-run tradeoff between inflation and unemployment. The logic of Friedman and Phelps explains part of this shift—that as workers begin anticipating higher rates of inflation, the short-run Phillips curve systematically shifts upwards.

This explanation, however, will not account for some of the shifts. From 1973 to 1975, for example, both inflation and the level of unemployment rose sharply, largely as a result of the removal of wage and price controls and the quadrupling of prices of crude oil. There were also other special factors at work—crop failures, change in the composi-

tion of the labor force, adverse weather, the financial woes of New York City. But, it is hard to disentangle the effects of these influences without more sophisticated statistical techniques.

Modeling the effects of policy

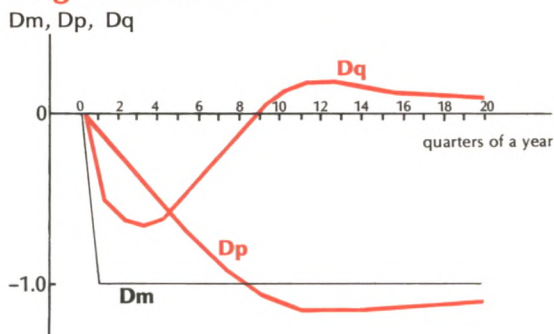
Econometric models—sets of statistically estimated equations describing the workings of the economy—are used to estimate the expected effects of monetary policy. These dynamic models, ranging in size from one or two equations up to hundreds or even thousands of equations, provide estimates of both the short-run and long-run effects of policy changes, allowing examination of both the “honeymoon” period when there is probably a tradeoff between inflation and unemployment and later when the tradeoff largely disappears.

A small model developed by the author imposes the long-run assumptions of Irving Fisher on a set of linear equations. Weighted averages of lagged values of the rates of growth of the money supply (Dm) and federal government purchases of goods and services are used to predict the rates of change of real GNP (Dq) and the GNP price deflator (Dp). Dummy variables are included to provide estimates of the effects of wage and price controls in the early 1970s and the later boosts in prices of imported oil.

This model predicts, other things being equal, a one percentage point decrease in the rate of growth of money will cause an equal reduction in the rate of inflation within two years. During that time, there will be a temporary reduction in the rate of growth of real production. After two years, real output will gradually return to its natural level and the rate of inflation will be permanently reduced one percentage point.

A graph of these expected results provides a visual summary of the model’s dynamic impact multipliers. Time is plotted along the horizontal axis. Rates of change of money, real GNP, and the GNP implicit deflator (a price index) are plotted along the vertical axis.

Effects of a decrease in the rate of growth of $M-1$



The model is Keynesian in the short run. In the first year after a change in monetary policy, there is more of an effect on real production than on the price level. Beyond this initial period, however, the effect on prices begins to take shape as the major response.

Responses of this model to a tightening of monetary policy are substantially different from those of large-scale models, which typically predict that effects of changes in the rate of monetary growth are spread over long periods, years or even decades. But when these large-scale models are presented to policymakers, they are usually simulated for only two or three years. In a sense only the initial honeymoon period is considered. No consideration is given to what lies beyond this first period of bliss.

The standard rebuttal to this criticism of ignoring long-run effects appears in Keynes’ famous quip, “In the long run, we are all dead.” Robert Solow offered a variation on this theme in a comment on the tradeoff between inflation and unemployment. The tradeoff, he said, “may not be permanent; but it lasts long enough for me.” This approach is equivalent to assuming away the stability problems of the long-run effects of monetary policy.

Equally important, it is simply not true that all of us, even most of us, will be dead in the time that is appropriate for judging the effects of monetary policy. According to the author’s small model, the full price effects of a change in policy are expected in about two

years. Even if these effects take longer to develop, they are not far enough in the future for policymakers to ignore.

Summary and conclusion

The country is in a state of stagflation— inflation high and GNP declining. In this situation, despite the temptation to act quickly to cushion the effects of the recession that is apparently under way, the Federal Reserve must also consider the long-run consequences of policy—especially the consequences for prices, interest rates, and the international position of the dollar.

To provide some perspective on these effects, this article has reviewed some of the most prominent theories of this century on the effects of changes in monetary policy and the kind of tradeoff that can be made between inflation and unemployment. Care has been taken to distinguish between short-

run and long-run effects of a change in the rate of monetary growth.

These theories, in turn, have been put into perspective by reviewing the basic trends in unemployment and prices over the past two decades. These trends have brought a growing consensus that there is no permanent tradeoff between unemployment and inflation and that the short-run tradeoff can be shifted by such special factors as wage-price controls or a sharp rise in oil prices.

Although a change in the rate of monetary growth can affect production and employment, these effects appear to be only transitory. The model indicates that after only a couple of years, the effects of monetary policy are reflected primarily in the rate of inflation. This suggests that monetary policy should be directed at what can be controlled—the long-run inflation rate— instead of being dissipated in a quixotic effort to keep unemployment below its natural rate.

The Gittings Model

This model consists of two linear difference equations that are estimated after the imposition of assumptions about the long-run neutrality of money. One equation is for the rate of growth of nominal GNP (Dy); the other is for the rate of inflation (Dp) as measured by the GNP deflator. At any time, the growth rate of real GNP (Dq) is equal to the growth rate of nominal GNP minus the rate of inflation.

The two equations have the same basic structure. They include the same number (N) of lagged dependent variables and the same number (M) of lagged values of the rate of monetary growth (Dm). Each equation includes an intercept term, a weighted average of the rates of growth of federal government purchases of goods and services (Dg), and dummy variables for periods following the imposition of wage and price controls in the third quarter of 1971 and the quadrupling of crude oil prices in the fourth quarter of 1973. The sample period for estimation is from the first quarter of 1959 through the fourth quarter of 1976.

