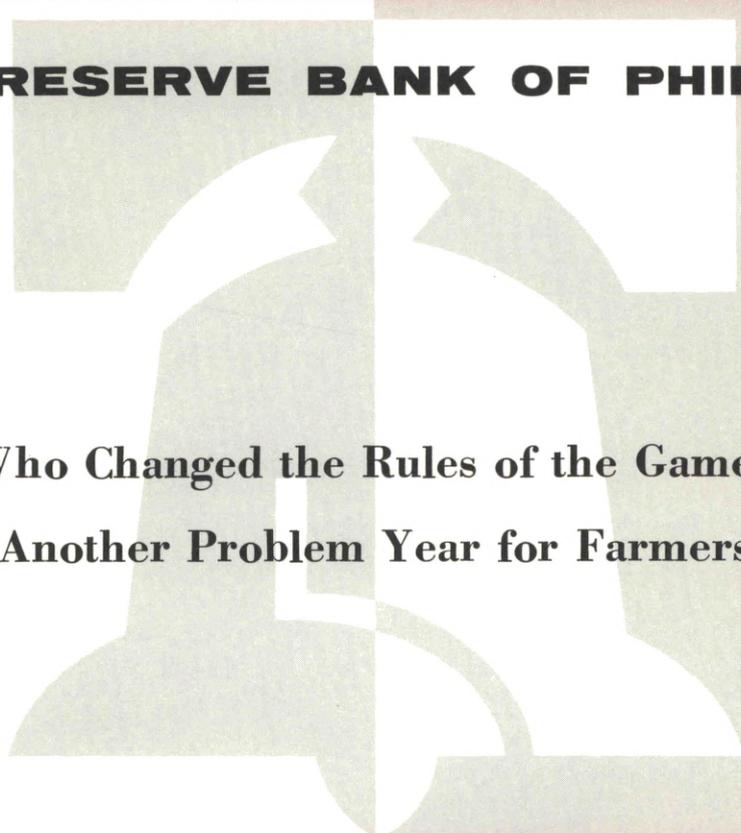


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**Who Changed the Rules of the Game?
Another Problem Year for Farmers**

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WHO CHANGED THE RULES OF THE GAME?

The Evolution and Development of Tools of Federal Reserve Policy



Early one morning a ship pulled out of the misty, fog-enshrouded harbor. In its hold was \$50 million in gold bullion. Late that same afternoon the central bankers met. They looked over charts and figures, discussed the situation, then raised the discount rate by one-half of one percentage point. In the weeks that followed, other interest rates rose. Money and credit became tighter. It was less easy to borrow.

Thus, a few decades ago the tools and techniques used to determine how much money and credit should circulate were relatively simple, in many instances reduced almost to a formula, as in the example above.

As time went on, things changed considerably. For just as a carpenter needs better tools to build a finer house, so must central bankers have better and more sensitive tools if they are to do a more competent job of adjusting the supply of money and credit to the needs of a more complex economy.

The “who” in these changes was actually the

course of events, events that stimulated central bankers to search out ever more adequate and finely honed tools to implement their policies. Wars, recessions, depressions, and inflations—periods of political and business instability—these were the forces of change. For as the British economist, D. H. Robertson, has written, “. . . a monetary system is like a liver: it doesn’t take up very much of our thought when it goes right, but it attracts a deal of attention when it goes wrong.”¹

In this article we take a look at the evolution through time of monetary policy with emphasis upon the tools used to implement that policy. We shall look for sources of change—why and how new tools evolved, how they developed.

As a starter, let’s see why the Federal Reserve System was established in the first place. What were the immediate events leading to the creation of the Fed, and what bearing did these events have on the tools given the new System?

¹ D. H. Robertson, *Money*, (Cambridge: The University Press, 1922) p. 2.

PANIC!

The crises and money panics of the late nineteenth and early twentieth centuries were the immediate seed from which the Federal Reserve grew. During these periods of crises, bank runs were an everyday affair. Frightened depositors queued up by the thousands to withdraw deposits from suspect institutions.

The basic problem was a general lack of liquidity—the absence of some ultimate source of credit and currency on which the banking system could draw when it encountered large-scale demands for funds. For the banking system which preceded the Federal Reserve was a hierarchical affair in which almost any disturbance could cause financial trouble. National banks were required to hold reserves, of course, but smaller banks were allowed to keep a large proportion of their reserves on deposit with medium-sized or large banks. Medium-sized banks, in turn, held a sizable proportion of their reserves with the New York banks. Finally, New York banks were allowed to use three-quarters of the pyramided reserve funds to expand credit, and they typically loaned them to stock brokers on call.

