annual report

BUSINESS REVIEW

FEDERAL RESERVE BANK OF PHILADELPHIA

Introduction To The Federal Reserve System

The Human Lag

Regional Economy Loses Some Zip In '69

FEDERAL RESERVE BANK OF PHILADELPHIA

JANUARY 1970

The beginning of a new year has had special significance for members of the Board of Directors of the Philadelphia Reserve Bank. For several years, Karl R. Bopp, President of the Bank, has taken the occasion to discuss with them his views of the purposes and functions of the Federal Reserve System.

Not only have men who have newly joined the Board found these talks a stimulating introduction to their terms of service, but other directors and staff have looked forward to them as an opportunity to gain new insights into Karl Bopp's thinking. For these presentations have been the result of an evolutionary process. They are built on a firm foundation of study and teaching of central banking, but they have changed over time as a result of Mr. Bopp's experiences in nearly three decades as a practicing central banker.

On the following pages, therefore, you see a still shot of what is essentially a moving picture. That is why there is little here on the question of the proper place of the Federal Reserve System in Government. Although he has devoted more time and effort to the question than probably any other student or practitioner of central banking, Mr. Bopp is not satisfied with what he said a year ago on this issue.

Hopefully, he will find time to develop a position in retirement, beginning in March. Undoubtedly, he will see other questions in a somewhat different light. In the meantime, the officers and directors of the Bank are happy to share these thoughts, recorded essentially as they were presented orally.

BUSINESS REVIEW is produced in the Department of Research. Ronald B. Williams is Art Director. The authors will be glad to receive comments on their articles.

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Introduction To The Federal Reserve System

A Message to New Directors of the Federal Reserve Bank of Philadelphia

by Karl R. Bopp, President

IMAGES OF THE BANK

The Federal Reserve Bank of Philadelphia has many images. The casual pedestrian on Chestnut Street may imagine that we are a cold and forbidding institution because the building is made of marble and bronze. The building is a widely recognized architectural masterpiece of Paul Cret—who also, incidentally, was the architect of the Federal Reserve Board building in Washington, D.C. The external coldness is muted by the pleasant and attractive garden. The garden is enclosed in order to assure that it will remain pleasant and attractive.

Those who pass by do not see a second image because it is *inside*. Inside are 966 employes and 36 officials, each with achievements, hopes, ambitions—and frustrations. Each is an important person in his own right. I hope you come to know us as individuals in due course. No organization chart can reveal the spirit that motivates us. If I were asked to squeeze that spirit into a sentence, I would say we try always to take our jobs seriously but never, hopefully, ourselves.

It is a continuing challenge to help each member of our staff derive satisfaction from doing his job well. The overwhelming majority of us are engaged in operations that are scarcely more than mentioned as service chores in the standard college textbooks on money and banking. We operate around the clock with three shifts in the collections, the guards, and the building departments.

We have 247 people who receive, sort, list, and send checks; 111 who receive, count, and ship cash; 89 who are directly concerned with our responsibilities as fiscal agent for the United States; 48 in accounting; 43 in machine tabulating—or electronic data processing, as the professionals now call it. We have only 6 in the credit department. That fact alone demonstrates that though the word bank is in our title, we are not an ordinary bank. So does the fact that we have 40 engaged in the examination of our state member banks.

Roughly a fifth of the staff are engaged in what might be called internal services, including 19 in personnel—we have a deep sense of obligation to those who devote their working lives with enthusiasm to the public purposes for which we exist; some 74 in the building department—incidentally, we receive many compliments on our "housekeeping"; about 22 in the cafeteria—we also have a reputation for good food and absorb about one-half the cost as an important investment in employe morale and well-being; some 59 guards—frequent winners of trophies for marksmanship. The remainder are in public information, printing, purchasing, research, telephone, and vault. We officers have our silent partners, our secretaries, who prevent us from making many "bloopers."

We have 21 who audit this Bank continuously. The audit department is responsible directly to the board of directors and not to the operating management. This is as it should be. I, for one, feel much more secure under this organization than I would if the auditor were responsible to me. After all, we do run a big operation. For example, our vault contains $1.3 billion of valuables held in custody for member banks, $.6 billion of unissued Federal Reserve notes, and $13.5 billion of unissued Government securities. I am as anxious as you are to be sure all these valuables are indeed where they should be! I also want to be sure that we spend only such moneys as you, after careful study, have authorized in the budget.

In addition, the Board of Governors examines the Bank once each calendar year. The Board's examiners spend about three weeks going over the Bank from top to bottom. The chief examiner reports to the chairman of the board at the conclusion of his examination and separately to the first vice president and me. Incidentally, he reads the minutes of the board meetings to assure that the operating management acts under proper authorization.

I mention these matters at the outset because I have a greater appreciation of their importance than I had when I taught central banking without having had any practical experience.

A third image of the Bank is financial in character. We have assets of about $4.4 billion. A little more than 66 per cent is in U.S. Government securities. About 15 per cent is in gold certificates. Discounts and advances on the other hand represent only a very small fraction of our assets—illustrating, once more, that we are an unusual bank.

About 63 per cent of our liabilities are in the form of Federal Reserve notes or paper money; one-fourth in deposits, mostly the reserve accounts of member banks. Our paid-in capital is less than 1 per cent of our liabilities. Surplus is maintained at the level of paid-in capital. Total capital funds amount to approximately 2 per cent of total liabilities.

Although we are not operated for profit, we are a profitable institution. Current earnings last year were approximately $172 million. Expenses absorbed 7.3 per cent of earnings. Dividends, which are limited to 6 per cent of paid-in capital, absorbed only 1.2 per cent of current earnings. Excess earnings of about $157 million were paid to the U.S. Treasury.

These three images of the Bank are important. Bob Hilkert, other members of senior management, and I spend a great deal of our time and effort to assure that we have adequate and suitable physical facilities, an enthusiastic staff whose members derive satisfaction from discharging their responsibilities efficiently, and a solvent financial institution.

It is not primarily because of these characteristics, however, that you were willing to join our board of directors. The image to which you can contribute most is the one that will determine our destiny. It is the contribution that the Bank can make to national monetary policy.

OUR ECONOMIC SYSTEM

I should like to sketch for you what I conceive to be the primary function of the Federal Reserve System in our society. I shall be very general at the outset, but I shall highlight some more specific elements before I conclude.

The basic economic goal of every society is the maximum utilization of its human and other resources. Societies differ, however, with respect to the relationships that they feel should exist between the Government and the individual and, consequently, on how specific goals are to be determined and achieved.

In dictatorships, the State is supreme, and the individual is subservient to it. Essentially, the leaders decide who is to produce how much of what goods and services and for whom. They determine the division of time into work and leisure, the allocation of resources between investment and consumption.

In democracies, the State is the servant of the people. Through secret ballots, the electorate determine generally what role they want their Governments to play. Within the limits thus established, each individual decides his own priorities as to specific goals.

The difference in basic philosophies is reflected in the differing role that money plays in the two systems. In choosing among alternative goals and alternative ways of achieving them, even a dictatorship is concerned with costs. Since the factors of production—land, labor, capital—are not directly commensurate, some unit of account is needed. Money serves this purpose, even in a dictatorship. It also performs some auxiliary function of allocations within the limits determined by the general economic plan.

In democracies, on the other hand, money is the basic instrument of economic freedom through which individuals make their preferences known. Within very wide limits, each individual has freedom to choose how he will earn his money income. Through the democratic process of the secret ballot, citizens elect representatives to determine how and how much—and it may be considerable—shall be allocated to common purposes through the Government. Again, within wide limits, the individual is free to spend the remainder of his money income as he sees fit. He may also borrow to supplement his income, may save for the future, and may sell some assets and buy others as he sees fit to secure a maximum of welfare. This is a continuous process. Decisions of today are influenced by the past and by expectations of the future. Today's decisions also condition the choices of the future. In the process, individuals direct the use of resources to those purposes for which they spend money and away from those for which they do not.

Democratic societies want their economic system to achieve maximum utilization of resources while maintaining a maximum of individual economic freedom. Unfortunately, there is no inherent reason why the total of all the individual decisions to buy or sell, to borrow or lend, to consume or invest, to hoard or spend will add up to the exact amounts that are needed to utilize available resources.

What is desired is some mechanism that will induce individuals *of their own volition* to adjust their behavior so as to produce the desired total result.

In the United States, the Federal Reserve System is a vital part of this mechanism. It is, however, by no means the only part. Before I discuss monetary policy, therefore, I should like to mention briefly the other major parts. First, we need competitive and functioning markets. Second, we need appropriate fiscal policies. Last year governments at all levels purchased about 23 per cent of our entire output. How much and what government buys, as well as where it secures the funds it spends, obviously have far-reaching effects on the level and composition of total output. Third, we need appropriate management of the debt. We shall be discussing these problems frequently in board meetings.

Appropriate wage-price actions and fiscal and debt management policies contribute to stable economic growth. Inappropriate policies in these areas aggravate inflation or deflation and impede stable growth. The monetary authorities, unfortunately, cannot operate on the assumption that appropriate policies in all these

areas will be followed at all times. We must deal with developments as we find them and not as they might be.

THE ROLE OF MONETARY POLICY

I discuss monetary policy in greater detail because it is the area of our primary responsibility. It is easy enough to describe in very general terms the basic purposes of a flexible monetary policy. If governments, corporations, and individuals try to purchase more goods and services than can be produced at existing prices, their efforts will tend to increase not production but prices. It would be appropriate, therefore, to make credit more expensive and more difficult to secure. If, on the other hand, the public is not buying as much as can be produced at existing prices, easier and cheaper credit would tend to induce the public to step up its purchases and thus restore production and employment to capacity.

Even this highly simplified model indicates that monetary policy, which is designed to serve the long-run interest of the public, must move against short-run swings of sentiment, restraining when sentiment is too exuberant and encouraging when it is too pessimistic; hence, the money managers cannot expect to be popular. We devote considerable effort to being understood and, hopefully, respected.

Objectives of Policy

The real world, of course, is not so simple as the sketch I have given. Those who have been concerned with monetary policy have been interested in having it achieve a number of specific goals. It is helpful to tabulate a number of these goals and the direction in which monetary policy should move to achieve each under specified conditions.

Inspection will reveal the general relationships between the objectives listed in column 1 and the conditions itemized in columns 2 and 3.

I have included No. 5—*a fixed rate of interest*—and No. 6—*productive credit*—because they have actually been pursued by central banks and because even now they are advocated from time to time in influential quarters. My own view is that as early as 1898 the Swedish economist, Knut Wicksell demonstrated conclusively that maintenance of a rate of interest below the equilibrium rate would, in free money markets, lead to cumulative inflation. Conversely, a rate pegged at too high a level would lead to cumulative deflation. When I discuss credit operations of central banks I shall try to demonstrate that "productive credit" is a tantalizing notion that is quite irrational in real economic terms.

There would be widespread agreement that we would like to have our economic system achieve the first four objectives on the list. And, indeed, it is not unreasonable to suppose that frequently—perhaps even generally—the conditions listed in column 2 will occur at the same time, as will those in column 3. For understandable reasons a rising price level is often associated with rising employment and output and decreases in a nation's international monetary reserves.

When I first studied money and banking in the 1920's, we demonstrated with careful economic analysis that those objectives were internally consistent and achievable.

Stripped of qualifications, the essence of our analysis ran something like this. Suppose you start with an economy in recession. The recession would be characterized by less than full employment and falling prices (in those days the general level of prices, not merely individual prices, fell as well as rose). The lower prices would tend to increase exports and to reduce

OBJECTIVES AND RELATED PROGRAMS

	Conditions Calling for or permitting an easing of credit conditions or an expansion in monetary aggregates	Conditions Calling for or permitting a tightening of credit conditions or a contraction in monetary aggregates
1. FULL EMPLOYMENT	Less than full employment.	Jobs in excess of workers.
2. STABLE PRICE LEVEL	Declining prices.	Rising prices.
3. CONVERTIBILITY OF THE CURRENCY	High and/or rising primary internatonal reserves.	Low and/or declining primary international reserves.
4. ADEQUATE GROWTH	When growth is inadequate.	When growth is too rapid to be sustained.
5. A FIXED RATE OF INTEREST	When savings are inadequate.	When savings are excessive.
6. PRODUCTIVE CREDIT	Increase in monetary volume of output.	Decrease in monetary volume of output.

imports. The resulting favorable balance of trade would be paid for with gold. Thus, in recession all objectives would call for an easier monetary policy.

The purpose of the easier policy would be to stimulate demand. The initial impact of enlarged demand would be on volume, more employment and greater utilization of plant and equipment. Profits would rise because fixed costs would be spread over the larger volume.

As revival continued, operations would approach efficient capacity levels and unemployment would decline. As unused margins shrank, prices and wages would rise. The favorable balance of trade would be reduced and ultimately be succeeded by an excess of imports over exports. At this point all objectives would call for monetary restraint.

I must confess that the logic of this analysis was compelling to us in the 1920's. It still sounds convincing, granted the inarticulate premises.

Doubts concerning these premises arose in the early 1930's, when, despite what was thought to be relatively easy money for a considerable period of time, revival failed to appear around the corner.

Many individuals concluded that monetary policy is a completely impotent tool of economic policy. Fiscal policy, which was brought into the discussions as a supplement to monetary policy, emerged by supplanting monetary policy entirely.

This shift in emphasis was reflected in graduate enrollments. Money and banking was a popular graduate major in the 1920's. It all but disappeared for a couple of decades from the mid-1930's. In recent years many students have again become excited about monetary theory and policy.

These developments have influenced my own thought. I have acquired some convictions, but I am less certain than I was forty years ago. Before I report on the degree to which we have achieved our four objectives during the past decade or so, I would like to recall an episode that compelled me to reconsider the linkages between monetary policy and our ultimate objectives. The episode was what happened in the United States from roughly the middle of 1953

to the middle of 1954. During that period, employment declined by 1 million (and unemployment rose by nearly 2 million), our monetary gold stock declined by $600 million, and both the consumer and wholesale price levels varied by only 1 per cent. Thus an employment objective would have called for greater ease, a convertibility objective would have called for greater tightness, and a stable price level objective would have called for no change. Now, obviously, general monetary policy cannot move in three directions at once. An unavoidable problem of monetary policy is to arrive at a judgment as to the appropriate balance over time among the several objectives, each of which is desirable in its own right.