The specific functional form for the inflation equation is the following:

$$Dp(t) = a_0 + \sum_{i=1}^N a(i)Dp(t-i) + \sum_{j=0}^M b(j)Dm(t-j) + \sum_{j=0}^M c(j)Dg(t-j) + dumwp(t) + dumoil(t)$$

This equation is an ordinary difference equation. The current rate of inflation ($Dp(t)$) is assumed to be a function of the rates of inflation in previous periods ($Dp(t-i)$). The lag weights ($b(j)$ and $c(j)$) for the rates of growth of money and federal government purchases are generated by third-degree polynomials with an end-point constraint.

Assumptions about the long-run neutrality of money correspond to the following constraints on the coefficients of the inflation equation:

$$\sum_{i=1}^N a(i) + \sum_{j=0}^M b(j) = 1, \quad \sum_{i=1}^N ia(i) + \sum_{j=0}^M jb(j) = 0$$

These constraints and the polynomial generating functions are also used in estimating the equation for the rate of growth of nominal GNP.

In estimating this model the author tried a large number of alternative lag structures. The model used to generate the reported impact multipliers consists of third-order difference equations with 14-quarter weighted averages of the growth rate of the money supply and federal government purchases. The dummy variables are applied for 10 quarters. Within the sample period, this model explains 52 percent of the variance of the rate of change of nominal GNP and 84 percent of the variance of the rate of inflation.

For a technical description of the model, see "A Linear Model of the Long-Run Neutrality of Money." *Staff Memoranda 79-6*, Federal Reserve Bank of Chicago. Copies are available from the bank's Public Information Center.

Urban mass transit—a major revival

Morton B. Millenson

The President's new energy program, presented in his speech July 15, singled out mass transit as an area for special attention. In its current form, this program allocates nearly \$13 billion more to the \$27.5 billion that the federal government planned to spend over the next decade. Although Congress has not yet defined the energy program in detail, inclusion of this additional funding would represent another milestone in the recovery of an industry that had been declining through most of the past 60 years.

With the introduction of the Model-T, a change began in the way the average American lived. One consequence was the start of a long decline in the use of public transit. The switch from street car to automobile was stopped and then even reversed by the Great Depression. From 1933 to 1941, the last year before the United States entered World War II, the number of riders actually increased at an average annual rate of nearly 3 percent. That was twice as fast as the growth of the adult population.¹

Wartime reprieve

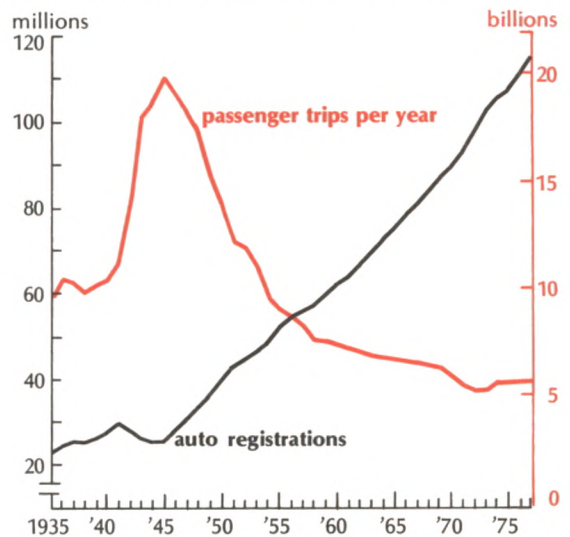
World War II ended production of new cars. It brought gas and tire rationing and shortages of spare parts. For most people, mass transit became the primary means of urban transportation. In 1945, the average city dweller used some form of public transit about 230 times a year—a rate that had not been seen for a generation. Although the number of riders dropped rapidly after the war ended, transit operators generally believed they were seeing merely a return to the prewar trend. As late as 1950, public transit use was still more than 20 percent above the

¹Virtually all of the statistics relating to mass transit on a nation-wide basis which are given in this article are quoted directly or derived from data collected by the American Public Transit Association (APTA) and published in its "Transit Fact Book, 77-78 Edition," Washington, D.C., or in earlier editions.

1941 level. The industry, therefore, invested heavily in new equipment between 1945 and 1950, particularly in trolley coaches and buses. But the lure of the automobile was too strong. By 1956, use of public transit was below the lowest level of the 1930s and the loss of riders continued, year by year.

A host of factors combined to prevent the return to the pre-war trend for public transit. But the total impact of the sources of the loss of riders can be summarized in two words—suburbs and automobiles. In every decade since the 1930s, the urban population of the country increased more, in absolute numbers, than the growth of the nation's total population. In 1940, 56.5 percent of Americans were urban residents; by 1970, the level was 73.5 percent of a much larger total. Furthermore, most of this increase in urban residency occurred in suburbia. In 1950, the suburban population of the statistical metropolitan areas was smaller than the population of the central cities. By 1970, suburbanites outnumbered central city dwellers by

Drivers abandon mass transit



Data: American Public Transit Association, U.S. Federal Highway Administration.

nearly 20 percent. During these two decades, the suburbs grew three times as fast as the central cities, two and a half times as fast as the nation as a whole.

The automobile takes over

The automobile became the essential feature of suburban living. The suburbs were not just residential communities. Stores and jobs also moved out to the suburbs, following the spreading network of highways. The development of the Interstate Highway System, its feeder routes, and other major roads gave easy access to areas increasingly distant from the central city.

Working, shopping, and living entirely in the suburbs became commonplace, but impractical without a car—often two or more. Parking space became crucial to the success of shopping centers and industrial sites. The increase in auto registrations and the decline in use of public transit summarize the reorganization of urban life after World War II. By 1970, the average urban dweller used public transit about 50 times a year. That was barely a fifth the number of trips he had made 25 years earlier.

Local governments to the rescue

During the Depression, many privately owned transit companies failed. Private reorganization was usually attempted, but occasionally operations were taken over by some form of local government ownership. The enormous use during the war and the continuation at high levels in the first few years that followed gave the surviving companies a period of temporary prosperity. It soon became clear that the decline in use was going to continue. Despite frequent, large fare increases, receipts fell below operating expenses. Public ownership became the only means of keeping most transit systems operating.