Thus, the ultimate capacity of the banking system to meet the demands of its depositors depended heavily upon the collateral of these call loans to brokers. Everything might go reasonably well as long as the call loans could be converted into cash with little or no delay. But let the demands for credit and currency pile up and panic would begin.

It might start in the smaller towns, say a demand by farmers to be paid in currency for their fall crops. If demands were sufficiently large, the New York banks would feel the pinch and call for repayment of their brokers' loans. Brokers would sell stock to get cash. With a

wave of selling, stock prices might fall and many brokers would be unable to repay the New York banks. The New York banks, in turn, would be unable to meet all of the demands of smaller banks.

Then panic would set in. Bank depositors would lose confidence and line the dusty streets to withdraw their funds. The result: bank failures, loss of savings, financial disaster. The ultimate capacity of banks to pay depended upon a thin margin of collateral which could not readily be converted into cash. There was no ultimate source of currency and credit which could be called upon when nearly everyone wanted currency instead of bank deposits.

The crisis of 1907 was the turning point. The National Monetary Commission was created and given the task of investigating banking conditions, recommending needed changes, and reporting to Congress. Following the 1912 report of the Commission, Congress acted quickly, and the Federal Reserve Act became law on December 23, 1913.

NATURE OF THE NEW SYSTEM

Under the Federal Reserve Act, 12 regional Federal Reserve Banks were set up and a Board was established in Washington. Commercial banks which became members of the System were required to keep reserves with the System and the Reserve Banks were given the power to extend credit to member banks by discounting specified short-term commercial paper. With this credit banks could obtain currency from the Federal Reserve Bank or could meet drains of funds to other banks. This "discount mechanism" became the first important tool of Federal Reserve policy. The System could use this tool to make credit and currency available when the banking system needed additional funds.

At first it was thought that the funds made available by the Federal Reserve Bank came from the centralized pool of reserves which the commercial banks kept with the Fed. But later it was realized that the bulk of these reserves was legally required and thus could not be “drawn out,” and that the Fed actually created *new* reserves when it gave credit on its books for discounted commercial paper.

This, then, was the first tool utilized by the Fed. But what checks were put on the use of this tool to prevent a flood of new money and credit from descending upon the economy as banks discounted paper to get new money from the Fed?

The answer, or so it was thought at the time, was provided within the Federal Reserve Act itself. It was thought that the proper quantity of money and credit could be assured (among other ways) by controlling the *quality* of credit extended by the System, and allowing the System to vary the interest or “discount” rate charged for discounting commercial paper. But how was this supposed to work?

Quality of credit

The original Act limited Federal Reserve discounts to short-term paper “issued or drawn for agricultural, industrial, or commercial purposes.” In other words, the Fed should provide new credit through the discount mechanism to banks but only on the basis of their short-term loans made to finance current production—goods in process. It was thought that this would assure that not too much money and credit would be created.

Since the Fed made funds available only on the collateral of productive loans, it was argued that each new grant of credit by the Fed would match the needs of the production process. If

production grew, credit would grow. If production were contracting, so would credit. Thus it was thought that credit would not outgrow production and hence there would be no danger of too much credit. The whole thing would be automatic.

Gold flows and discount rate

Gold flows and discount rate administration under the so-called “rules of the game” of the classical gold standard (which influenced the thinking of most System officials) provided an additional safeguard against over-expansion of credit. If too much credit were made available, prices would rise (with more money chasing a limited supply of goods) and interest rates would fall. When this happened, gold would flow abroad as (a) Americans bought more abroad (at lower prices) and foreigners bought less here, and as (b) Americans invested more abroad (at higher interest rates) and foreigners less here. Thus, gold outflows provided a ready signal that too much money was around; under the “rules of the game,” central banks should use their tools to make money tighter at home, thereby adding to business stability.

How to tighten credit? Raise the rate charged banks when they discount their commercial paper. A higher discount rate would discourage bank borrowing from the Federal Reserve banks. This would help to limit the amount of bank credit available and raise its price. With less money pursuing domestic goods, some steam would be taken out of the boom and pressure on prices would be eased.