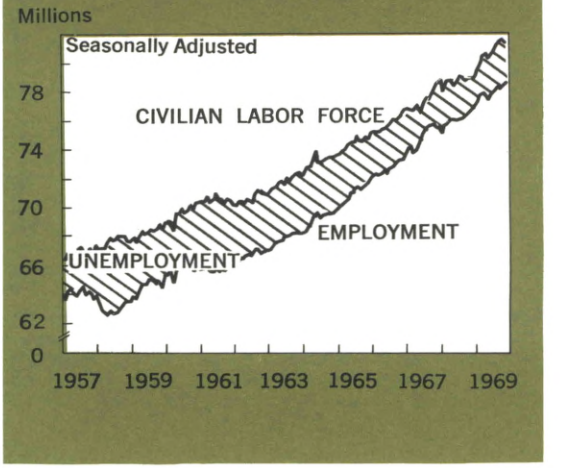
I move next to some reflections on our basic objectives and the extent to which we have achieved them since 1957.

Full Employment. The first pair of charts relates to the full employment objective. This objective is of great importance in its own right. It is a serious tragedy when a qualified person wants a job and cannot find one. I feel very deeply about this. I recall a period after the First World War when my father, an excellent union carpenter, sought a job diligently—but in vain—day after day for months. I recall my early days on the faculty at the University of Missouri when graduates in all fields with long and successful experience came back desperately looking for jobs—any kind of job.

Unemployment, particularly widespread unemployment, affects not only the individual who is unemployed but also his immediate family. It has widespread social consequences. When many people are idle they have ample time to get into or create trouble. This is true particularly if the idle are disadvantaged in some way. A significant part of our social unrest has arisen from unemployment.

CHART 1

CIVILIAN LABOR FORCE AND EMPLOYMENT



If, now, you look at Chart 1 on employment, you will note the significant growth that we have experienced, with only small interruptions in 1958 and 1966. The chart also reveals, of course, that employment is related to the size of the civilian labor force. If you look at recent years a bit more closely, however, you will note that the size of the labor force itself seems to be influenced by the level of employment. What seems to happen is that when jobs are easy to get and employment rises rapidly, many individuals, particularly women and teenagers, decide to seek jobs and thus enter the labor force. On the other hand, when jobs are hard to get and employment is rising slowly, they simply cease looking and, by definition, leave the labor force.

The stubbornness that has developed in the rate of unemployment (Chart 2), despite rapid increases in employment, has policy implica-

tions. In earlier times revival quickly brought down the rate of unemployment. In 1958-1959, for example, unemployment was reduced by a third in less than a year, from 7.5 to 5 per cent.

It was during the early years of this period, when unemployment was consistently running above 5 per cent, that I argued against increasing monetary restraint. I was placed with some strange bedfellows for taking this position, but a central banker should not change his view because he may be falsely accused. This Bank, in turn was a little slower than some in favoring increased restraint and a little more prompt in favoring ease.

If employment were our only objective, we would, as the table shows, pursue an easy money policy until we had no unemployment or only seasonal and transitional unemployment. But we have other commendable objectives. The critically important question for policymakers is what level of unemployment is implied to achieve the appropriate mix of our over-all objectives. The answer one gives to this question involves value judgments as well as economic analysis.

Many competent individuals have expressed their views on this matter, and views of many have changed over time as we gain more experience. The primary reason for being tempted to insist on a very low figure is genuine concern for the plight of the individual without a job. Pointing to a low rate also are the achievements of such rates by ourselves during wars and by a number of our highly industrialized competitors in recent years. Pointing to caution in striving for too low a rate are the undesirable consequences that flow from inflationary pressures when aggregate demand is excessive.

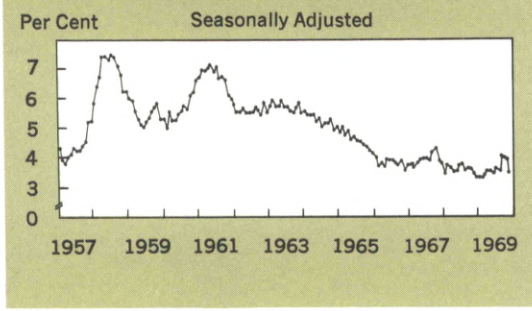
Unfortunately, the problem is not static but dynamic. A policymaker can tolerate a bit more unemployment if the economy is moving ahead than if it is falling farther behind.

Selection of a specific rate is influenced also by judgments as to the accuracy of the relevant measurements, as to the minimum level of transitional unemployment, as to the extent of structural unemployment, as to the residence, skills, and qualifications of the unemployed, and similar factors. My own view is that for the present we should pay increasing attention to other objectives when the unemployment rate falls below the 4 per cent level.

I envision higher standards for the future. As an employer, we have engaged with enthusiasm and success in several programs to train disadvantaged individuals. The results of our so-called BEEP (Business Experience, Education Program) program to encourage high school students to stay in school and still work have been especially gratifying. I attach top priority to public policies that will make possible ever higher levels of employment. What is required is a successful attack on ignorance, inadequate training, and discrimination. Success also will require more rigorous economic analysis, more information (*e.g.*, on job vacancies by type and location) and better information (more accurate and more complete on labor force, employment, and unemployment).

CHART 2

UNEMPLOYMENT RATE



Stability of the Price Level. I move now to the objective of price stability. Our interest in the price level is not quite as direct as our interest in employment. We have no particular interest in the absolute level of prices as such. If, throughout our history, the price of every good and every service had been exactly twice what it has been in fact, we would be today precisely where we are in real terms, even though all dollar prices, of course, would be double what they are.

Our interest in the price level derives from the evil consequences of changes in it. Changes in the price level redistribute wealth and income inequitably. A period of rising prices robs the creditor for the benefit of the debtor because it enables the debtor to repay with cheaper dollars than he borrowed. A period of falling prices robs debtors for the benefit of creditors.

Changes in the price level also produce unwise business decisions. Business decisions are based on dollar magnitudes on the assumption that the unit of measure, the dollar itself, remains constant. Since the businessman is concerned with maximizing profits in the long run, he is necessarily vitally interested in an accurate measure of what his profits actually are. A changing price level, however, produces a distorted view of profits.

Inventories and depreciation afford excellent illustrations of the distortions. The process of production is a lengthy one in which the businessman buys before he sells. He buys countless raw goods to be funneled into his factories and machines, and he usually keeps some inventory of his finished products. If, month after month, prices are rising, then this stock appreciates on his hands. He is continually selling at a price better than he expected and hence securing a windfall "profit."

These profits are inflated for another reason. It is clear that a manufacturer wears out his plant and equipment as he produces his output. Such wear and tear, or depreciation, is a cost of production. By the time the asset is completely worn out, enough depreciation should have been charged to replace it. If, however, depreciation is computed on the basis of original cost and prices have risen during the life of the asset, the depreciation allowance will be inadequate to replace it. The cost of depreciation will have been understated and profits correspondingly overstated. George Terborgh has estimated that the inflation in the decade 1947-1956 resulted in overstating corporate profits by $43 billion. Reported profits were $187 billion, whereas true profits were $144 billion. It does not take much imagination to appreciate that business decisions may be irrational if they are based on the assumption that profits are 30 per cent higher than they really are.

Here, then, sits the businessman, his profits inflated by windfall inventory gains and by understated costs. The future looks rosy indeed. Expectations of future sales and profits lead him to expand his plant and equipment. Rosy expectations also lead him to accumulate greater inventories, both because his sales are rising and because he desires to lay in more stock before the prices of that stock rise. In short, we have a typical inventory and capital spending boom.

Things go on rising for a while but then the bubble bursts. The businessman realizes that additions to productive capacity have outrun consumer demand. He realizes that his inventories are high relative to any reasonable forecast of sales. He cuts back on inventory purchasing and capital spending. The firms which supply him with inventory and which build his plant and equipment are forced to cut back their

production and lay off workers. Then, like a pebble dropped into a pond, the effects spread. Other firms selling to the second group of suppliers and builders find sales declining. More workers are laid off and hence consumer income falls. With income declining, business sales fall even further. In short, we have the familiar downward spiral of business into the depths of recession, a recession which will continue until top-heavy inventories and excess plant capacity are corrected. Once more inflation has helped breed the excesses which result in recession.

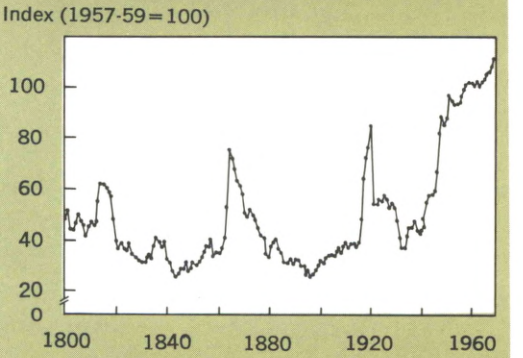
I move next to the history of prices. You have before you a chart of wholesale prices since 1800 (Chart 3). Now, there are very great hazards in interpreting a chart of prices over the very long term. The reason is the obvious one that the things our forefathers actually bought and sold are, with some rare exceptions, not the same things we buy and sell. There are hazards in long-term price comparison. Nonetheless, I think we can draw some general conclusions of contemporary relevance from an index of prices over the long run.

It is perfectly clear that we have had four major inflations in our history. These have all been associated with war: first, the War of 1812; second, the Civil War; third, the First World War; and, finally, the Second World War. The great inflations have been war-induced inflations—that's point one.

If you look a little more carefully, you see a significant and rapid increase in prices in the 1830's—actually 1832 to 1837. This one, it seems to me, was essentially a product of President Jackson's successful war against the Second Bank of the United States. As you know, he destroyed the Second Bank of the United States and ushered in an orgy of new banks with state charters. This was a period of wildcat banking in the United States which resulted in a great expansion in our money supply via a very inferior kind of banking system. And the net of all this increase in the money supply was a significant increase in prices.

CHART 3

WHOLESALE PRICE INDEX, 1800-1969



The second significant rise—though nothing like the very tall ones—you will notice came in the decade of the 1850's. All you have to do is recall 1849 to reach the correct conclusion that this was clearly a consequence of the gold discoveries in California and in Australia. The third of these secondary increases in prices came from the late 1890's up until the First World War, roughly. This again was a result of gold discoveries—this time in the Klondike and Cripple Creek—which led to very rapid expansions in our total money supply. Finally, we have the rise from the late thirties up to the Second World War. This followed the revaluation of gold. So that these have all been asso-

ciated with monetary phenomena, either changes in the base or discoveries of new primary money in the form of gold.

I move next to the great declines. They have followed wars. You see the significant decline after the War of 1812 to roughly 1820. After the Civil War, we have another long continued price decline. Again a decline after the First World War.

Interestingly enough, we did not have a decline after the Second World War. Many people predicted that we would. Sewell Avery, for example, was determined that this was going to happen. The lack of progress of Montgomery-Ward in the post-Second World War period is a reflection of his error of judgment. In my view, this new post-war experience was not an accident. It seems to me to illustrate that human intelligence applied to problems can, if everything works out well, produce desirable results. We did not have the anticipated great price decline because of public and private actions to prevent it. Organizations like the Committee for Economic Development were founded to develop and promote a smooth transition to peace. It was felt deeply that if we had another terrific recession the whole fabric of society might not hold together. So there was determination to do something about it. We did not talk about a return to pre-war normalcy or anything like that. We did do something about the real economic problems that were involved. The Employment Act was passed in 1946.

You will notice that the very rapid declines following wars were in turn followed by long-continued but slower price declines. The development after the War of 1812 was interrupted by the Jackson episode that I have mentioned. These were periods of great social suffering, difficulties, and unrest. One need only recall 1848—one of the watershed years in modern Western history. In my view, these were primarily the result of an inadequate supply of the means of payment for the entire Western world, resulting from an inadequate supply of gold. The inadequacy was aggravated by the decision of important industrial countries to adopt the gold standard (*e.g.*, Germany after the Franco-Prussian War).

As I mentioned earlier, declining prices put pressure on debtors and may even force them into bankruptcy. The persistent price decline after the Civil War had much to do with the development of greenbackism; the free silver movement; and similar so-called radical movements. I think the debtor class simply would not tolerate what was happening to it. In my view the gold standard would have ceased to exist as an international standard had it not been for the wholly fortuitous discovery of gold in California in 1849 and the wholly fortuitous discovery of gold in the Klondike and Cripple Creek in the 1890's. Had these discoveries not occurred I think the gold standard would have collapsed.

One conclusion I draw from this long experience is that our economic system has no *inherent* tendency toward either inflation or deflation and that we should be aware of the dangers and guard against both.

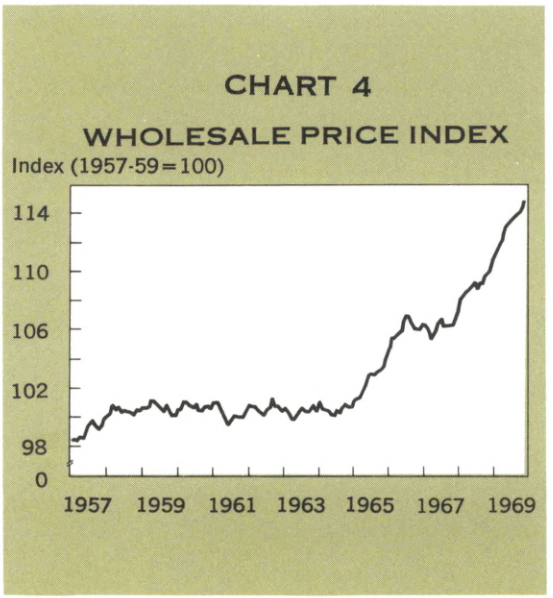
There always have been some who have felt there is an inherent tendency toward deflation. Usually they have been engineers or production men who emphasize that increasing efficiency reduces real costs. Of course it does, but one must not confuse real costs with money costs. Wage rates obviously can go up faster than output per unit of time.

Others, who usually emphasize this latter possibility, insist that our economy has an inherent tendency toward inflation. In recent

years they have based their argument largely on the increased power of labor unions. To me, this is a new version of an old argument. The same complaint, in different terms, can be heard throughout our history. "Men don't work the way their fathers used to work." "They loaf on the job." "Quality isn't what it used to be." This is nostalgia for a society that never existed in fact.

My own view is that there is no inherent price tendency in our economy. Prices are a result of the monetary institutions that we create and the skill with which we manage them.