By 1970, over three-fourths of the trips were on publicly owned systems. Today public systems carry over 90 percent of the passenger load.

Year transit became a public responsibility (selected major cities)

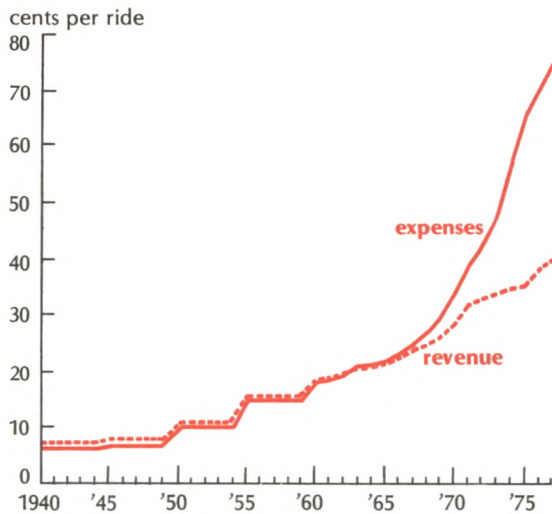
<u>City</u>	<u>Year</u>
Seattle	1911
San Francisco	1912
Detroit	1921
New York (rail)	1932
Cleveland	1942
Boston	1947
Chicago	1947
Los Angeles	1958
Oakland	1960
New York (bus)	1962
St. Louis	1963
Pittsburgh	1964
San Diego	1967
Kansas City	1969
Philadelphia	1970
Baltimore	1970
Atlanta	1972
Washington	1973
Houston	1974
Milwaukee	1975

SOURCE: Chicago Transit Authority.

Although these systems continued to raise fares in an effort to hold down the subsidies needed to maintain service, farebox receipts have increasingly fallen behind costs and subsidization has grown. The operating deficits covered by tax dollars have probably been significantly higher than shown by available data, since many government accounting systems do not include all capital costs—some omitting them entirely.

During this transition from private to public ownership, the burden of subsidizing public transit was shouldered mainly by local government. There was some assistance from the states, still less from the federal government. Until 1973, most of the support for subsidizing public transit came from people that saw public transit as an essential service to city dwellers that could not afford a car or were too elderly or otherwise physically unable to drive. Tax support for public transit was seen as one essential element of the effort to help

Farebox does not keep up with transit costs



Data: American Public Transit Association

the least affluent segments of society. This view restrained fare increases even in those few large cities where public transit remained the principal means of transit to the central business district for most of the population. The concept that general welfare might be served by encouraging public transit as a replacement for the automobile played almost no part in the initial decision to subsidize public transit.

Environment and energy

Awareness spread from a few experts to influential segments of the general public that air pollution was a serious and growing problem in the nation's large cities by the mid-1950s. Furthermore, the automobile had been pinpointed as the main source of pollution in the Los Angeles basin. California quickly became the leader in what grew into a national program to cut air pollution—a program that has since burgeoned into a major effort to protect all aspects of the natural environment. The principal legislative effort has been aimed at reducing emissions from automobiles and other pollution sources. Although there was some recognition that substitution of public transit for auto use

could lower pollution levels, this potential was not a major consideration in the development of environmental legislation. It has since become a useful tool in the drive for federal funding of public transit.

No single measure can be used to compare the pollution produced by use of public transit with the automobile. The gasoline-fueled bus produces emissions similar to the automobile but the diesel bus or railcar behaves differently. The generation of power for the large segment of electrically propelled transit poses still different problems for the environment. Nevertheless, the total pollution produced is roughly proportional to the amount of fuel consumed. A typical transit bus will use only 5 to 10 percent of the fuel per passenger mile used by a typical automobile when carrying large passenger loads. Even in off-peak periods the potential for reduced pollution is substantial. For electric systems, the fuel savings are similar, and possibilities for controlling emissions at one large power-generation source are better than can be achieved with a large number of separate small engines.

The relative fuel efficiency that provides public transit with an edge over the automobile is also its strongpoint in this period of rapidly increasing energy costs. Attention began to be focused on public transit for its energy saving potential during and immediately after the Arab oil embargo. As in the environmental area, however, the possible contribution of public transit in saving energy had not attracted broad public support for federal funding, at least not before long lines again appeared at the gasoline pumps. The potential for saving energy was, at best, only a contributing argument in the push for federal participation in subsidizing public transit.

Federal support—a growing factor

While environmental and energy issues did not, in themselves, attract enough interest in Congress to lead to funding for mass transit in the 1960s, they served to buttress the cases of cities and states seeking relief from some of

the burdens they had shouldered in taking over mass transit from private operators. Public transit, moreover, began to be seen as potentially important in arresting, perhaps reversing, the decline of the old central cities. Small amounts of federal support were obtained in the latter half of the 1960s, particularly with the creation of the Urban Mass Transit Administration in 1968. After 1970, federal funding grew rapidly, reaching the point where the Surface Transportation Act of 1978 authorized spending nearly \$3 billion a year for five years. Although actual appropriations and disbursements never reached the full authorized level, the federal government's spending on public transit since 1975 has amounted to more each year than state and local spending combined. Most federal spending has financed capital purchases and major maintenance and renovation, but some funds, particularly after 1974, have gone to cover operating expenses.

In addition to funds directly appropriated for public transit, some federal funds originally intended for urban expressway links in the Interstate System have been transferred to transit use. About \$1.6 billion funds have been obligated for transit use by the end of fiscal 1978.

Can transit pick up the load?

The last census data available (1975) show that only 6 percent of the trips to work were made by some form of public transportation. Nearly as many people, 4.7 percent, walked to work. Nearly 85 percent went to work in a private car or truck—and more than three-quarters of these drove alone. If even one of every fourteen drivers were lured out of his car by public transit, the rush hour transit load would be doubled.