In short, it was hoped that the new Federal Reserve System could put an end to the money crises of the nineteenth and early twentieth centuries and could provide a measure of economic stability. The main tools for the task:

discount accommodation and the discount rate.

The beauty of the tools (in theory at least) was their automaticity—provision of the proper quantity of credit by controlling its quality and by adjusting discount rates to gold movements.

Unfortunately, that stability was not to be forthcoming. And just as economic instability was a motivating factor behind the creation of the Federal Reserve System, it was an important force behind the further development of ideas and tools.

The new instability was the inflation-deflation cycle associated with . . .

WAR AND ITS AFTERMATH

Hardly had the System begun functioning effectively when the guns heard in Europe caught the United States in the turmoil of World War I and the System's efforts were turned in the direction of wartime financing.

After the war the almost inevitable inflation came, described by System officials at the time as "characterized by an unprecedented orgy of extravagance, a mania for speculation, over-extended business in nearly all lines and in every section of the country, and general demoralization of the agencies of production and distribution." The war was financed in large measure by creating money, and the money had come home to roost.

At first the System declined to take restrictive action, working instead to keep credit readily available and interest rates low so as to facilitate Treasury handling of the large war debt. Not until May of 1920 did the System embark upon a thorough-going policy of restraint. But unfortunately this very month marked the end of the postwar boom and the beginning of one of the sharpest and most severe price declines in history.

In May of 1920, John Wanamaker's in New York cut retail prices 20 per cent. By August of 1921 wholesale commodity prices had plunged 40 per cent. Unemployment leaped to $4\frac{3}{4}$ million in 1921. Farmers were especially hurt as they had used extraordinarily high wartime earnings to buy and bid up prices of agricultural land and thus were faced with huge mortgage debts in a period of declining commodity prices.

War, inflation, deflation: these conditions set the stage for a fundamental reappraisal of System goals, guides, and tools. And this reappraisal was to bring important changes. The direction of change: a growing dissatisfaction with passive implementation of monetary policy based on automatic guides. But why a new emphasis on discretion and action?

The new emphasis

The reasons were at least two in number. First of all, there was widespread dissatisfaction with the cycle of inflation and deflation that the country had just gone through,² and dissatisfaction with the past invites re-evaluation.

A second reason for the new emphasis upon discretion was simply that the old guides to policy—gold flows and qualitative discount administration—were becoming increasingly obsolete. The international gold standard was no longer in operation. Indeed, the United States was the only major country still maintaining gold payments. So how could gold be a guide to policy?

With regard to the gold standard, the 1923 *Annual Report* noted that:

Under the present conditions, with gold embargoes in force in most foreign

² The hearings in 1921 before the Joint Commission of Agricultural Inquiry provide a pungent example of this dissatisfaction.

countries and the United States practically the only free gold market of the world, the movement of gold to this country does not reflect the relative position of the money markets nor does the movement give rise to corrective influences, working through exchanges, money rates, and price levels, which tend to reverse the flow. The significance which movements in the reserve ratios formerly possessed rested upon the fact that they were the visible indicators of the operation of the nicely adjusted mechanism of international finance. With this mechanism now inoperative, the ratios have lost much of their value as administrative guides.

Moreover, the old "real bills" or "commercial loan" theory of discount administration was questioned for logical consistency:

There are no automatic devices or detectors for determining, when credit is granted by a Federal Reserve Bank in response to a rediscount demand, whether the occasion of the rediscount was an extension of credit by the member bank for nonproductive use. Paper offered by a member bank when it rediscounts with a Federal Reserve Bank may disclose the purpose for which the loan evidenced by that paper was made, but it does not disclose what use is to be made of the proceeds of the rediscount. A farmer's note may be offered for rediscount by a member bank when in fact the need for rediscounting has arisen because of extensions of credit by the member bank for speculative use.

In other words, just because a note rediscounted by a commercial bank at a Federal

Reserve Bank was signed by a farmer, this didn't mean that the new funds so obtained by the commercial bank would be used to make additional "productive" loans to farmers or business. The funds might be used to finance speculation, say, in stocks. Thus, money might grow at a faster rate than production.