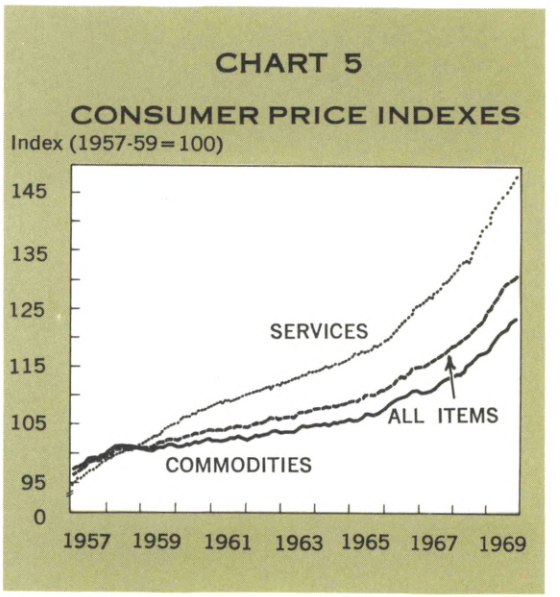
I move now to the story of prices since 1957, and begin with wholesale prices (Chart 4).



From the middle of 1957 until the beginning of 1965, the index varied between 99 and 101 per cent of the 1957-1959 average. If you recall the long-run chart, it is clear that there had not been such a long interval of stability in more than 150 years. No other modern industrial country has ever experienced such an interval of stability.

In reviewing what I said to our directors in earlier years, I find that in January 1966 I said: "This view is reinforced by our experience after the Second World War and in the past eight or nine years. I do have some reservations on how well we will in fact manage in the period ahead."

You may recall that it was at this time that the Federal Reserve System was taken to task for being "excessively" concerned about inflationary prospects. In retrospect, the rapid acceleration of the military effort in South Vietnam and the excessive reliance on borrowing to pay Governmental costs clearly warranted such concern.



I move next to the consumer price index. The record has been one of virtually uninterrupted rise (Chart 5). The primary reason has been the persistent increase in the cost of services. There is a widespread judgment of qualified individuals that this index probably has an

upward bias because of improvements in quality. You might be inclined initially to dispute this judgment. You might have in mind, for example, the cost of medical services, including drugs. Doctors now rarely make home visits; office calls are brief; drugs are expensive. If, however, one keeps in mind the service performed—curing the patient—the story is different. Time was when pneumonia was frequently fatal and even recovery was long drawn-out. It was a costly disease, directly and in terms of time lost from work. I have a hunch our forebears would have considered a modern cure cheap even for their time, but it was not available.

Improvement in quality has come also in goods as well as services. Take the automobile tire. I can remember when Sears Roebuck guaranteed tires for 3,000 miles and how boldly they advertised when this was increased to 5,000 miles. Imagine anyone even trying to sell such a tire today. Unfortunately, we have not devised a statistical technique to measure changes in quality accurately.

If quality changes could be measured, it is quite possible that an accurate consumer price index would reveal no upward drift from, say, 1957 to the end of 1964. Since that time the record has been similar to that of prices at wholesale.

Convertibility. I move next to convertibility as an objective of policy. For the United States this still means redemption of currency in gold at a fixed price. Since this objective, more than any other perhaps, arouses great emotions, it might be worthwhile to see how England came to adopt the gold standard in the first place.

Macaulay wrote: "In the autumn of 1695, it could hardly be said that the country possessed, for practical purposes, any measure of value of commodities. It was a mere chance whether what was called a shilling, was really tenpence, sixpence, or a groat." For example, the exchequer found that coins which should have weighed 220,000 ounces actually weighed only 114,000 ounces.

William and Mary appointed a committee to make recommendations for solving the problems. The membership was quite extraordinary: Sir Isaac Newton, Master of the Mint, John Locke, the great philosopher, and Lord Somers.

Sir Isaac recommended that the Government call in the old coin at face value and issue new full weight coins and that the ratio of silver to gold be established at 16 silver to 1 gold (shades of Bryan!). In major countries on the Continent the ratio was 15½ to 1. Sir Thomas Gresham could have predicted the results a century before! Relatively, England overvalued gold and the Continent overvalued silver. Gold was taken to England for exchange into silver, which was taken to the Continent for exchange into gold, which . . . . Newton later recognized his error and recommended that it be corrected, but this latter advice was not followed.[1]

A century passes and England is once again involved in war with her old enemy, France; this time under Napoleon. She abandons redemption of the currency but decides to resume convertibility after the war. The mint, of course, had very little silver to coin and Lord Liverpool decided to close it to the free coinage of silver because England was "naturally a gold country" and that "gold was the natural currency of England." And, indeed, it was if one admits, as he should, that it is only "natural" for even a Sir Isaac to make a mistake and for

[1] This is the story as told by George F. Warren and Frank A. Pearson in their *Prices*, New York, 1933, p. 159.

this mistake to have "natural" consequences.

It is irrelevant but tempting to speculate what might have happened if Sir Isaac had made a mistake in the other direction, say by adopting a ratio of 15 to 1. England might well have become "naturally a silver country." With the role that sterling acquired on the basis of English leadership in industry and commerce throughout the world, who knows, the world might naturally have been on the silver standard.

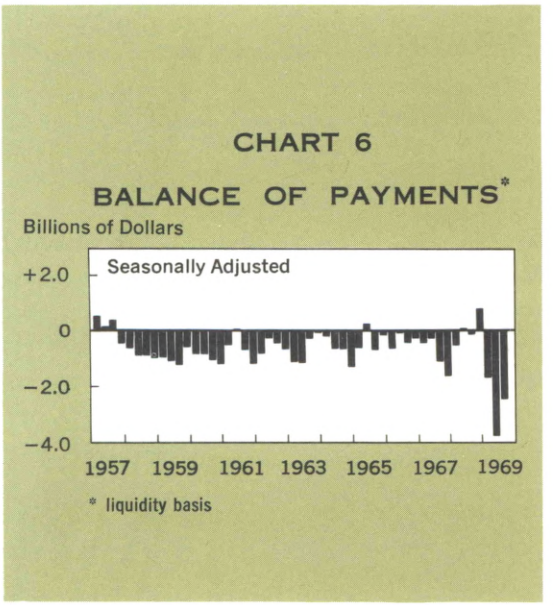
These are irreverent conjectures. Still, the faithful have propagated some fictional natural history. One gains an impression that the gold standard existed for centuries without interruption. Yet it has not existed in modern times for as long as a century, though England almost made it from 1822 to 1914.

My own view is that England arrived on the gold standard because of a mistake by Sir Isaac Newton in 1696. The gold standard survived the nineteenth century only because of the *miracles* of new gold discoveries in the 1840's and 1890's. Finally, when one sees the incredibly small amount of gold frequently held by the Bank of England, he is forced to conclude it was not a self-regulating system but was in fact maintained through *management* by the Bank of England. Thus, a mistake, miracles, and management describe the system more accurately than does a mystical natural providence.

Do not misunderstand me. I think that on balance an international monetary system—essentially this means a system of relatively fixed rates of exchange—is preferable to a system of national currencies with freely fluctuating rates, despite its presumed intellectual attractions.

An international system, however, requires genuine international cooperation on the part of the members based on rational economic principles. Such a system should indeed put pressure on a member which has an unfavorable balance of payments because it has pursued policies of over-full employment and inflation. It should not, however, put pressure on a member that has an unfavorable balance of payments despite significant unemployment and stable or even falling prices.

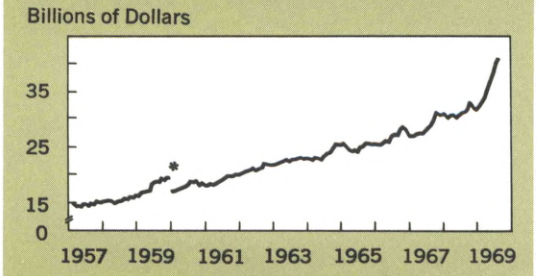
I move now to recent developments in our balance of payments. As you can see from Chart 6, we have been running at a persistent deficit



ever since the Suez crisis in 1957. Throughout this period (except for a brief interruption in 1959) we have had an excess of exports over imports of both goods and services. This excess, however, has not been large enough to finance our foreign defense, Government aid, and private investment abroad. As a result our short-term liabilities to foreigners have doubled from about $15 billion to over $40 billion (Chart 7) and our gold stock has declined from over $22 billion to about $11 billion (Chart 8).

CHART 7

SHORT-TERM LIABILITIES TO FOREIGNERS REPORTED BY BANKS



*Series since 1960 is revised and excludes holdings of dollars of IMF.

Growth. This brings us to the last objective I shall discuss: adequate growth and a rising standard of living. Barring a nuclear war, our children and grandchildren are almost certain to have a higher standard of living than we enjoy. For them, the hard core of our basic economic problems may be solved. This may not be an unmixed blessing. There is joy and importance in work. The thrill of the craftsman at whatever task is one of life's real satisfactions. Long hours of leisure are not necessarily satisfying, even when they are voluntary.

Monetary policy has relatively little to do with the germinal elements of growth. One of these ingredients is the sporadic appearance of genius, frequently motivated by what most people consider a naïve desire to comprehend: Newton, Descartes, Harvey, Gibbs, Einstein, Fermi. Another ingredient is the application of knowledge to invention: Burbank, Edison, Firestone, Ford; and to human organization: Taylor, Mary Follett. Other ingredients are the character of a people and availability of natural resources.

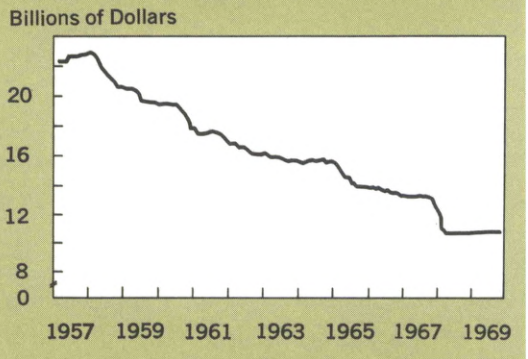
My own view is that, although a central banker should be interested in growth as is any responsible citizen, he should not establish any specified rate of growth as a specific objective of monetary policy. He should, instead, concentrate on achieving the best balance among the three objectives that I have already discussed.

Hopefully, this will produce a maximum sustainable use of available resources. This, in itself, is a large contribution to growth. Beyond this, however, the actual rate of growth depends on matters that are not reached directly by monetary policy. One of these factors is how hard and long we wish to work. It has been estimated that in the past fifty years we have taken about half of our productivity gains in the form of increased leisure and about half in the form of more output. We could grow much faster if we worked longer and harder.

Another factor is how we divide our actual output between consumption and investment. The more we consume the less remains available for investment to increase our growth. It

CHART 8

GOLD STOCK



is an appropriate role of Government to influence consumption, saving, and investment through fiscal policies, but it is not a primary responsibility of the monetary authorities.

The important concern of the central bank should be to contribute all that monetary policy can contribute to full utilization of resources. It is the responsibility of the individual citizen and the Government to determine the distribution of our total resources between work and leisure, between consumption and investment.

This brief statement on objectives gives you a general idea of my basic philosophy and prejudices. My recommendations on monetary policy arise from the application of these principles to developments in the economy. Until late in 1965, I had been slow to recommend increasing firmness in credit conditions. The primary reason was the persistence of excessive unemployment, the stability in our price level while those of our international competitors were rising. In my view these factors outweighed our adverse balance of payments and gave hope, indeed, that it too could be rectified.

Since the end of 1965, however, we have come far closer to full utilization of our manpower and prices have risen. These developments, in my view, fully justify the tighter conditions in money and capital markets that have been promoted by the System.

One conclusion from this analysis is that, despite what some of us had come to believe, it is not always possible to achieve all of these objectives completely and simultaneously. It becomes necessary from time to time to choose among various objectives. The choice that an individual makes reflects not only his economic analysis and its application to contemporary developments, but also his scale of values. The choice need not be, and indeed seldom is, of the either/or, all-or-nothing variety. It is more apt to be a relative matter: a little more of this objective for a little less of that one.

Instruments of Policy

Our value judgments extend beyond the choice of an appropriate "mix" of objectives. They extend to the *means* of achieving our goals. There is widespread agreement that we should do so "in a manner calculated to foster and promote free competitive enterprise," to use the language of the Employment Act of 1946.

The general instruments of monetary policy offer a possibility of promoting our basic objectives in precisely this way. They are means of inducing institutions and individuals of their own volition to adjust their behavior so as to produce the desired social result.

Lending Operations.

1. *Eligibility and Acceptability.* The first instrument relates to lending operations of a central bank. Although there is a conception that central banks should be very meticulous in their lending activities, even the most venerable central banks have made some—well, unusual, loans. For example, the *London Gazette* of May 6, 1695 contained an advertisement announcing that the "court of directors of the Bank of England give notice they will lend money on plate, lead, tin, copper, steel, and iron, at four per cent per annum."

I mention this pawnbroking operation only to indicate that we need not abandon consideration of novel ideas merely out of fear of violating established traditions. Given enough time, an historian probably could cite a precedent, or reasonably accurate facsimile, of any action. Even if he could not, mere tradition is not an adequate basis for abandoning a decision that is otherwise appropriate.

This is worth mentioning in connection with lending activities of central banks because there was a time when influential scholars concluded that central banks would achieve their desired purpose provided only they limited their lending (discounting) to appropriate documents.

The idea is known as the real bills doctrine or the commercial loan theory of banking. It is a tantalizing conception that has survived refutation by outstanding individuals at least as far back as Henry Thornton in 1802. In fact the lending provisions of the original Federal Reserve Act, many of which still survive, were based on this disproved theory. Current efforts of the System to eliminate these provisions are stalled in the Congress.

What then is the real bills doctrine? It is based on the plausible notion that the volume of money should be related directly to the volume of goods flowing through the productive process.

An ideal banking system, therefore, would create new money whenever a trader bought goods and would extinguish it whenever he sold. Merely to illustrate the principle, suppose that each step of the production and distribution process takes 90 days to complete. The supplier now sells raw materials to the manufacturer and draws a 90-day draft on him. After acceptance he discounts the draft at his bank. New money is created for 90 days. At the end of that period the manufacturer sells to the wholesaler and draws a 90-day draft, which he discounts. He is now in position to repay the draft drawn on him by the supplier which has come due. Ninety days later the wholesaler sells to the retailer, draws and discounts the draft to repay his own debt to the bank. And so on. The drafts are all real bills drawn against real commodities flowing through trade channels and since the sale of the commodities in the regular course of business provides the funds to repay the drafts, they are "self-liquidating."