While the transit industry once accommodated far more riders than even this small shift out of the auto would produce, the capacity simply does not exist today. As riders abandoned public transit, fleets of transit vehicles shrank, leaving most of the nation's systems operating close to capacity during peak hours. The Chicago Transit Authority

Federal grants to large urban areas by Urban Mass Transit Administration (cumulative through fiscal 1978)

<u>Area</u>	<u>Grants</u> (millions of dollars)	<u>Rank order</u> <u>of area by</u> <u>population</u>
New York	2,084	1
Atlanta	852	20
Chicago	851	3
San Francisco	594	6
Boston	536	7
Baltimore	495	14
Philadelphia	389	4
Los Angeles (including Orange County)	201	2
Pittsburg	168	11
Washington	154	8
Cleveland	138	9
Seattle	118	17
Miami	115	18
Detroit	94	5
Minneapolis-St. Paul	86	12

SOURCE: Urban Mass Transit Administration.

(CTA) regularly has nine out of ten of its buses in service during the rush and nearly as many of its rail cars (88 percent). Any sudden big move from cars to the CTA would swamp the system. Until more equipment could be obtained, the only step that could be taken would be to ask businesses to stagger working hours. Most large metropolitan areas with old established transit systems have traffic flows designed to move passengers in and out of the central business district. Despite the overall decline in riders, these systems have retained a major share of traffic in and out of the central city core. These systems could, with little or no expansion, handle a large proportion of the people that now drive to the central business district. In Chicago, for example, nearly 90 percent of the daytime population accumulation in the Loop and its immediate environs arrive on mass transit. More than half these people use the CTA, either rail or bus. Nearly all the rest come on commuter rail lines, only about 1 percent using suburban bus lines. If a fifth of the drivers going to the Loop switched to public transit, this transit load would increase less than 3 percent.

If transit systems are to make a significant contribution to the energy conservation program, they must be expanded to provide service not now available—not to intensify existing service. Existing systems in large metropolitan areas need to be reoriented to traffic patterns that drivers now use to bypass the city core entirely. In metropolitan areas where well-used transit systems do not now exist, fast convenient service must be provided. Some transit specialists have suggested that a reasonable goal for the administration's ten-year program might be to double the number of riders. Because of the expected increase in the labor force by 1990, however, the share of work trips on public transit would rise from the 6 percent of 1975 to about 8 percent and the number of people driving to work would still have increased.

Nor is it clear that the capacity to handle twice as many riders can be acquired for \$4 billion. About 4,000 buses must be bought every year to maintain the fleet at its present size. To double the fleet in ten years requires that 9,200 buses be bought every year. These buses alone would cost over a billion dollars a year in 1978 dollars. To double the size of the heavy rail car fleet used by transit systems (excluding the needs of the commuter railroads) would add about another half billion dollars a year. And if fares were not raised to carry a larger share of the operating costs than they do today, another billion dollars a year would be needed for operating subsidies. Major capital costs are going to be incurred for the cars, rails, right-of-way, and related construction for the several cities like Boston and Pittsburgh that are now working on new or expanded light rail systems. New heavy rail systems are also well under way. Atlanta will only have about a fourth of its planned system operating when the present phase is completed. Washington, D.C., has about a fourth of its total planned system in operation. Many cities have more modest plans, but pressures to expand transit systems beyond current programs would place the total cost beyond the existing UMTA funding level of about \$2.7 billion, and probably beyond the administration's \$4 billion proposal.

Section 504—a new “Catch-22”?

In addition to the outlays already planned to expand public transit, another major cost factor may have to be taken into account. Section 504 of the Rehabilitation Act of 1973 requires nondiscriminatory treatment of the handicapped. On May 31, 1979, the Department of Transportation issued regulations to implement section 504. The regulations must be met by all transit systems receiving federal funds. The department has interpreted the statute to mean that all transit systems, whether bus or rail, must provide accessibility to people in wheel chairs. These regulations would not raise costs much if they applied only to new systems. The transit industry is concerned, however, about what it sees as a tremendous cost for retrofitting existing rapid transit stations, railcars, and buses to meet the requirements. The industry and the Department of Transportation have apparently agreed that no equipment now exists to close the gap between railcars and the platform so wheelchairs can board trains safely. While equipment has been built to lift wheelchairs onto buses, its reliability, particularly in winter, is doubtful. Providing elevators in many subway and elevated stations also presents major engineering and cost problems.

The department estimates that the cost of meeting its requirements will not substantially exceed a billion dollars. The American Public Transit Association, speaking for the industry, estimates that the cost will exceed the department's estimate several times. The Chicago Transit Authority estimates the cost of meeting the requirements on its system alone to be about a billion dollars.

The association has filed suit to force Transportation to revise the regulations or set them aside entirely until complete cost and environmental impact studies are prepared. The matter is now before the courts. If the association is right in its cost estimates and the announced regulations remain in force, a large part of the funds intended for expansion of the nation's public transit network will have to go to meet these requirements.

Bank holding companies: Competitive issues and policy

Anne S. Weaver

Many important policy issues regarding bank holding company mergers and acquisitions have come before the Board of Governors in the past few years. In many ways, the past two years have seen subtle changes in Board policy regarding the competitive issues raised by bank holding company applications.

New interpretations have begun to emerge regarding several competitive issues:

- Horizontal acquisitions
- Chain banking
- Geographic and product market definitions
- Potential and probable future competition

• Mergers of bank holding companies
Considerations of convenience and needs have also faced new interpretations.

In an effort to identify these issues in areas where policy is not settled, this article analyzes recent decisions on bank holding company applications.

Horizontal acquisitions . . .

The Board has always responded negatively to horizontal bank mergers and holding company acquisitions—horizontal meaning a holding company's acquisition of an existing bank in a market area where it already competes. This type of acquisition is generally objectionable because a competitor is eliminated from the market, increasing market concentration.

Some decisions handed down by the Board have left the impression that there might be less opposition to certain types of horizontal acquisitions than in the past. In August 1976, the Board denied the application of Michigan National Corporation, fourth largest banking organization in the Detroit market, to acquire Peoples Bank &

Trust Company (NA) in Trenton. Michigan National Corporation controlled about 8.5 percent of the market's deposits. Peoples Bank controlled about 0.7 percent. (September 1976, p. 795.)*

In contrast, a few months later, the Board approved the application of Trust Company of Georgia to acquire Security National Bank in Smyrna, Georgia. With approval of the Trust Company of Georgia application, the resulting organization held 14.3 percent of the deposits in the Atlanta banking market, making it the third largest. (January 1977, p. 77.)