In short, since System officials were dissatisfied with the past record of instability and since they could no longer rely on the automatic guides of the past, the System began to move away from the era of rules and automatic adjustment. In the 1923 *Annual Report*, the Federal Reserve Board had this to say:

In its ultimate analysis credit administration is not a matter of mechanical rules, but is and must be a matter of judgment — of judgment concerning each specific credit situation at the particular moment of time when it has arisen or is developing . . . the Federal Reserve Board must look for guidance primarily to information concerning the state of industry and trade and the state of credit. Changes in the volume of bank credit in use are the outcome of changes in the volume of business. A proper and effective credit policy, considered in its broader aspects must, therefore, be based on that wide variety of economic facts which, when brought together, throw light on the changes taking place in the business situation and their relation to current banking and credit trends.

Two words summed up the new attitude: discretion and action. These two words were in sharp contrast to those which best described earlier policy. It was now discretion and action instead of automatic and passive. Of course

there was no sharp break with the past. Some within and without the System still clung to "the real bills doctrine."

Yet the new emphasis had indeed arrived, and it carried through to the *tools* of Federal Reserve policy. For during the period of transition toward discretion and action an important finding had been made, which was to provide much of the wherewithal to implement the new attitude. That finding was the discovery of the monetary impact of open market operations.

Open market operations as a tool of credit policy

Open market operations simply mean the purchase and sale of securities by the Federal Reserve System in the "open" market. The Federal Reserve Act gave the System legislative authority to engage in these operations and the System did so on numerous occasions in its early history. Until the early twenties, however, the Federal Reserve Banks bought or sold securities primarily: (a) with an eye toward providing earnings (the securities purchased gave the banks an interest income), (b) to facilitate Treasury financing, or (c) to provide the collateral to back Federal Reserve Bank notes, a type of currency no longer issued by the Fed.

Then in the early twenties a curious thing happened. System officials began to notice that the purchase and sale of Government securities had interesting effects on credit conditions. Purchases by the System seemed to ease credit while sales tended to make credit less available.

The explanation of this phenomenon was simply that, when the Fed *purchased* securities, it paid for them with newly created funds which, when deposited in the banking system, made more money available to lend and to invest. When it *sold* securities, it generally received a

bank check which reduced the aggregate amount of funds which the banking system had available to lend and to invest.

Here, then, was a new technique the Fed could use to inject or withdraw funds from the economy. And most important, the Fed could do so at its own initiative. It didn't have to depend upon banks to come in and borrow as it did with discount policy. It didn't have to wait for banks to react to a change in the discount rate.

The new tool fit in perfectly with the evolving ideas of action, initiative, and judgment. Where System policy called for action, the new tool provided the wherewithal for prompt, decisive action. Where policy called for discretion and initiative (as opposed to the automatic formulas of yesteryear) the new tool provided the wherewithal to invoke that initiative—to change the funds available to lend and invest at its own discretion and judgment instead of at the judgment of the banking system. Thus in its 1923 *Annual Report* the Board recognized that:

The difference between discount operations and open market operations is that the initiative in rediscounting lies with the member banks, while in the purchase and sale of securities the initiative may be taken by the Reserve Banks.

Moreover the Board directed:

That the time, manner, character, and volume of open market investments purchased by Federal Reserve Banks be governed with primary regard to the accommodation of commerce and business and to the effect of such purchases or sales on the general credit situation.

No longer would open market operations be

primarily for income. They now reflected an active and positive credit policy.

The Federal Reserve in the early 1920's also discovered many important relationships between open market operations and discount policy. Most important—they learned to coordinate the two tools to achieve maximum effectiveness.

Now that Federal Reserve officials had come to understand open market operations, their control instruments could be employed with more initiative, precision, and effectiveness. They could use discount rates alone, open market operations alone, or the two together in varying degrees, depending on conditions and the results desired. For example, if they wanted merely to offset gold or currency or to take only mildly restrictive or easing action, they might leave discount rates unchanged and rely solely on sales or purchases in the open market . . . if the Federal Reserve wished to restrict credit, it would usually begin by selling Government securities, which would force member banks more deeply into debt at the Reserve Banks. This alone would lead the banks to lend less liberally and market rates of interest would rise. The Reserve Banks would then decide whether, and how much, to add to the restrictive pressure by raising discount rates.³

Thus disturbances in the economic liver stimulated Federal Reserve officials to reappraise monetary policy. First, the money panics of the nineteenth and early twentieth centuries had given us the Fed and its original tools. Now the war and postwar inflation-deflation cycle

led to the use of new guides and new tools with which to affect the quantity of money and credit. Yet this was by no means to be the end of the evolutionary process. There were other disturbances to come. One of the most important: the Great Depression of the 1930's.