The general idea is so tantalizing it is tragic that it contains flaws both in principle and in application. A basic weakness is that the money to which the batch of goods gives rise does not remain attached to the goods but goes on a series of visits of its own. The theory ignores the velocity of circulation of money. Let us suppose that the velocity of circulation increases by say 10 per cent and that this results in a rise of prices by 10 per cent. The batch of goods that formerly gave rise to a real bill of $100 will now give rise to one of $110. The additional money, with no further change in velocity, will lead to a further rise in prices, which will result in a still larger volume of real bills and money and so on *ad infinitum*. The real bills doctrine is not, even in principle, a self-limiting system; it is a self-inflammatory, chain-reaction system.

There are other weaknesses in the theory. It makes no provision for money needed to purchase services or fixed assets. Furthermore, in practice there is not such an identity between the *echeance* or maturity of the bill and the time it actually takes to move through the several stages of the distributive process. Furthermore, with development of the so-called clean bill with documents surrendered against acceptance instead of payment, it became possible to have more than one bill outstanding against the same batch of goods. Development of clean bills as money market instruments made it possible to issue so-called finance or accommodation bills, with no underlying goods at all. Despite their interest in doing so, even sophisticated dealers confessed they could not distinguish a "real" bill from any other.

The lending and discounting operations of the Federal Reserve Banks are conducted in accord-

ance with the Federal Reserve Act and Regulation A of the Board of Governors.

In our banking system it is important that there be an "escape valve" to prevent pressure from concentrating at times with undue severity at particular points—either for reasons independent of monetary policy (*e.g.,* a local catastrophe) or as a result of what is intended as general pressure.

It is for this reason that member banks have the privilege, under appropriate circumstances, of borrowing from their Federal Reserve Banks. The borrowing privilege, it should be noted, is not to be used to scalp a profit should the yield on Treasury bills, for example, be above the discount rate. The Federal Reserve Banks supervise their loans to member banks to see that they are for proper purposes. We go to great lengths to assure impartial administration of our discount window. Consideration of the report on borrowing is a standard item on the agenda of your biweekly meetings.

Incidentally, if you ever hear rumors of discriminatory treatment, I am sure that the management of the Bank would like to hear about them. For understandable reasons, such rumors arise occasionally—not in periods of easy money but in periods of restraint. Occasionally, country member banks allege that Philadelphia banks receive preferred treatment. We have had enough conversations with Philadelphia members to appreciate that they at times feel we are too gentle with the country members. We do not, incidentally, adjust our administration to changing conditions in the credit market. I described the principles under which we operate before the Pennsylvania Bankers Association in May 1958 and the talk was published in our *Business Review* (June 1958). I am asking you to report any allegations of favoritism that come to your attention because it is critically important not only that we remain impartial but that we maintain a reputation for objectivity.

2. *Bank Rate.* Price, or the rate that is charged, is the most important condition that a central bank imposes in extending credit. It has, understandably, received most attention. It is not, however, as we have seen, the only condition. It is not even the oldest means of controlling the amount of credit extended.

The Bank of England, for example, maintained its rate at 5 per cent on inland bills from 1719 and on foreign bills from 1773 to 1822. Henry Thornton, an outstanding financial leader, recommended in 1802 that the Bank vary its rate as a means of regulating the volume of circulating medium, but his advice was not followed. He was virtually alone in his view. Ricardo, the great classical economist, understood that the volume of lending would be influenced by the relationship between bank rate and the rate of profit but he did not discuss changes in the rate as an instrument of policy. The governor and deputy governor of the Bank actually denied to the Bullion Committee in 1810 that the rate had any influence on the volume of good bills offered for discount.

Instead of increasing the rate, the directors rationed their credit and "set limits to their advances according to circumstances, and as their discretion may direct them." They "contracted their issues of paper . . . [when] their apprehensions [were] excited by the reduction of their stock of gold." Instead of decreasing the rate, they extended the list of collateral on which they would extend credit.

The Bank of France maintained a uniform rate from 1820 to 1847. The Bank of England was subject to the 5 per cent usury law until 1837. It was not until the 1840's that the rate became the premier instrument of policy. Eventually the rate was changed to meet every gust

of wind that blew. It was changed 202 times from 1855 to 1874, including 24 changes in the single year 1873.

Various theories were gradually developed as to the nature of an "effective rate." Most widely taught at one time was the theory that to be effective, the bank rate must be above the market rate. Of course, there are many market rates, and part of the analysis involved definition of the appropriate market rate. Underlying the basic idea, it seems to me, is a judgment that the only danger from monetary policy is inflation. So long as the only basic goal of policy was convertibility and so long as depression was viewed either as an inevitable aftermath of inflation or as an act of God, the argument convinced many.

The bias of the theory is reflected in its application. As market rates rise, the bank is compelled to increase its rate to remain above. As market rates decline, it must defer action, so that its own rate remains above, even after the change. There may be times, of course, when it is appropriate for the bank rate to follow market rates—particularly when market rates are subject to influence by other instruments—but there are other times when it is not appropriate. The theory is not of universal applicability.

Another theory related effectiveness to the volume of discounts actually held by the central bank. One naive variant of the idea simply held that bank rate is effective if it holds down the volume of borrowing to low levels. This version is similar to the idea that bank rate should be above market rate. If bank rate is above actual market rate on identical paper, one would not expect much—if indeed any!—paper to reach the bank. Another naive variant lies at the opposite extreme and holds that bank rate can be effective only if a considerable volume of paper is held by the bank. It is felt that only under such circumstances can bank rate be meaningful in affecting market conditions.

A somewhat more sophisticated version of the theory is concerned not with the absolute level of borrowing but with the relationship between changes in the rate and changes in the central bank's portfolio. In this version the purpose of an increase in the rate is to discourage borrowing from the central bank. If, therefore, an increase in the rate is followed by a reduction in the portfolio, the increase may be said to have been effective. Similarly, a reduction in the rate would be judged effective if it led to an increase in the portfolio.

For purposes of economic policy, however, this is a rather narrow conception. Our major interest is not what happens to the central bank portfolio but what effect the actions of the central bank have on the economy. The first theory that takes this aspect into account measures effectiveness by reference to market rates. An increase is viewed as effective if it is followed by increases in market rates; and a decrease in bank rate is effective if it is followed by decreases in market rates.

The next theory goes one step further. Votaries of this theory argue that the central bank should not be interested in market rates as such but should be concerned with the volume of money. They, therefore, measure the effectiveness of a change in the rate by the subsequent behavior of either the supply of money or a proxy, such as the volume of reserves of the commercial banking system.

Each of these theories focuses on a particular aspect of discounting. Each contributes something, though occasionally in a negative way, to our understanding of the role of the discount rate in the economy.

The implication of this conclusion is that it

is desirable to approach the problem from a much broader point of view. Our ultimate interest is to achieve as nearly as may be possible the objectives that I discussed earlier. It is appropriate, therefore, to measure the effectiveness of any instrument of policy in terms of its contribution—in conjunction with other instruments—to those objectives. This is a more complex undertaking and we shall have numerous occasions to discuss it during the course of the year.

In the Federal Reserve System, discount rates are established by the directors of the Reserve Banks "subject to review and determination" by the Board of Governors. The vast expansion in Government debt and the widespread ownership of that debt have affected the degree to which different discount rates can be maintained at the several Reserve Banks.

I do not suggest for a moment that member banks in a district where the rate is lower would borrow in order to lend the reserves in districts where the rate is higher. Nevertheless, the net effect of a differential in rates will tend to produce the same result. This is true because such banks would *tend* to lend excess reserves in the federal funds market and to borrow from their Reserve Bank rather than from the funds market, especially if the funds rate exceeded the discount rate. This, in turn, would mean that the administration of the discount window at the lower rate Reserve Bank would become increasingly difficult. It would also tend to mean that the Reserve Bank or Banks with the lower rate would in fact determine conditions for the whole country. This implication reminds me of a remark by one of your predecessors. After a vigorous discussion in a meeting of the board, Archie Swift said: "I am reminded of my mentor who told me when I was young: 'Always remember that when a dozen people are on one side of an issue and you are on the other, it is possible—not likely, mind you, but possible—that *they* could be right, and you wrong.' " Nevertheless, different rates perform a useful function at times.

3. *The Tradition against Borrowing.* In days when bank failures were common, an early sign of weakness in a bank was that it borrowed money—other than by deposit. Banks disliked showing borowing on their published statements. Although some banks have recently abandoned the tradition against borrowing, many still hold to it. Banks that anticipate a shortage of reserves on the semiannual call dates usually borrow in larger amounts for a day or two before the end of June and December so that they can meet their requirements, repay their borrowing, and still show no borrowing on their call report or published statement.

The Federal Reserve System has encouraged member banks not to borrow from the Reserve Banks except for appropriate purposes. Many members in this District and elsewhere take pride in never having borrowed from their Reserve Bank. This tradition affects the amount of borrowing from the Reserve Banks.

Open Market Operations. The relationship between central banks and government finance is intimate and reaches back to the origin of such banks. The Bank of England was founded in 1694 because the standing of government credit, after the so-called "stop of the Exchequer" by

[2]Act 5 & 6 Wm. & Mary, cap. 20. The full title of the Act, though long enough, does not even mention the Bank of England. It reads: "An Act for Granting to Their Majesties several Rates and Duties upon Tunnage of Ships and Vessels, and upon Beer, Ale, and other Liquors, for Securing certain Recompences and Advantages in the said Act mentioned, to such Persons as shall Voluntarily Advance the sum of Fifteen hundred thousand Pounds towards carrying on the War against France." (Acres, W. Marston, *The Bank of England From Within, 1694–1900,* vol. 1, p. 9, Oxford University Press, London, 1931.)

Charles II, was so low that William and Mary had great difficulty financing the war with France. Creation of the Bank of England was authorized in the Ways and Means Act of 1694[2], not in a separate bank act. Similarly, Napoleon created the Bank of France in 1800 to help finance his military ventures. Most countries with considerable experience in central banking have witnessed episodes in which the view of the Government has differed from that of the central bank concerning the methods of extending central bank credit to the Government, its amount and the terms and conditions.

Central banks experimented from time to time with purchases and sales of Government securities in the market to achieve a variety of purposes. Early in the nineteenth century the Bank of England bought Exchequer Bills on the market when it wanted to expand its circulation and sold them when it wished to contract. In periods of strain it occasionally *sold* securities, presumably to afford greater accommodation to commerce. Such operations are comprehensible only on the assumption that funds did not flow freely among segments of the market and that the help of the Bank was needed to redistribute credit. It is perhaps worth mentioning that such an action in the crisis of 1847 resulted in recorded criticism of the governor and deputy governor—a rare experience. Central banks also bought securities either in an attempt to increase earnings or to invest what they considered excess funds.

An early theory of open market operations as an instrument of monetary policy is that sales of securities can be used to make the discount rate "effective." It grew out of a somewhat incongruous set of assumptions. Suppose a central bank wishes to tighten credit when bank rate already is considerably above market rate. An increase in bank rate may simply widen the margin between bank rate and market rate. What is desired, however, is an increase in market rate. If, now, the central bank could sell securities, it could force market rate to rise and thus force the market to borrow from the bank. The amount of such borrowing, in turn, could then be controlled or influenced by the higher bank rate.

In the light of what has been said about the development of bank rate theory, it is understandable that early theory of open market operations would have been one-sided and dealt only with sales. It did, however, contain some important ideas which, unfortunately, were not adequately developed or comprehended.

One of these ideas is that open market operations, the discount rate, and the volume of discounts are interrelated. The Federal Reserve System rediscovered this idea as it analyzed its early frustrations with open market operations after the First World War.

You will remember from your own experience and our discussion of objectives that the First World War was followed shortly by a severe depression. The depression was accompanied by sharp liquidation at commercial banks and by repayments of borrowings at the Federal Reserve Banks. A number of Reserve Banks became concerned about how they might earn enough to pay their expenses. Some concluded that the appropriate way would be to buy Government securities. There is an interesting footnote to Federal Reserve history that concerns the effects of these decisions on the Government securities market, the Treasury, and the relationship between the Federal Reserve Bank of New York and the other Reserve Banks. Our primary interest, however, is in the intimate relationship between open market operations and borrowing at the Reserve Banks as a whole. The relationship is not as precise as a mathematical

function because it is influenced by other factors, such as the intensity of demand for credit. A close relationship, however, arises from the reaction of member banks to open market operations. If member banks are in debt to the Federal Reserve when the System buys securities to put funds into the market, the member banks will use some of these funds to repay borrowings rather than to expand credit. Contrariwise, when the System sells securities, member banks may replace some of the funds by borrowing from the Reserve Banks. There is an inverse relationship between reserves provided by the System through open market operations at its own initiative and reserves provided by the System through lending at the initiative of the member banks.

It does not follow, however, that nothing important has happened or that open market operations are ineffective. Usually borrowed reserves are more expensive than reserves provided via purchases of securities and there are both the tradition against borrowing from the System and the administration of the discount window at the Reserve Banks.

The intimate relationships between the two instruments explains why a practitioner usually prefers not to become involved in the semantic morass of isolating the degree to which each is effective in some meaningful sense. These two instruments are complementary, as indeed are all the general instruments of monetary policy. Suppose that the Open Market Committee instructs the Manager of the Open Market Account to maintain firmer conditions in the money market. He will sell Government securities. The sales will depress the prices (increase the yields) of the securities sold. Dealers will have larger portfolios and will reduce their prices. Payment for the securities will absorb reserves from the banking system and hence put pressure on the banks to reduce their loans and investments, thus reinforcing the rise in rates and spreading it out to other markets and other securities. The purpose, of course, is to make borrowing more difficult and more expensive so as to achieve the ultimate purpose of preventing expenditures throughout the economy from reaching inflationary levels.

Reserve Requirements. The third general instrument is the power lodged in the Board of Governors to require member banks to hold specified amounts of reserve against their deposits.

I must confess that I long shared the view of those monetary theorists who hold that maintenance of a specified relationship between reserves and deposits is an indispensable ingredient of an effective monetary policy. The logic of the case is straightforward. If commercial banks keep a fixed relationship between their reserves and their deposits (which are the largest part of the supply of money), then the central bank which can determine the quantity of reserves for the System can control the volume of money. If, however, the commercial banks can change their reserve ratio at will they can nullify the efforts of the central bank: (1) by increasing the ratio rather than expanding credit when the central bank wishes to expand and (2) by decreasing the ratio rather than contracting credit when the central bank reduces the volume of reserves.