There were extenuating circumstances, however. Acquisition of the Smyrna bank was the smallest vehicle open to Trust Company for entry into Cobb County, one of eight counties making up the Atlanta market. Trust Company was prohibited under state law either from branching into Cobb County or from setting up a new bank there.

Though influenced by these special factors, the case may illustrate the Board's willingness to approve certain horizontal acquisitions. Shortly after approving the Trust Company of Georgia application, the Board approved several other horizontal holding company applications.

Huntington Bancshares, for example, the seventh largest banking organization in Ohio, acquired Central National Bank of London, Ohio. Huntington already controlled the second largest bank in the Columbus market, with a 23.2 percent market share. Central National ranked twelfth with 0.7 percent of the deposits in the market. (October 1977, p. 932.)

Governor Coldwell dissented from this approval on grounds that existing competi-

*All citations are from the *Federal Reserve Bulletin*.

tion would be eliminated. He was also unable to conclude that there were overriding public benefits.¹

After the Huntington approval, however, horizontal acquisitions were more likely to be approved, provided the resulting organization did not control more than about 20 to 25 percent of market deposits and was not the largest banking organization. This observation is consistent with the Board's denial of Texas Commerce Bancshares' proposed acquisition of Bexar County National Bank of San Antonio. Though Texas Commerce was the largest banking organization in the state, it would have held less than 10 percent of the total deposits in the San Antonio banking market. (May 1977, p. 504.)

To some observers of the holding company movement, the Huntington and Trust Company cases may have indicated the direction of future Board decisions.

Despite these approvals, however, the Board has remained concerned over horizontal acquisitions in highly concentrated markets. Its position is reflected in its denial of the Isabella Bank & Trust Company application to merge with the Shephard State Bank. Both banks compete in the Mt. Pleasant, Michigan, banking market. (November 1977, p. 1022.)

Isabella Bank ranked first in the market with 31.8 percent of the deposits. Shephard State ranked fourth with 8.0 percent. Together, they would have held 39.8 percent of the deposits in a market where the four largest banking organizations already held 88.9 percent.

Department of Justice guidelines used in antitrust suits define a highly concentrated market as one where the four largest organizations control more than 75 percent of the market. These guidelines used in defining industrial concentration have been referred to by the Board several times as indications of

the potentially adverse effects of additional concentration of banking resources.

. . . and a special case

An unusual situation regarding competition comes up when a bank faces imminent financial problems. Under Section 3 of the Bank Holding Company Act, the Board has to consider whether the adverse competitive factors of an application may be outweighed by either convenience and needs factors or financial and managerial considerations.

Such a situation came up in late 1976, when Manufacturer's National Corporation, the fourth largest banking organization in Michigan, sought to acquire the National Bank of Southfield. Both organizations headquartered in the Detroit banking market, Manufacturer's holding 15.1 percent of the deposits and Southfield holding 0.5 percent. (January 1977, p. 75.)

The four largest banking organizations in the market controlled 71.5 percent of the deposits. As Manufacturer's ranked third, approval of its application would move the market share of the four largest organizations in the direction of the 75 percent believed to define a concentrated market.

But while the Board conceded that the acquisition would have substantially adverse effects on competition in the Detroit banking market, it approved the application on grounds that the Southfield bank could not continue serving the public if the application were denied. Convenience and needs outweighed the adverse competitive effects. In this case, the problems of a weak bank clearly called for special treatment.

Chain banking

Chain banking means control of two or more banks by the same people, whether an individual or a group. Chain relationships have been important in the Seventh District because they provide a means of circumventing multibank holding company and branch banking restrictions in states that prohibit these organizational forms.

¹In several strong dissenting statements, Governor Coldwell has advocated that the Board take a stricter view of the adverse competitive effects of the elimination of existing competition and increased concentration of banking resources.

One objective of the Bank Holding Company Act of 1956 was the prevention of undue concentration of bank resources in holding companies. Speaking before a subcommittee of the Senate Committee on Banking and Currency in 1966, William McChesney Martin, Jr., then chairman of the Board of Governors, discussed proposed revisions to the act to include one-bank holding companies. Regarding competitive concerns surrounding holding company activities, Chairman Martin said:

It may be asked why the act now covers only companies and does not apply to control exercised by an individual. It is, of course, possible for an individual to achieve the sort of domination of a banking market that the act seeks to prevent a company from obtaining. But the need to regulate this kind of activity on the part of individuals is not as great as it is for corporations because individuals generally are more limited than are corporations in their ability to attract capital for expansion, and because control by individuals generally is diffused when they die. The decision to cover corporations but exempt individuals entails difficulty in deciding whether to cover holdings by groups of individuals associated together in some form other than a corporation.

Now, 13 years later, the Board is forced to face these definitional problems more directly. Left unchecked, chain arrangements would allow one-bank holding companies with common owners to be operated as multibank holding companies, without the regulatory restrictions imposed on multibank organizations.

In May 1977, the Board denied an application by Mahaska Investment Company to form a one-bank holding company by acquiring Farmers Savings Bank, Fremont, Iowa. Mahaska Investment Company's principal was already affiliated with the largest bank in the market. That bank held 47.7 percent of the deposits. Farmers Savings ranked third among

the five banks in the market, holding 13.5 percent of the deposits. If the proposal had been consummated, the applicant would have indirectly controlled more than 61 percent of the market deposits. (June 1977, p. 579.)

The Board could not ignore the identity of interests in Mahaska and the affiliated banking organizations. The anticompetitive effects of this proposal were evident and the application was denied.

The Board expressed the hope, in fact, that denial of the application would result in Farmers Savings becoming independent of the applicant and, thereby, an independent competitive force. By not allowing a relationship to be formally established between the banks, the Board hoped more procompetitive effects would follow.