There is nothing wrong with this logic but the assumptions are too rigid and are based on the partial experience of a few countries. It is, of course, part of modern American banking tradition that commercial banks be required by law to maintain minimum reserves against their deposits. In England there was a long-standing tradition as to the appropriate relationship be-

tween reserves and deposits. It is, of course, reasonable to suppose that commercial banks in these countries will usually keep their actual reserves at approximately the legal or customary minimum. The reasons are obvious. A bank will not ordinarily keep less than its required reserve because of legal penalties or loss of prestige and customers. It will not ordinarily keep more reserves than required because this will result in loss of income, since reserves are nonearning assets. So long as the minimum requirement is set higher than the bank would adopt of its own volition, it will not hold excess reserves.

Even in England and the United States, however, there have been times when banks desired greater liquidity or reserves than they were required to maintain. During the great depression banks increased their reserve ratio rather than expand their loans and investments. Does this mean that the central bank is helpless? Not necessarily. It does mean that the central bank must be able to supply more reserves or liquidity than the banks *of their own volition* wish to hold. This is the real heart of the matter. Can the central bank create more reserves or limit their creation to less than the banks desire to hold for *whatever* reason (law, custom, prejudice, inertia)?

This conclusion is based on both logic and experience. From its foundation in 1875 until the First World War the German Reichsbank achieved its objective of maintaining convertibility of the mark even though it operated in a very loose-jointed banking and financial system. Among the impediments were: (1) the Reichsbank had no continuing knowledge of the amount of reserves actually held by the commercial banks; (2) the operations of the Reichsbank were such that it could not have achieved a specified level of reserves even had it wished to do so; (3) the commercial banks were not governed either by law or custom as to their reserve ratio which in fact declined very substantially over the period as a whole and varied significantly in the short run. In short, the Reichsbank operated without *any* of the conditions that some analysts consider indispensable to effective monetary policy. What it did accomplish was its basic objective! It did so, in my view, by making its credit (it conducted a large commercial banking business as well as operated as a central bank) cheaper or more expensive than the commercial banks desired. Their reaction to the conditions enforced by the Reichsbank achieved its purposes.

The ultimate power of a central bank to enforce its will lies in its ability to create new money or reserves—by acquiring earning assets —and to destroy existing money or reserves by disposing of earning assets.

It does not follow that I would advocate elimination of reserve requirements and the power to change them from the kit of tools possessed by the Federal Reserve System. The reasons for citing the German experience are to indicate the basic nature of our problem and to illustrate that even a primitive system can be made to work. It does not follow that it would be the best system for the United States in the 1970's.

I move next to the general level of reserve requirements not as a tool of monetary policy but as a matter of equity. I confess that observation of the operations of many kinds of financial institutions has induced me to change my approach to this problem. The change in approach, in turn, has changed my conclusions.

My initial approach to the problem began with the fact that the issuance of money is a sovereign function. It is, therefore, appropriate for the Government to impose conditions which

in effect exact a payment from institutions which are authorized to exercise this function. This approach continued with the fact that demand deposits are money. It is, therefore, appropriate to require commercial banks as money-creating institutions to keep part of their assets in nonearning reserves. These reserves, in turn, are created by the central bank when it acquires earning assets. Excess earnings of the central bank can then be returned to the Government as payment for its delegation of the money-issuing privilege.

I took it for granted that the authority (and it still seems obvious until one analyzes the process) to issue money is *inherently* a valuable privilege and that, therefore, "fairly high" (a weasely vague phrase!) reserve requirements would be "equitable." The logic of this approach implies that reserve requirements be uniform against all demand deposits subject to check, with a possible qualification for interbank deposits. Under such a system each bank would contribute (by way of nonearning reserves) to the Government in proportion to the amount of money it had created. Yet, nonmember banks may be, and in Pennsylvania are subject to lower requirements than members of the Federal Reserve System.

There are several other factors that must be evaluated in determining the value to an individual bank of the privilege of issuing money. First of all, such money is not issued without cost. The bank must perform financial services for its customers. It may, of course, charge for these services. Any individual bank, however, is limited in the amount of money it may issue by its competitive position in the economy. As banks compete with each other for the deposits of customers, they reduce the profitability of the money-issuing privilege. Much of the value of the privilege remains not with the banks but is transferred competitively to the public. Meanwhile commercial banks compete not only with each other but with other financial intermediaries. The value of the money-issuing privilege might be measured by difference in profitability between commercial banks and other financial intermediaries. Such scattered information as I have seen does not suggest that the privilege is worth very much.

I have, therefore, come to the tentative conclusion that equity between member and nonmember banks and between commercial banks and other financial intermediaries does not call for very high reserve requirements. It is worth recalling in this connection that the Federal Government secures roughly half of net income via corporate income taxes.

The general level of reserve requirements has derivative but important effects on open market operations. The higher the level of requirements, the larger the purchase of securities that would be needed to support a given increase in the volume of member bank deposits. Stated another way, this means that the effect of a given open market operation varies inversely with the level of reserve requirements. If requirements are low, a given operation will have a large effect. This effect is taken into account, of course, in planning such operations. The logical implication of the relationship is that errors of projection in the level of reserves have greater impact when the level of requirements is lower. The impact, however, will be felt in the money market and actual operations can be adjusted appropriately if the directive to the manager is written in terms of conditions in the money market.

The Board of Governors has authority to establish minimum reserve requirements for member banks. The limits of this authority are 10 per cent to 22 per cent for demand deposits of

Reserve City banks, 7 per cent to 14 per cent for demand deposits of other member banks, and 3 per cent to 10 per cent for time deposits at all member banks. A reduction in requirements makes additional funds available for lending and investing; an increase in requirements reduces the funds available and would force contraction. In important ways a reduction in requirements is similar to a purchase of securities in the open market and an increase is similar to sales.

There are some important differences between the two instruments. A change in requirements affects immediately and directly every member to which it is applicable. The effects of an open market operation affect most banks only indirectly. The minimum quantitative effect on "free" reserves of a change in requirements is large. In principle, of course, changes could be made in very small fractions of one per cent, but the operating and other practical problems that would be created by very small and frequent changes in requirements make such use inappropriate. Open market operations, on the other hand, can be conducted in any needed volume, large or small, and their direction can be changed at any time without ill effects.

ORGANIZATION OF THE SYSTEM

I move next to the organization of the Federal Reserve System that has been created to administer monetary policy in the United States. The organization can be understood best in terms of our basic heritage. We as a people have an abhorrence for concentration of power. We prefer a separation of governmental powers and a system of checks and balances with full appreciation that it may be, or appear to be, less efficient in the short run.

What was desired was an organization that would not be controlled for partisan political purposes by the administration in power or by private interests, especially the so-called financial interests. Congress solved this problem by making the System responsible to the Congress rather than to the President and by creating a rather complex organization in which Government representatives would have final authority but private individuals would have an influence.

At the apex is the Board of Governors of the Federal Reserve System. It consists of seven members appointed by the President by and with the advice and consent of the Senate for fourteen-year terms. The long terms are designed to insulate the Board from the day-to-day pressures of partisan politics. In the unlikely event that private interests would attempt to seize control of the System, it is perfectly clear that the Board, selected by the Government, has the power to enforce its will. A united Board has authority over all the policy instruments; has power not only to exercise general supervision over the Reserve Banks, but also to remove any officer or director of any Federal Reserve Bank; and may ignore the advice of the Federal Advisory Council. Within these limits, Congress felt that private interests could make a valuable contribution to monetary policy.

The Federal Reserve Banks are organized to blend public and private influences. Each of the twelve Federal Reserve Banks is supervised and controlled by a board of nine directors with three-year terms. There are three classes, each consisting of three directors. Class A are chosen by and are representative of the member banks. Class B are chosen by the member banks and are engaged in commerce, agriculture, or some other industrial pursuit and may not be bankers. To diffuse power, it is also provided that member banks be grouped for purposes of electing directors into three groups: large, medium, and

small. Each group of member banks elects one Class A and one Class B director. Finally, the Class C directors are appointed by the Board of Governors. The Board of Governors designates one Class C member as chairman and another as deputy chairman of the board of directors.

The general idea was that in establishing discount rates or the cost of credit, the board of directors should have the views of lenders (Class A) and of borrowers (Class B) with a public group (Class C) to resolve any differences that might develop.

I might say that my experience is that directors do not consider themselves as representative of any particular interest. I have known Class B directors to move an increase in the rate, even on occasion when the mover's firm had a security flotation in the offing. Similarly, Class A directors have made a motion to reduce the rate. Action on the rate is preceded by a review of economic developments presented by our senior vice president in charge of research. He, in turn, has consulted with his staff, which includes professionally trained economists and statisticians. We are the original source of significant economic data. You directors express your judgments on developments. A motion on the rate is made with reference to the total situation, not as a reflection of a narrow point of view. Ordinarily, though not invariably, of course, votes on the rate have been unanimous. I mention this so that our new directors may have some feel of the spirit that has motivated their colleagues and their predecessors.

The board of directors supervises the Federal Reserve Bank subject to the provisions of the Federal Reserve Act, including the power of the Board of Governors. They select the officers. Their selection of a president and a first vice president for five-year terms is subject to the approval of the Board of Governors. The president is the chief executive officer of the Bank.

The third agency in the structure of the System is the Federal Open Market Committee. It consists of the seven members of the Board of Governors and the presidents of five Federal Reserve Banks. The president of the Federal Reserve Bank of New York is a permanent member. The other four presidents are selected in rotation by the directors of the other eleven Banks which are divided for this purpose into four groups. We are grouped with Boston and Richmond. Currently, I am a member and will serve until March 7, 1970. All presidents attend and participate in the meetings, but only the members vote.

The Federal Open Market Committee usually meets every three or four weeks in Washington. Regional and national judgments are brought to bear on national monetary policy. Extensive and intensive preparation goes into these meetings. Principles of monetary policy as well as their application to current developments are analyzed. Professional economists at both the Board of Governors and the twelve Reserve Banks prepare analyses. In addition, each president has the views of his own directors. He does not go as an instructed delegate, however, but votes as his judgment dictates.

The whole gamut of monetary policy is discussed. The immediate result is a directive to the Manager of the Open Market Account as to his operations until the next meeting.

The complexity of the System is illustrated when we relate the several instruments of policy to the agencies that have been described. The Board of Governors has exclusive control over the reserve requirements of member banks, over margin requirements for purchasing or carrying listed securities (the sole selective credit control

instrument), and over Regulation Q (the maximum rates of interest banks may pay on time and savings accounts). Discount rates are established by the directors of the Reserve Banks subject to review and determination by the Board of Governors. Open market operations are determined by the Federal Open Market Committee.

The fourth agency is the Federal Advisory Council. It was designed to give the commercial banking community an opportunity to express its views directly to the Board of Governors. It consists of one banker from each Federal Reserve District elected annually by the board of directors. The established custom in this District is for an individual to serve three terms. The Council meets quarterly with the Board of Governors. Our member reports to this board after these meetings.

The fifth part of the System is the member banks. National banks are required to be members and qualified state chartered banks may become members. Member banks are required to subscribe 6 per cent of their capital and surplus to the stock of the Reserve Bank in their District. Half of this has been paid in and the other half is subject to call. The stock is unique in character. It does not convey residual ownership of assets, which revert to the United States in the event of liquidation. A cumulative 6 per cent dividend is paid. Each member may nominate and has one vote in the selection of the Class A and Class B director for its group.

There you have in capsule form the unique blend of public and private interests that comprise the Federal Reserve System.

In conclusion, I should like to emphasize two features on which continuation of the present structure of the System depends.

The first feature is the dual role of my position as president of a Federal Reserve Bank. On the one hand, I am the chief executive officer of this Bank and as such am responsible to you, the board of directors. On the other hand, I am a regular attendant and, in rotation, a statutory member of the Federal Open Market Committee. As such I am responsible to my conscience and cannot go as an instructed delegate.

As president, I have a responsibility to keep you informed so that you may reach the best decisions on monetary policy, especially the discount rate of this Bank. As a Committee member, I acquire certain sensitive information that I am not at liberty to disclose. For my own part, I have never found that this dual role creates any difficulty or irritation. I am sure it never will so long as the nature of our relationships is understood. It is to develop understanding that I mention it specifically today at the first meeting with new directors.

The second feature relates to you as directors. In our meetings, we deal with many matters that must remain confidential. I cite action on the discount rate as the most important single example of many. You establish the rate on Thursday morning subject to review and determination by the Board of Governors. The Board typically announces its action at 4:00 p.m., after the close of the financial markets in New York. There is thus an interval in which such highly important knowledge must be held in confidence. This is true especially when we happen to be among the first Reserve Banks to make a change in the rate. Furthermore, there is always the possibility that the Board will not approve the rate you have established. A "leak" on the rate could result in a complete reorganization of the Federal Reserve System with elimination of all private elements. When I consider how much the directors of this Bank have contributed to monetary policy and its application to current developments, I am firmly convinced

that this would be a tragedy.

In the long run, of course, the future of the System depends on the quality of our monetary policy. A central bank can remain independent within Government not as a matter of right or of law but only as it maintains the confidence of the public. In a very real sense, the future of the System as we know it is in the hands of each —and of all—of us.

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The Human Lag

by Edward G. Boehne

Much has been said about the lags of monetary and fiscal policy. But there are also lags associated with changes in human attitudes. These lags have been heavy contributors to the economic problems we face as we break into a new decade. Public attitudes as well as the attitudes of policymakers failed to shift quickly enough in the past decade as the entire complexion of our economy changed.

Human attitudes remain remarkably stable as long as they provide guidelines for successful behavior and policy. So, as long as what we do pays off, there is little incentive to review our attitudes even though the environment in which we function is changing. Success at worst makes us oblivious to changes and at best causes us to perceive changes selectively so that they fit prevailing attitudes. Stability of attitudes is not just so much psychological jargon; it is a real cause of our economic difficulties.

EXPANSIONIST PSYCHOLOGY

Coming into the 1960's, the Kennedy Administration inculcated the "expansionist (get the country moving again) psychology" in the American people. This expansionist psychology grew out of the recession-riddled 1950's. The 1950's began with war and escalating inflation and ended with recession and price stability. Throughout the decade, the policy focus generally was on fighting actual inflation or combating the threat of rising prices. For example, in the 1952-59 period, discussions of the Federal Open Market Committee, with only a few interludes, concerned inflation, and much less attention was paid to the goal of economic growth.[1]

[1] Mark H. Willes, "Changing Goals of Monetary Policy: 1952-1966," *The National Banking Review*, vol. 4, no. 4 (June, 1967) pp. 503-507.

The anti-inflationist policies of the 1950's, indeed, were effective. As the decade of the 1960's began, the roots of inflation had been choked off. But, in the process, economic growth had been stunted. There was a growing concern that too many people were out of work, too many machines were idle, and too much economic waste was occurring.

Changing of the Guard. The year 1960 brought with it not only a new decade, but also the election of a new national administration. And the Kennedy team developed a persuasive case for getting the economy moving again. How absurd, they argued, to have idle men and idle machines coexisting with want when prices are stable. Aside from relieving human distress caused by involuntary unemployment, they wanted to meet social needs—schools, roads, health, and cities. And their clinching logic was that we could have more of everything without taking less of anything else. This concept became the attitudinal hook upon which the hats of fiscal and monetary policy were hung.

How was it possible that we could get more without giving up anything? The chart provides a graphic answer. The straight, broken line shows the economy's *potential* GNP. This line moves up because the economy's capacity to produce expands each year. Additional workers and more capital (plant and equipment) mean greater potential output. The solid, sometimes jagged line represents the amount of *actual* GNP. This is the amount of output we really produced.

For ten years prior to 1966, there was a gap between potential GNP and actual GNP. The economy was producing below its capabilities. In early 1961, during the trough of the 1960-61 recession, this gap reached $50 billion. In other words, the economy had unutilized resources—labor and capital—capable of producing $50 billion of *additional* goods and services. All that was needed to accelerate economic growth and close the gap was more *demand*.

And so the Kennedy Administration set out to upend the anti-inflationist attitudes of the '50's and replace them with expansionist economic policies of the '60's. Government spending accelerated, taxes were lowered, and business investment was stimulated. The Federal Reserve cooperated by making plenty of bank reserves available so that the faster pace of economic activity could be financed easily and fairly cheaply. Certainly, the comfortable monetary policy which prevailed was a powerful stimulant consistent with the expansionary psychology. The economy zoomed, and because of slack capacity, prices remained stable. Whoever said economics is a dismal science?

EXPANSIONISM: LEGACY AND CONSEQUENCES

Expansionist policies of the early '60's were, indeed, successful. Unemployment was greatly reduced, economic growth accelerated, and all the major sectors of the economy gained in this windfall affluence. By 1965, the gap disappeared, as shown in the chart, but the expansionist attitudes still prevailed.

With the gap gone and with Vietnam War expenditures mushrooming, something had to give. No longer could slack capacity be counted on to yield the extra output. Either Government outlays unrelated to the war had to be trimmed, or consumers and businessmen would have to tighten their belts and pay more taxes. But the expansionist illusion was too good to

let go. Officials said we could have both more guns and more butter. We could fight the war and have more of everything else, too.

As the economy bumped along its ceiling and output exceeded normal capacity, prices escalated. Not only did they rise, but they climbed at an accelerating rate. Inflation had clearly replaced unemployment as the chief economic problem. But policy itself, torn between the reality of inflation and the leftover spirit of expansionism, became a destabilizing element. Recognizing the perverse effects of fiscal policy on inflation, the Federal Reserve in 1966 slammed on the monetary brakes in an effort to cool the economy and relieve inflationary pressures. As can be seen in the chart, the medicine worked well, and the pace of economic activity began to slow in late 1966. As soon as the economy began to lose steam, however, the short-lived anti-inflationary policies of the Fed were reversed. The threat of a slowdown was more persuasive than the fact of escalating inflation.

Again, in 1968, after three years of rapidly rising prices, the expansionist psychology dominated the policy scene. Recovering from its paralysis, fiscal policy finally took on an anti-inflationary posture in mid-1968. Taxes were increased; the rein on expenditures was tightened; and the huge Federal deficit turned into a small surplus. But the Fed became fearful of "overkill"—fearful that a restrictive monetary policy on top of a tax increase might cause too much slowing in the economy. So, the Fed eased up on the monetary brakes. This policy tended to offset the effects of fiscal restraint, and the inflationary spiral intensified. After three years of inflationary boom, the ghost of expansionism still whistled its familiar tune.

Recessions and slow growth during the '50's caused a large gap to develop between potential and actual GNP. Expansionist policies during the first half of the '60's eliminated this gap. And excess demand since 1965 has pushed output beyond the normal limits of economic potential. The result has been escalating inflation.

Logarithmic scale with 1/3 cycle in a given distance

*Trend line of 3½ percent per year through middle of 1955 from 1st Quarter 1952 to 4th Quarter 1962, 3¾ percent from 4th Quarter 1962 to 4th Quarter 1965, and 4 percent thereafter.

A NEW ELEMENT

It became increasingly clear that the old attitudes were serving as inappropriate guides to policy. The public became concerned as a growing chunk of each paycheck was being wiped out by rising prices. After a considerable lag, attitudes were beginning to be reexamined. But even in the face of massive evidence that the expansionist philosophy had run its course, we were not ready yet to toss aside completely the old attitudes. The human lag was at work. But it was also being reinforced by a new element—a shift in emphasis from *how many* people are unemployed to *who* are unemployed.

The trade-off between unemployment and in-

flation is an old dilemma which policymakers have faced on numerous occasions. But in the 1960's, a new dimension was added to this trade-off.[2] An aroused nation had become sensitive to the social and economic inequities borne by some groups in society—notably non-whites. Even with record prosperity, the non-white unemployment rate had remained roughly twice that of all workers. Surely, it was reasoned, the burden of any rise in unemployment would fall most heavily on these same disadvantaged groups. Since disadvantaged persons typically are the least skilled and least educated, they are the last to be hired in an expansion and the first to be laid off during periods of slack demand.

The upshot of this new element was that it raised the cost of unemployment as a remedy against inflation and lengthened the life of expansionism. But as prices continued to soar, it was apparent, even with this new element, that some form of restraint had to be placed on the economy.

THE COMPROMISE OF GRADUALISM

So, late in 1968 monetary policy again was reversed and made restrictive. In early 1969, the Nixon Administration took office and promptly unleashed a barrage of anti-inflationary pronouncements. But even then, with monetary and fiscal policies coordinated for the first time in the struggle against inflation, officials still apologized for curtailing demand. Anti-inflationary policies were described as designed to slow-*up* rather than slow-*down* the economy. By gradually reducing excess demand, the argument went, inflationary pressures would subside without the pain usually associated with an economic transition of this kind. Gradualism was a kind of compromise. It continued to pay homage to the expansionist heritage while still espousing restraint, yet it clearly avoided advocating recession as a cure for inflation.

The logic of gradualism is impressive in the abstract world of theory. But in the context of a four-year inflationary boom, supported not only by demand excesses, but also by expectations of more boom and more inflation, gradualism has serious flaws. It provides for little uncertainty; it advertises a painless transition; it makes caution a seemingly costly pursuit. The result: businessmen and labor continued to bet on inflation, and expectations became more and more unrealistic in the face of an unwinding economy.

Businessmen and union leaders are well aware of the expansionist attitude which has prevailed. They continue to act as if that attitude will never change. They forget that although attitudes are quite stable, they can change. For most of 1969 people were skeptical of the authorities' intent to fight inflation. It was believed that expansionist attitudes would prevail ultimately, and that inflation would continue. This skepticism existed despite ever-tighter monetary policy.

Policymakers now are confronted with an uncomfortable dilemma. They are faced either with confirming these expectations by easing policy and making winners out of those who bet on inflation, or they can keep on the brakes, puncture inflationary expectations, and probably bring on a recession. The slow-*up* alternative of gradualism no longer exists.

To confirm inflationary expectations now would just about end all hope of bringing inflation under control in the foreseeable future. It would widen the credibility gap and make it

[2]For a closer look at the trade-off, see Sheldon W. Stahl, "The Phillips Curve: A Dilemma For Public Policy, Inflation versus Unemployment," *Business Review,* Federal Reserve Bank of Philadelphia, January, 1969.

extremely difficult for Government to convince the public of its resolve to dampen inflation. Further, future assaults on inflation would probably be more costly. The deeper and more numerous the roots of inflation become, the more difficult they are to choke off.

But to puncture inflationary expectations by keeping policy taut probably would cause a sharper and more painful adjustment than would have been supposed some months back. Consumer enthusiasm for spending already is low. If the bullish expectations of businessmen should break, sharp adjustments in inventory investment and capital spending easily could occur. With all of this, a recession would be just short of inevitable.

So, policymakers find themselves once more at the crossroads. Do they again pay homage to the expansionist view and follow the road of ease? Or do they travel the path of continued restraint and forsake the expansionist legacy?

SOME LONGER-RUN ISSUES

The expansionist panacea was born in the depression of the 1930's, rekindled in the recessions of the 1950's, and brought to full bloom in the boom of the 1960's. The magnificent success of expansionism was both numbing and hypnotic. Its great appeal is that in a sense it revokes the basic law of economics—scarcity. More Government spending or business investment did not mean less private consumption. But the expansionist spell lingered on past its appropriate time, and inevitably produced an overheated, inflationary economy. Expansionism turned out not to be a panacea after all; it proved to be a cure for only one kind of illness —an underemployed economy. But now as we look beyond the current problem of inflation and take a longer view, the chief concern is how we manage an economy as it bumps along its ceiling. How do we walk the tightrope between unemployment and inflation?

First, we need to shake off the expansionist legacy. The human lag has lagged long enough. We need to recognize the reality of the new ball game and stop pretending that we are playing in an old one. Demands need to be tailored to supply in the '70's—not the reverse as we have been accustomed to in the '60's. We need to realize that in a full employment economy more for one thing means less for something else. We cannot do all things for all people at the same time. We need to order our priorities, difficult as this may be in a pluralistic society.

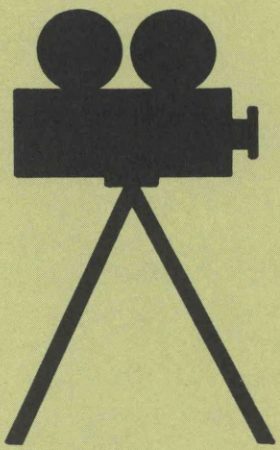
Second, we need to take a closer look at the nature of unemployment. If 10 million people are out of jobs and there are no jobs available, that's one kind of unemployment problem. But if three million people are unemployed and three million jobs exist, this is quite another problem. In the first case, pumping more demand into the economy would be appropriate. But in the second case, the problem is not one of deficient demand; rather, it is the difficulty of fitting square pegs into round holes. Although massive, club-like tools of expansionism may force some of the square pegs through some of the round holes, the inflationary costs appear to be prohibitive. Rather, chisel-like tools, such as job training to fit available workers to available jobs, seem better suited for mopping up structural unemployment along the normal limits of economic capacity.

Finally, the yo-yo approach to policymaking must be avoided. Stop-and-go policy measures over the last four years have themselves been destabilizing. Policymakers, in short, need to gear their policies more toward compensating for longer-run and more basic changes in the

economic climate and less toward attempting to iron out short-run wrinkles. Less concern with "fine tuning" and more sensitivity to fundamental changes in the economy would reduce the human lag, and hopefully guard against repeating the over-reactions of recent years.

No one, of course, can guarantee what this decade will bring. Over the last decade, we came a long way in learning how to stabilize a modern economy, and we have also learned how not to stabilize one. Hopefully, we are not being overly optimistic in assuming that the future will reflect lessons learned from both past successes as well as past shortcomings.

NOW AVAILABLE: FILM STRIP ON TRUTH IN LENDING FOR CONSUMERS



A film strip on Regulation Z, Truth in Lending, for showing to groups of consumers has been developed by the Board of Governors of the Federal Reserve System.

The 20-minute presentation is designed for a Dukane projector which uses 35mm film and plays a 33 RPM record synchronized to the film. Copies of the film strip can be purchased from the Board of Governors of the Federal Reserve System, Washington, D.C. 20551, for $10.00. It is also available to groups in the Third Federal Reserve District without cost except for return postage.

Groups in the Third District may direct requests for loan of the film to Truth in Lending, Federal Reserve Bank of Philadelphia, Philadelphia, Pennsylvania 19101. These requests should provide for several alternate presentation dates. Others not in the Pennsylvania, New Jersey, or Delaware area should direct requests to their nearest Federal Reserve Bank or branch.

Regional Economy Loses Some Zip in '69

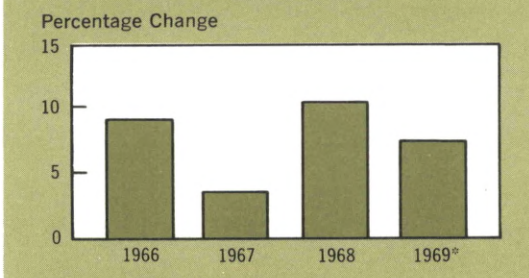
by Edward G. Boehne

Economic activity in the Third Federal Reserve District during 1969 set new records, but showed signs of losing momentum at year's end. Sales reflected rising consumer anxiety, and gains in production for the year lagged behind the hectic pace of 1968. Labor markets remained tight, but rising prices chipped away at climbing wages, and real purchasing power rose only slightly. Banking conditions reflected both strong loan demand and a restrictive monetary policy.