Similar applications in the Seventh District have also been denied, one where an applicant's principals were already affiliated with a bank in the same market and approval of the application would have resulted in an organization controlling a significant share of the market deposits, and would have sanctioned an arrangement that was anticompetitive in its origin. (December 1977, p. 1083; March 1979, p. 256; April 1978, p. 317.)

Market definition

Several factors are used by the Board and the Reserve Banks to determine the geographic banking markets for bank holding company formations, mergers, and acquisitions. With no focus on a specific bank, a geographic area is defined as a relevant market based on the demand and supply of banking services in the area.

Demand deposits and small to medium-sized commercial loans are emphasized in an effort to pinpoint the location of customers for bank services. These services, being more specifically associated with banks than many other services, are believed to affect locally limited customers most. Large CDs and large commercial loans are not emphasized.

Applicants define their service area, based on where they derive at least 80 percent of their deposits. Since information on small

to medium-sized commercial loans is not readily available, the analysis usually focuses on demand deposit accounts.²

By use of information on commuting, shopping and other trade patterns, bank advertising, and general economic conditions in the area, the market can be defined even closer. Prices and services offered by banks in the area are analyzed to see whether changes in prices and services are transmitted from one bank to the next. Discussions with bankers in the area also give insight into the competitive environment.

Natural and political boundaries are taken into consideration. Final delineations often approximate SMSAs (Standard Metropolitan Statistical areas), counties, and RMAs (Ranally Metro areas). This is because data are usually available for these areas. RMA data, being based primarily on commuting patterns and population densities, are particularly useful.

Market definition has been an issue in several cases in the district. Two banks are considered to be in the same geographic market if price and service changes and other competitive practices of one bank cause significant competitive reaction on the part of the other. The Bank Holding Company Act prohibits the Board from approving bank holding company acquisitions where the competitive effect in any section of the country may be substantially adverse. One of the most crucial market definitions in the Seventh District evolved from National Detroit Corporation's proposed acquisition of Brighton State Bank. (June 1977, p. 583.)

Up until then the only applications the Board had considered in the Detroit market were to acquire banks near the center of the area. As Brighton was outside but on the fringe of what had been defined as the market, the Board had to rely on commuting data to determine if the previous market definition was the proper one to use in analyzing the competitive consequences of this proposal. As urban areas grow, banking

markets expand to reflect changing work and social habits.

Looking at commuting patterns, population trends, shopping habits, and advertising patterns—all reflecting changes in the area—the Board expanded its definition of the Detroit market and denied the application on grounds that the acquisition would have eliminated a significant amount of existing competition in the Detroit market.

Product definition

How broadly the product market of banking should be defined has been debated since the early 1960s. The Supreme Court has consistently found that commercial banking is a unique line of commerce, rejecting the notion that banks compete with other financial institutions, such as S&Ls, mutual savings banks, and finance companies. As a result, bank mergers and acquisitions have had to be analyzed primarily on the basis of commercial bank competition in a market.

Several times in the past few years, the Board has faced the issue of thrift institutions expanding their products and services, as for example, by introducing NOW accounts.

In approving a bank holding company merger in Connecticut in 1974, the Board took into account the importance of mutual savings banks in that state and disagreed with a Department of Justice recommendation that the application be denied. There were more mutual savings banks in Connecticut than commercial banks, and their deposits exceeded the deposits of commercial banks. (May 1974, p. 375.) Taking both mutual savings banks and commercial banks into account, the Board ruled that approval would not change the applicant's ranking in the market and that statewide concentration would not be increased.

In a recent case in New Hampshire, the Board again commented on the effects of savings banks on competition and the concentration of resources:

In this connection (concentration of resources) the Board notes that three of

²P. R. Schweitzer, "Definition of Banking Markets," *Banking Law Journal*, September 1973, page 745.

New Hampshire's four largest savings banks operate in the Manchester banking market, that together they hold almost twice the amount of market deposits held by all 11 commercial banks in the market, and that each one holds more deposits than any one of the commercial banking organizations in the market. While the Board continues to view commercial banking as a distinct line of commerce, the Board recognizes that the presence of thrift institutions in the relevant banking market, particularly in New England where thrift institutions have certain expanded lending and deposit-taking powers, is one of the factors that may be taken into account in analyzing the competitive effects of a particular acquisition. (December 1978, p. 967.)

In another order, involving a New York holding company's proposed acquisition of a bank, the Board said:

[C]ommercial banks and thrift institutions do compete in the marketing of certain types of services. The Board believes that the overlap of certain services offered by thrift institutions and commercial banks is not so great at this time as to treat the two types of financial institutions as if they were the same. The Board continues to be of the view that it is the cluster of products and services that commercial banks offer that makes commercial banking a distinct line of commerce for purposes of analyzing the competitive effects of the subject proposal. (November 1978, p. 894.)

With the increase in the package of services provided by thrifts, then, the Board has broadened its view of commercial banking as a distinct line of commerce. In looking at the effects on statewide concentration, it has considered thrifts in some instances.

But in assessing the competitive effects of holding company acquisitions of nonbank

subsidiaries, the Board has followed a different line of reasoning. In ruling on applications of bank holding companies to acquire consumer finance companies, for example, the Board has taken the position that banks and finance companies compete directly. In an order denying the acquisition of Public Loan Company by Bankers Trust New York Corporation in 1973, the Board stated:

The contention that commercial banks serve a different clientele from finance companies is becoming less and less valid as commercial banks place more emphasis on retail banking and seek to attract a greater diversity of customers. There appears to be a substantial class of customers being served by both institutions consisting of high-risk margin clientele of commercial banks and the low-risk margin customers in the case of finance companies. (September 1973, p. 694.)

Another example of asymmetric product market definition has come up regarding bank holding company acquisitions of mortgage banking companies. As recently as June 1979, the Board determined that banks and mortgage companies compete directly in some aspects of the mortgage banking business. (April 1978, p. 321; July 1979, p. 566.)

Potential competition

The doctrine of potential competition hypothesizes that outside competitors exert procompetitive influences on the market behavior of companies already in a market. This is because companies in the market see outsiders as threatening to enter. The hypothesis, then, rests on two assumptions:

- That potential entrants will base their decisions to enter on the prices and profits of banks already in the market.
- That to discourage new entry, banks in the market will respond to the threat of competitive entry by following pricing policies that do not fully exploit their oligopoly posi-

tion (they will tend to hold their prices under what they might otherwise charge).

Increasing the number of banks competing in a market tends generally to improve the performance of the market, with benefits to the public. For this reason, the Board is concerned with the probability that a holding company will enter a market by the most procompetitive means. If, instead of acquiring a market leader, the organization enters by acquiring a foothold bank or, better yet, by establishing a new bank, competition will be intensified. This is the thinking behind "probable future competition."

Governor Wallich has taken this position several times in dissenting against some approvals of applications by the Board's majority. A study done in 1977 indicates denials based on arguments of probable future competition led 71 percent of the applicants to use foothold entry or to establish new banks within six or seven years after their applications were denied.³

A landmark decision was handed down in December 1973 when the Board denied an application by First International Bancshares to acquire Citizens First National Bank of Tyler, Texas. Under what came to be known as the "Tyler Doctrine," the Board declared it would not look favorably on any of the five largest banking organizations in Texas acquiring the largest banks in the state's secondary banking markets. The basis was thus laid for denials over the next two years of applications that would have eliminated significant potential and probable future competition. (January 1974, p. 43.)

In April 1977, however, the Board reconsidered its position, allowing Texas Commerce Bancshares, a Houston-based company, to acquire Capital National Bank in Austin. The third largest banking organization in the state, Texas Commerce held 6.9 percent of the deposits. Capital National was the second largest bank in Austin. It held 21.4 percent of the deposits in that market and 0.7

percent of deposits statewide. (May 1977, p. 500.)

The Board explained that although it denied some of the largest banking organizations in Texas acquisitions of leading banks in secondary markets, its concern over the increased concentration of resources and increased disparity in the size of Texas banks no longer seemed warranted. Concentration had not increased significantly in Texas. It was low, in fact, compared with other states.

With this acquisition, Texas Commerce became the largest banking organization in the state and large banking organizations across the country were signaled that the Board would be less likely in the future to block efforts to acquire leading banks in markets where the organizations had not been represented.

Several applications involving acquisitions similar to that of Capital National were approved over the next year. Applicants ranking among the three largest banking organizations in their states were allowed to acquire leading banks in new markets. (October 1977, p. 932.) Only in one instance has an application been denied recently on the basis of potential and probable future competition. And even in that case the Board later reversed its decision.

Northwest Bancorporation, the largest banking organization in Iowa, applied to acquire the First National Bank of Fort Dodge. Northwest held 6.1 percent of the deposits in Iowa. The bank at Fort Dodge held only 0.5 percent of the deposits statewide, but it was the largest bank in its market, holding 30 percent of the deposits. The three largest banks held 85 percent of the market deposits. Northwest's closest subsidiary was 87 miles from Fort Dodge. (June 1977, p. 585.)

Because research showed the market would support another bank and Northwest had the resources to enter with a new bank, the application was denied. Approval would have eliminated potential and probable future competition.

The Board reconsidered the application a few months later, however, when it was shown that the Fort Dodge market was not at-

³Stephen A. Rhoades, "Probable Future Competition and Predicting Future Entry in Bank Merger Cases," to be published in *Antitrust Bulletin*.

tractive for new entry. County population had declined in the first half of the 1970s, and an industrial park that had been the main source of expected growth in the area had run into difficulties and never opened. As the market was no longer considered overly attractive for entry with a new bank, the Board decided the proposed acquisition would not have any substantially adverse effect on potential and probable future competition. It approved the acquisition.

Governor Wallich dissented, however, saying Board decisions in 1977 reversing the Tyler Doctrine had added to the concentration of banking resources in Texas, Michigan, and Iowa. They also served to foster similar acquisitions in the future. Specifically, his concern was that approvals in these situations could cause holding companies "to eschew *de novo* or foothold entry into highly concentrated markets in the belief that the Board would approve less procompetitive means of entry."

Evidence to support the concept of probable future competition is scant. Rhoades has shown that banks and holding companies blocked from acquiring leading banks in markets will enter either through the formation of new banks or acquisition of smaller banks that give them a foothold in the market. There is some evidence that *de novo* entry improves the performance of banking markets.⁴ There is no compelling empirical evidence, however, to show that foothold entries improve the performance of banks in the market.

Holding company mergers

Mergers of bank holding companies that would not eliminate existing competition have met little resistance from the Board. Texas Commerce Bancshares, for example, was allowed to acquire a one-bank holding company with 21.4 percent of the deposits in its market, making Texas Commerce the

largest bank holding company in the state. (May 1977, p. 500.)

Three bank holding companies acquired other holding companies in the Seventh District in late 1977 and early 1978. These acquisitions seem to reflect the current direction of holding company activity.

In December 1977, the Board approved Pacesetter Financial Corporation's acquisition of Western Michigan Corporation and its two subsidiary banks. Although Pacesetter moved up from sixteenth to the fourteenth largest banking organization in Michigan, no existing competition was eliminated. (January 1978, p. 35.)

A month later, the Board approved the merger of the ninth and eleventh largest banking organizations in Michigan. Consummation of the proposal made First American Bank Corporation the fifth largest holding company in the state. Although First American would control 3.9 percent of the deposits statewide, banking subsidiaries of the merging companies competed in different markets, causing the Board to conclude that no existing competition would be eliminated. Governors Wallich and Partee joined in dissenting against approval of the merger, saying probable future competition would be eliminated. (February 1978, p. 119.)

Also in January 1978, the Board approved Central National Bancshares' acquisition of Associated Bank Corporation, Mason City, Iowa, boosting Central National's rank from the fifth largest banking organization in Iowa to fourth. (February 1978, p. 113.)