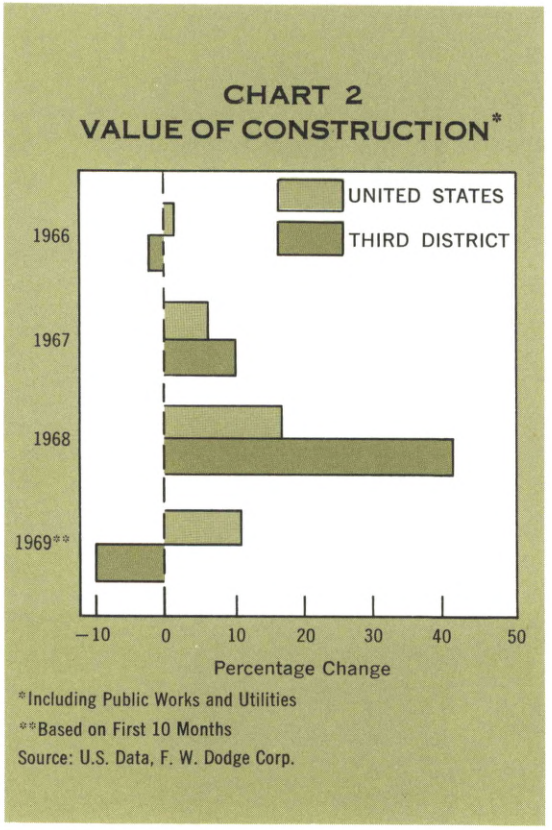
PRODUCTION AND SALES

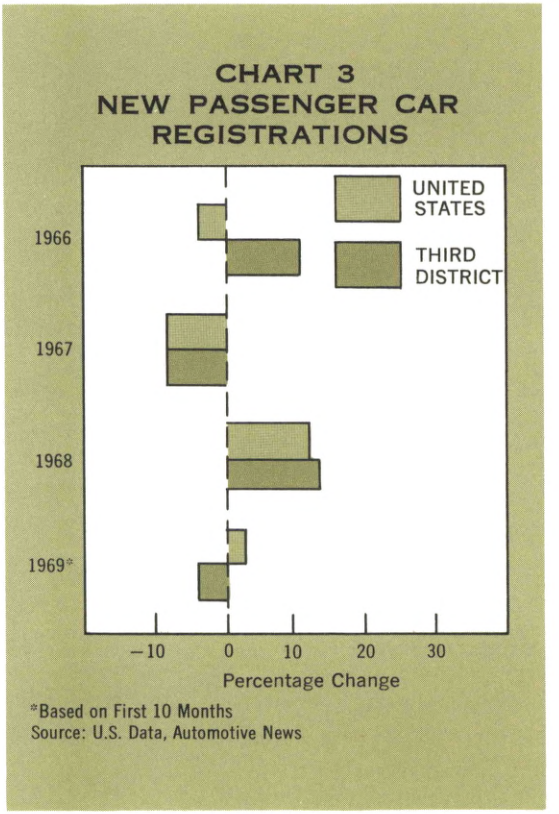
Output in the Third Federal Reserve District climbed to another record high in 1969, but the rate of increase was under the torrid pace of a year earlier. Manufacturing activity in the District, measured by electric power consumed by industrial firms, rose 6.8 per cent in 1969, compared to a jump of nearly 10 per cent in 1968, as shown in Chart 1. The less hectic tempo of last year largely reflected a general slowing up of the economy during the second half of the year in response to restrictive monetary and fiscal policies.

CHART 1
ELECTRIC POWER CONSUMPTION OF MANUFACTURERS IN THE THIRD DISTRICT



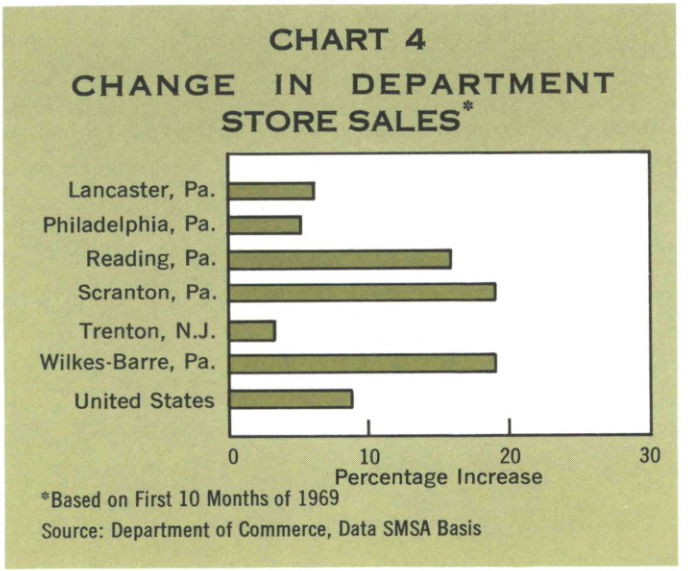
Construction activity, including residential, nonresidential, and public works, in particular felt the bite of monetary tautness. After a whopping gain of just over 40 per cent in 1968, the value of construction plummeted to a 10 per cent decline in the District during 1969 (Chart 2). At the national level, the growth rate of construction activity dipped from 17 per cent in 1968 to 11 per cent in 1969. The sharper slump in the region was caused largely by the abnormally high volatility of public works in the Third District during the past two years. In 1968, public works jumped 124 per cent, or nearly five times the gain posted a year earlier. In contrast, public works construction in the District for 1969 skidded 45 per cent.





While business firms in the Third Federal Reserve District were producing more in 1969, consumer zest for spending began to wane, especially for durable goods. For example, following a big leap in 1968, registration of new passenger cars (a rough proxy for new car sales) in the District slipped over 3.5 per cent in 1969. Nationally, the number of registrations rose slightly, as indicated in Chart 3.

Department store sales also lacked the zip evident a year earlier, although sales performance was mixed throughout the District, as indicated in Chart 4. Lancaster, Philadelphia, and Trenton trailed the nation; whereas, Reading, Scranton, and Wilkes-Barre kept ahead of the national pace.

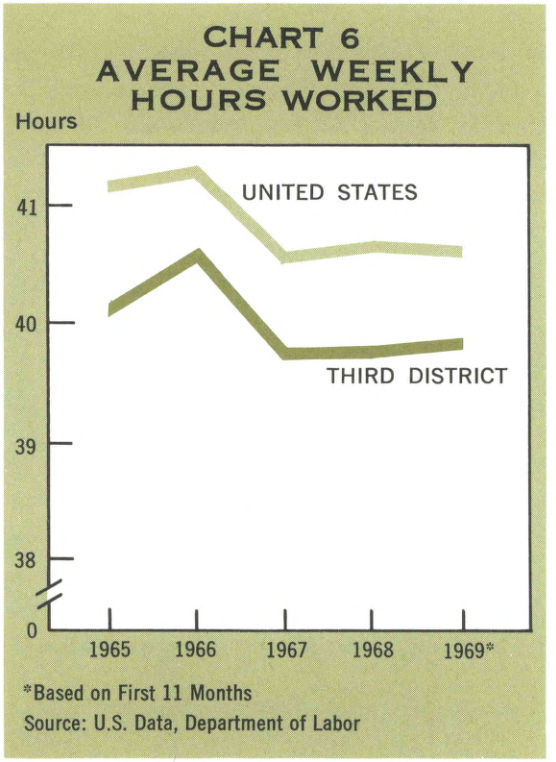


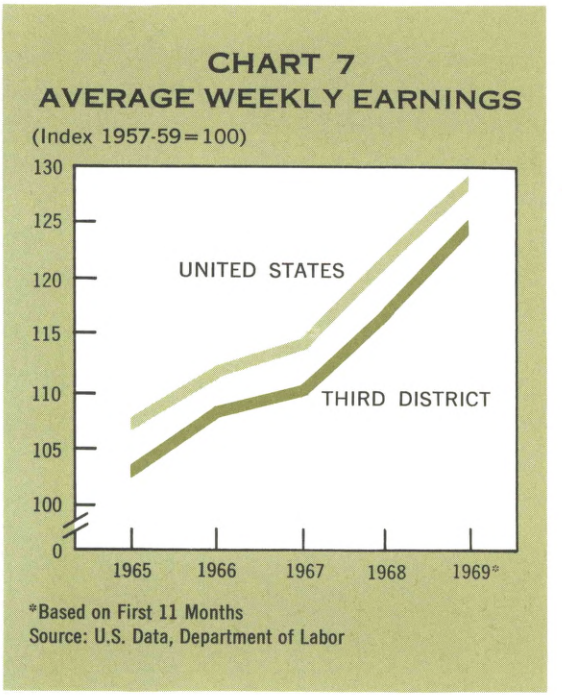
LABOR MARKETS

Even though the economy of both the nation and the region was losing some momentum during the latter part of 1969, labor markets remained tight. As seen in Chart 5, the unemployment rate in the District dropped slightly from 3.1 per cent in 1968 to 2.9 per cent in 1969, and still remained below the national figure of 3.5 per cent. In part, this low unemployment figure may reflect the fact that recruiting and training of skilled labor is expensive. Especially if the dip in business activity is short-lived, as most businessmen apparently believe it will be, hoarding of labor may be a cheaper alternative than first laying off and later rehiring workers with scarce skills.

Employees in the region also continued to put in a standard workweek in 1969. The average weekly hours worked in manufacturing last year in the District remained essentially unchanged from 1968 at 39.9 hours (Chart 6). Nationally, the number of hours worked per week was slightly higher, as it has been for several years.

On the wage side, another record was set in terms of the number of dollars earned. In the





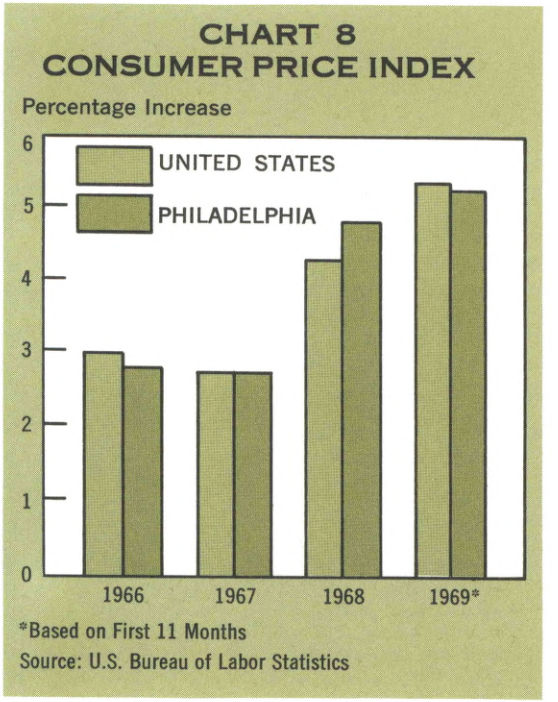
District, weekly earnings in manufacturing climbed $7.70, or 6.5 per cent, in 1969 (Chart 7). In the nation, by comparison, the step-up in weekly earnings last year amounted to $6.61, or about 5.5 per cent.

PRICES

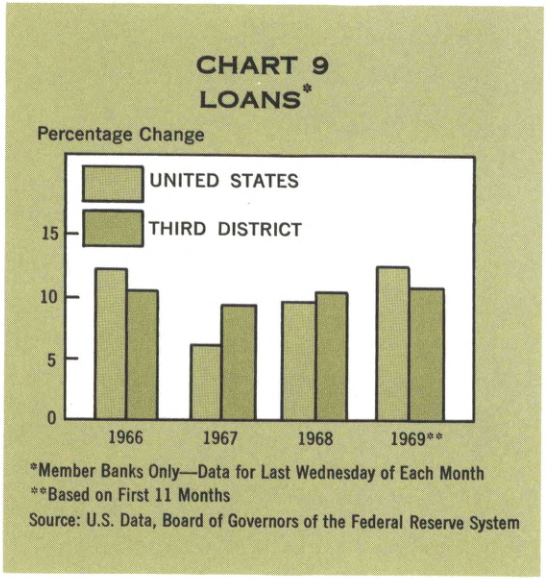
Along with record wages came a record cost of living. Consumer prices in the Philadelphia metropolitan area rose 5.3 per cent, or about the same as for the nation as a whole (Chart 8). Despite record dollar earnings, workers in the region barely were able to outrun inflation. With prices rising 5.3 per cent and wages climbing 6.5 per cent, the real purchasing power of workers rose only slightly.

BANKING

Banking trends in 1969 reflected record eco-

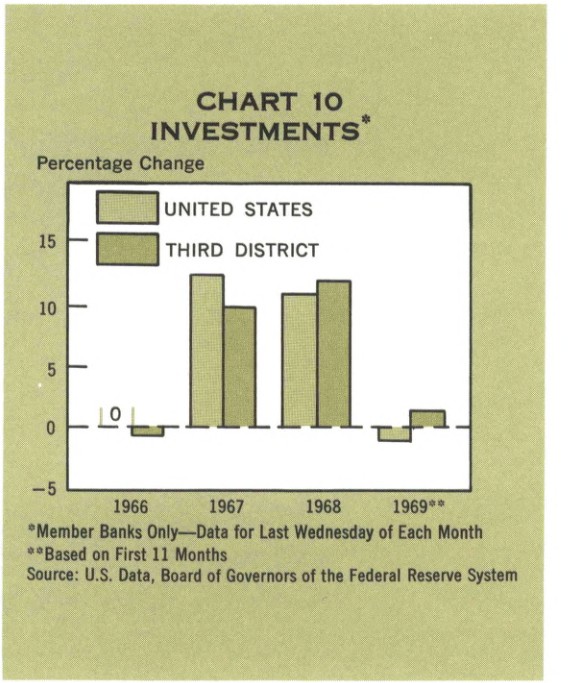


nomic activity and the resulting loan demand, particularly from the business sector, as well as a restrictive monetary policy. Accordingly, bank loans continued to rise sharply, but investments and time deposits changed little during 1969.[1]



Corporations were pressed for funds during much of 1969, and many of them turned to commercial banks. And, because of previous credit commitments, banks had to scramble to be responsive to the loan demands of businesses. Consumer needs for housing and installment credit, although not as robust as the demands of businesses for credit, offered little room for banks to reallocate loans. Consequently, loans at member banks grew by more than 10 per cent in the Third District, barely under the national gain of 12 per cent (Chart 9).

In order to meet this strong loan demand in the face of a restrictive monetary policy, banks in both the District and the nation not only had to cut back on their acquisition of securities, but they also had to acquire nondeposit funds through such techniques as Eurodollar borrowings and the sale of commercial paper. On the investment side, banks in the Third District during 1969 barely added to their holdings of U.S. Governments, municipal securities, and other investments. This performance is in sharp contrast to 1967 and 1968 when the volume of investments shot up 10 per cent or more (Chart 10). Nationally, investments of member banks declined slightly for the first time since 1966.