The Board seems inclined to continue approving mergers of this kind, using the same criteria as for the acquisition of banks—which means applications most likely to be denied are those involving existing competition between the two companies. The frequency of this type of application can be expected to increase, moreover, as the number of attractive independent banks that can be acquired declines.

Another illustration of this type of merger is the Board's September approval of First City Bancorporation of Texas' merger with First Security National Corporation. In its

⁴A. S. McCall and M. O. Peterson, "The Impact of *De Novo* Commercial Bank Entry," *Journal of Finance*, December 1977, page 1587.

order, the Board reiterated its concern for competitive issues. First City was the second largest banking organization in Texas, with 8.2 percent of the deposits. First Security was the seventeenth largest, with 0.6 percent of the deposits. Combination of the two companies made First City the largest banking organization in the state. The order stated:

The Board continues to monitor statewide banking structures in general, and more specifically, the size disparity between large banking organizations Statewide and the smaller regional banking organizations. The Board is concerned with the possibility that continued approval by the Board of acquisition or merger proposals involving large Statewide and relatively sizeable banking organizations may perpetuate this size disparity and increase concentration ratios.

. . . It should be noted that it is not the Board's intention to suggest by this Order that it will generally approve the acquisition of leading local market competitors by major Statewide organizations. To the contrary, this case approaches the limits in terms of size (First Security, \$413.0 million in deposits) of the banking organization being acquired and the effects on competition and concentration of what the Board will regard as approvable in light of present structure and legal considerations. (Order issued September 10, 1979, to be published.)

Convenience and needs

Although convenience and needs are not usually the primary considerations in a Board decision, the Board does expect applicants to comply with the service changes proposed in their applications. When Commerce Bancshares, Inc., Kansas City, Missouri, applied in April 1977 to acquire Farmers State Bank, St. Joseph, Missouri, the Board found adverse competitive factors. It also found,

however, in reviewing a previous Commerce Bancshares application, that the company had not made the improvements in public benefits it promised. The bank it acquired had not made the significant changes in its agricultural lending program that Commerce Bancshares proposed in its application. (May 1977, p. 494.)

Since the same promise of improved services was made in the application under consideration, the Board found that, on the basis of Commerce Bancshares' record, little weight could be given to these promises. Considerations of convenience and needs, therefore, did not outweigh the adverse competitive effects.

With passage of the Community Reinvestment Act, considerations of convenience and needs become more important. The act is intended to encourage financial institutions to meet the credit needs of their entire local community, including low and moderate-income neighborhoods. Applicants seeking Board approval under Section 3 of the Bank Holding Company Act are asked to provide certain information on the lending characteristics of their affiliated banks. Regulation BB section 228.7 provides several areas of discussion applicants can use to illustrate the lending performance of affiliated banks. Organizations asking permission to open branches are also required to furnish community reinvestment data. The same data must also be submitted for banks being acquired by holding companies where there is an officer or stockholder interlock.

The Board then evaluates the performance record of the whole organization to see if the institutions have been meeting the credit needs of their entire community, consistent with safe and sound banking practices. If they have not, the applications can be denied.

Summary

The Board of Governors' stand on several competitive issues is still evolving. The Board is constantly reassessing these issues in the light of new findings in bank research. And as

the composition of the Board changes, new perspectives are introduced into the process. Board decisions concerning holding companies lead, nevertheless, to several conclusions about these issues and trends in Board policy regarding the competitive aspects of bank holding company applications.

- **Horizontal acquisitions.** The Board still takes a critical view of holding company acquisitions in the same geographic market. Decisions involving horizontal acquisitions that tended to increase the concentration of banking resources in a market area and eliminated existing competition left the impression in some quarters that the Board's stand against these acquisitions might not be as rigid as it was. As a result, large bank holding companies could be expected to try to increase their influence in markets where they are already established.

Actually, however, the pendulum may have already started swinging in the other direction. In August, the Board denied a merger of the tenth and thirteenth largest banking organizations in Missouri. Both competed in the St. Louis market, with market shares of 3.2 percent and 2.3 percent of the deposits. The resulting organization would have been the fourth largest in the market. The Board stated:

In the past the Board has authorized combinations of relatively substantial competitors in various markets when it was persuaded that the effects of the combinations would be minimal, that offsetting benefits of value were likely to be achieved, or that less anticompetitive means of expansion were not reasonably available to the organizations. It is the Board's view that a proposed combination of two banking organizations that are direct competitors of similar orientation within a metropolitan market and are both of a size to have achieved economies of scale and have management, or sufficient resources to attract capable management, that will permit each to

continue independently as an aggressive competitor in that market, normally would have serious anticompetitive effects and should not be approved except in compelling circumstances. (Order issued August 27, 1979, to be published.)

- **Chain banking.** The Board has taken a strong position in opposition to chain banking arrangements with anticompetitive effects. Its current policy is not to sanction the formation of bank holding companies that foster serious anticompetitive chain banking arrangements. The scope of its influence over director interlocks was broadened recently with passage of the Depository Institution Management Interlocks Act.

- **Market definition.** The Board and Federal Reserve banks still face problems with the definition of banking markets both with respect to geographical markets and product lines. The Board has relied extensively on commuting patterns in defining geographic banking markets. It has also taken thrift institutions into account in weighing the competitive effects of proposed acquisitions.

- **Potential competition.** The Board no longer accepts the argument of potential competition as the sole reason for denying the acquisition of large banks by the leading holding companies in a state to the extent it once did.

- **Holding company mergers.** Acquisitions of bank holding companies by other bank holding companies are becoming more common. The Board has not taken the position that these acquisitions are, in themselves, substantially adverse in their competitive effects.

- **Convenience and needs.** While the Board's main focus is rarely on considerations of convenience and needs, it has recognized in one instance that an applicant's record of fulfilling previous convenience and needs promises should be considered in deciding an application. With the Community Reinvestment Act, issues of convenience and needs could become more important in deciding applications.