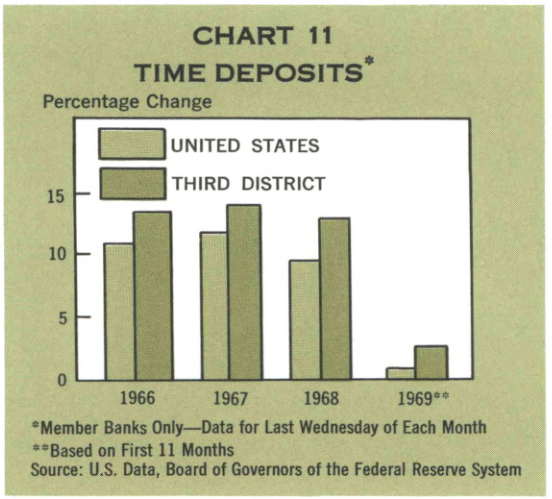


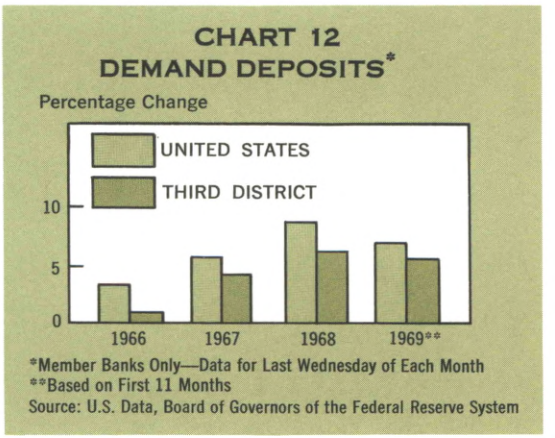
Record high interest rates in the financial markets made time deposits less attractive to

[1]Banking data are for member banks only. Percentage changes are based on data collected for the last Wednesday of each month. Percentage changes for 1969 include data through November. U.S. data are from the Board of Governors of the Federal Reserve System; Third District data are from the Federal Reserve Bank of Philadelphia. Demand deposits include interbank deposits, U.S. Government deposits, and other deposits. Time deposits include interbank and other time deposits. Loans include both loans and discounts. Investments include U.S. Treasury securities and other securities.

savers than other investments such as Treasury Bills. Commercial banks are prohibited from paying more than 4 per cent on savings deposits and a maximum of 6.25 per cent on single maturity (180 days or more) time deposits of $100,000 or more. With the 91-day Treasury Bill rate, to mention only one example, averaging nearly 7 per cent in 1969, a large share of the savings flow bypassed banks and headed directly for the open market. And, as shown in Chart 11, time deposits at member banks suffered. After posting a 13 per cent boost in 1968, time deposits inched up only 3 per cent for member banks in the Third District during 1969. Nationally, the gain in time deposits last year was under 1 per cent, compared to a 10 per cent jump in 1968.

Finally, gross demand deposits at member banks in the Third District rose just over 5 per cent in 1969, compared to a 6 per cent gain in 1968—a shade under the national rate in both years (Chart 12).





In short, for the Third District as well as for the nation, 1969 was a year of troubled prosperity. Output rose, wages climbed, and sales advanced, but rising prices and the threat of still higher prices made much of the gain illusory. The primary problem facing the nation and the District in 1970, therefore, is how to get the economy back on a sustainable growth path with minimum transitional cost.

WHAT THIRD DISTRICT BUSINESSMEN SEE FOR 1970

The staff of the Federal Reserve Bank of Philadelphia conducts a monthly Business Outlook Survey. The purpose of the survey is to obtain a reading of business conditions within the Third Federal Reserve District—an area comprising the eastern two-thirds of Pennsylvania, the southern half of New Jersey, and Delaware. The survey sample polls manufacturing firms with 500 or more employees.

Since its inception at the request of the regional business community nearly two years ago, the Business Outlook Survey has become a useful source of economic intelligence both for business and public policymakers. You may request that names be placed on the mailing list for the Business Outlook Survey by writing to Public Information, Federal Reserve Bank of Philadelphia, Philadelphia, Pennsylvania 19101.

OUTLOOK FOR 1970

Area businessmen foresee a slowdown in the economy lasting at least through the first half of 1970. Underlying this bearish outlook is a projected softness in new orders, shipments, and order backlogs. With product demand weakening, most manufacturers in the Third District plan either to halt inventory accumulation or actually to liquidate some of their existing stocks during the opening six months of 1970.

Despite sluggish demand, most firms plan to maintain the present size of their labor force. On the price front, area businessmen see little encouragement for a quick end to inflation. The majority of respondents to the Business Outlook Survey expect both to be paying as well as receiving higher prices during 1970.

As businessmen peer into the second half of 1970, however, a growing minority of them are beginning to look across the valley of business contraction to the upward slope of recovery beyond. This suggests that with the slowdown in the economy just now becoming clearly visible and with some bullish expectations already on the second-half horizon, regional businessmen anticipate only a short-lived decline in economic activity. So, as area executives gaze into the latter part of 1970, they are beginning to see a lot of what they have been seeing for the past four years—an expanding, inflationary economy.

DIRECTORS AND OFFICERS

At the election held in the fall of 1969, Mr. William R. Cosby, President, Princeton Bank and Trust Company, Princeton, New Jersey, was elected by member banks in Electoral Group 2 as a Class A Director for a three-year term beginning January 1, 1970. He succeeds Mr. Robert C. Enders. Mr. Edward J. Dwyer, President, ESB Incorporated, Philadelphia, Pennsylvania, was reelected by member banks in Electoral Group 3 as a Class B Director for a like term.

The Board of Governors of the Federal Reserve System redesignated Dr. Willis J. Winn, Dean, Wharton School of Finance and Commerce, University of Pennsylvania, Philadelphia, Pennsylvania, Chairman of the Board of Directors of this Bank and Federal Reserve Agent for the year 1970. Mr. Bayard L. England, Chairman of the Board, Atlantic City Electric Company, was reappointed a Class C Director of this Bank for a three-year term beginning January 1, 1970. Mr. England also was redesignated Deputy Chairman of the Board for the year 1970.

The Board of Directors of this Bank selected Mr. George H. Brown, Jr., Chairman of the Board, Girard Trust Bank, Philadelphia, Pennsylvania, to serve again during 1970 as the member of the Federal Advisory Council from the Third Federal Reserve District.

Effective January 16, 1969, three promotions occurred within the officer staff: Mr. Ralph E. Haas, formerly Assistant Vice President, became Vice President; Mr. William F. Staats, formerly Senior Economist, became Secretary and Senior Economist; and Mr. James A. Agnew, formerly Collections Officer, became Assistant Vice President. Effective the same date, Mr. Alexander A. Kudelich, formerly Head, Department of Collections, was promoted to officer status with title of Assistant Vice President. As of January 31, 1969, Mr. Lawrence C. Murdoch, Jr., Vice President and Secretary, resigned to accept a position with a Philadelphia commercial bank. Mr. Sheldon W. Stahl, Senior Economist, resigned effective June 2, 1969, to accept a position with the Federal Reserve Bank of Kansas City.

FORECASTS FOR 1970 NOW AVAILABLE

The Department of Research has compiled and analyzed a number of predictions made by businessmen, economists, and Government officials. This compilation includes a summary of forecasts for the economy as a whole as well as for particular sectors of the economy. The more important indicators are presented in chart form.

Copies of this release are available on request from Public Information, Federal Reserve Bank of Philadelphia, Philadelphia, Pennsylvania 19101.

DIRECTORS AS OF JANUARY 1, 1970

Group		Term expires December 31
	CLASS A	
1	HAROLD F. STILL, JR. President, Central Penn National Bank Bala Cynwyd, Pennsylvania	1971
2	WILLIAM R. COSBY President, Princeton Bank and Trust Company Princeton, New Jersey	1972
3	H. LYLE DUFFEY Executive Vice President The First National Bank of McConnellsburg McConnellsburg, Pennsylvania	1970
	CLASS B	
1	PHILIP H. GLATFELTER, III President and Chairman, P. H. Glatfelter Co. Spring Grove, Pennsylvania	1970
2	HENRY A. THOURON President, Hercules Incorporated Wilmington, Delaware	1971
3	EDWARD J. DWYER President, ESB Incorporated Philadelphia, Pennsylvania	1972
	CLASS C	
	WILLIS J. WINN, Chairman Dean, Wharton School of Finance and Commerce University of Pennsylvania Philadelphia, Pennsylvania	1970
	BAYARD L. ENGLAND, Deputy Chairman Chairman of the Board Atlantic City Electric Company Atlantic City, New Jersey	1972
	D. ROBERT YARNALL, JR. President, Yarway Corporation Blue Bell, Pennsylvania	1971

OFFICERS AS OF JANUARY 1, 1970

KARL R. BOPP, President

ROBERT N. HILKERT, First Vice President

JOSEPH R. CAMPBELL, Senior Vice President
DAVID P. EASTBURN, Senior Vice President
DAVID C. MELNICOFF, Senior Vice President
JAMES V. VERGARI, Senior Vice President and General Counsel
EDWARD A. AFF, Vice President
HUGH BARRIE, Vice President
NORMAN G. DASH, Vice President
RALPH E. HAAS, Vice President
WILLIAM A. JAMES, Vice President
G. WILLIAM METZ, Vice President and General Auditor
JAMES A. AGNEW, Assistant Vice President
JACK P. BESSE, Assistant Vice President
JOSEPH M. CASE, Assistant Vice President
D. RUSSELL CONNOR, Assistant Vice President
ALEXANDER A. KUDELICH, Assistant Vice President
WARREN R. MOLL, Assistant Vice President
HENRY J. NELSON, Assistant Vice President
KENNETH M. SNADER, Assistant Vice President
ALBERT SPENCER, JR., Assistant Vice President
RUSSELL P. SUDDERS, Assistant Vice President
JAMES P. GIACOBELLO, Chief Examining Officer
THOMAS K. DESCH, Examining Officer
WILLIAM L. ENSOR, Examining Officer
JACK H. JAMES, Examining Officer
LEONARD E. MARKFORD, Examining Officer
WARREN J. GUSTUS, Economic Adviser
WILLIAM F. STAATS, Secretary and Senior Economist
MARK H. WILLES, Senior Economist
SAMUEL J. CULBERT, JR., Bank Services Officer
GEORGE C. HAAG, Public Information Officer
HILIARY H. HOLLOWAY, Assistant Counsel
EUGENE W. LOWE, Securities Officer
A. LAMONT MAGEE, Assistant General Auditor
DAVID P. NOONAN, Assistant Personnel Officer

STATEMENT OF CONDITION
Federal Reserve Bank of Philadelphia

(000's omitted in dollar figures)	End of year 1969	1968
ASSETS		
Gold certificate reserves:		
Gold certificate account	$ 525,671	$ 494,258
Redemption fund—Federal Reserve notes	—	—
Total gold certificate reserves	$ 525,671	$ 494,258
Federal Reserve notes of other Federal Reserve Banks	34,614	35,064
Other cash	5,034	4,901
Loans and securities:		
Discounts and advances	650	100
United States Government securities	3,071,751	2,810,204
Total loans and securities	$3,072,401	$2,810,304
Uncollected cash items	729,778	634,903
Bank premises	2,475	2,359
All other assets	125,279	257,666
Total assets	$4,495,252	$4,239,455
LIABILITIES		
Federal Reserve notes	$2,756,766	$2,615,923
Deposits:		
Member bank reserve accounts	986,466	991,103
United States Government	70,870	522
Foreign	6,760	11,660
Other deposits	17,965	13,321
Total deposits	$1,082,061	$1,016,606
Deferred availability cash items	557,760	520,863
All other liabilities	30,631	20,499
Total liabilities	$4,427,218	$4,773,891
CAPTITAL ACCOUNTS		
Capital paid in	$ 34,017	$ 32,782
Surplus	34,017	32,782
Total liabilities and capital accounts	$4,495,252	$4,239,455
Ratio of gold certificate reserve to Federal Reserve note liability	19.1%	18.9%

EARNINGS AND EXPENSES
Federal Reserve Bank of Philadelphia

(000's omitted)	1969	1968
Earnings from:		
United States Government securities	$164,711	$136,300
Other sources	8,371	4,604
Total current earnings	$173,082	$140,904
Net expenses:		
Operating expenses*	10,701	9,584
Cost of Federal Reserve currency	1,262	1,385
Assessment for expenses of Board of Governors	779	750
Total net expenses	$ 12,742	$ 11,719
Current net earnings	160,340	129,185
Additions to current net earnings:		
Profit on sales of U.S. Government securities (net)	—	41
All other	319	427
Total additions	$ 319	$ 468
Deductions from current net earnings:		
Loss on sales of U.S. Government securities (net)	317	—
Miscellaneous non-operating expenses	25	9
Total deductions	$ 342	$ 9
Net additions	(22)	459
Net earnings before payments to U.S. Treasury	$160,317	$129,644
Dividends paid	$ 2,000	$ 1,934
Paid to U.S. Treasury (interest on Federal Reserve notes)	157,082	126,754
Transferred to or deducted from (—) Surplus	$ 1,235	$ 956

* After deducting reimbursable or recoverable expenses.

VOLUME OF OPERATIONS
Federal Reserve Bank of Philadelphia

Number of pieces (000's omitted)	1969	1968	1967
Collections:			
Ordinary checks*	363,700	324,500	283,400
Government checks (paper and card)	33,900	32,800	32,700
Postal money orders (card)	13,700	14,600	17,300
Non-cash items	899	832	846
Food stamps redeemed	29,581	22,633	17,391
Clearing operations in connection with direct sendings & wire & group clearing plans**	607	655	706
Transfer of funds	308	271	248
Currency counted	334,900	319,700	305,200
Coins counted	803,868	492,377	560,700
Discounts and advances to member banks	1	(a)	(a)
Depositary receipts for withheld taxes	1,293	1,056	799
Postal receipts (remittances)	281	271	282
Fiscal agency activities:			
Marketable securities delivered or redeemed	569	482	536
Computerized marketable securities (Book entry transactions)	18	13	—
Savings bonds and notes (F.R. Bank and agents)			
Issues (including reissues)	10,187	10,506	9,934
Redemptions	9,229	7,941	7,260
Coupons redeemed (Government and agencies)	996	959	1,070
Dollar amounts (000,000's omitted)			
Collections:			
Ordinary checks	$116,717	$100,774	$ 94,422
Government checks (paper and card)	9,421	8,952	7,983
Postal money orders (card)	241	253	248
Non-cash items	1,464	1,258	1,104
Food stamps redeemed	42	31	23
Clearing operations in connection with direct sendings & wire & group clearing plans**	66,946	61,742	54,568
Transfers of funds	351,524	250,695	219,815
Currency counted	2,494	2,351	2,258
Coins counted	103	58	63
Discounts and advances to member banks	6,289	1,193	323
Depositary receipts for withheld taxes	7,012	5,695	3,935
Postal receipts (remittances)	1,031	1,008	929
Fiscal agency activities:			
Marketable securities delivered or redeemed	11,603	14,091	13,571
Computerized marketable securities (Book entry transactions)	5,966	7,877	—
Savings bonds and notes (F.R. Bank and agents)			
Issues (including reissues)	428	468	459
Redemptions	530	403	385
Coupons redeemed (Government and agencies)	380	394	435

* Checks handled in sealed packages counted as units.
** Debit and credit items.
(a) Less than 1,000 rounded.