THE GREAT DEPRESSION

The Depression of the 1930's was one of the most severe and prolonged of all time. It was marked by bread lines and shanty towns. Its emblems were the blue eagle and the C.C.C. Its despair was the breeding ground for political agitation, even violent revolution.

The economic statistics of the Great Depression were morbid reminders of human despair. By 1933, one of the worst years of the depression, total spending as measured by gross national product was one-third less than in 1929. And unemployment, the most important indication of human misery, reached almost 13 million by 1933. One out of every four persons in the labor force was out of a job.

What could the Federal Reserve System do about it? At first, the hands of System officials were pretty much tied. One problem was gold reserves and collateral requirements. The System was still required to back its notes and deposits with gold and eligible commercial paper, and since gold was flowing out and the volume of eligible paper was declining (with the slowdown in production), the System could not act aggressively to push currency and credit into the banking system.

More than this was involved, however. Some System officials

considered the depression necessary and inevitable to purge the economy of the extravagances of the new-era prosperity. This feeling was accompanied

³ Lester V. Chandler, *Benjamin Strong, Central Banker* (Washington: The Brookings Institution), pp. 236-237.

by an unwillingness to do anything that might involve a return of what were considered the artificial conditions of that period. For a time there was both a return to traditional theories and principles and a hesitance to devise or employ new techniques of monetary management. These developments are illustrated in the caution with which the Reserve officials pressed for extension of the discount facilities of the System and the collateral provisions for Federal Reserve notes.⁴

Nevertheless, the legislative mills began to grind as the Depression worsened, and the System emerged with major changes in its box of tools.

Legislation affecting System tools

Among the first of many bills passed affecting System tools was the *Glass-Steagall Act of 1932* which gave the System power in exceptional circumstances to extend credit without requiring eligible paper. The word “exceptional,” however, was an indication that the old “commercial loan theory,” though dealt a blow to the logical chin, was still stirring.

Other legislation was aimed at curbing some of the speculative excesses typical of the twenties—excesses such as those that had contributed to the stock market crash.

The Banking Act of 1933 empowered the System to prevent undue use of “bank credit for the speculative carrying of or trading in securities, real estate or commodities or for any other purpose inconsistent with the maintenance of sound credit conditions.” To put teeth in this provision the Act authorized the Reserve Banks,

among other things, to refuse credit accommodations to offending member banks.

Then came the *Securities Exchange Act of 1934* which gave the System its first “selective” control of credit, selective in the sense the control would not affect the total amount of credit put to use in the economy as a whole, but which could change the amount of credit put to use in a particular sector of the economy—in this case, for the purchase and carrying of securities listed on national exchanges. (See the table describing Federal Reserve tools in more detail.)

The stock market was singled out for a very important reason. It was thought that much of the panic and perhaps some of the roots of the Depression lay in the speculative binge that carried stock prices to the inflated highs of 1929. Many times during the twenties Federal Reserve officials had been disturbed about the rapid rise in stock prices and the volume of credit which was helping to push stock prices up. (It was possible to buy a stock costing \$100 by putting up say, \$10 of your own money and borrowing the rest). By October, 1929, loans to brokers had risen above \$8.5 billion, more than two-and-a-half times their level three years earlier.

Yet despite their concern with the stock market, System officials were often hesitant to use their general controls to decrease over-all availability of credit (which might be needed by industry in general) just to keep some of this credit from spilling over into one sector.

This was the environment giving rise to the development of the Fed’s first “selective” tool. The Board was empowered to prescribe minimum margin requirements (the amount of cash relative to borrowed funds) for purchasing or carrying securities or selling them short. Later, as will be discussed, the Board was given ad-

⁴ Karl R. Bopp, “Three Decades of Federal Reserve Policy,” *Postwar Economic Studies*, (Washington: Board of Governors of the Federal Reserve System, 1947) No. 8, p. 13.

ditional selective controls when conditions indicated the desirability of checking the amount of credit flowing into one or more other sectors of the economy.

Finally, in the *Banking Act of 1935*, the Federal Reserve Banks were allowed to “make advances to any member bank on its time or demand notes . . . which are secured to the satisfaction of such Federal Reserve Bank” but at a penalty rate of $\frac{1}{2}$ of 1 per cent. As a result, the Board of Governors issued a regulation which made all sound assets of member banks a potential basis of advances by the Federal Reserve Banks. This regulation marked, for all practical purposes, the demise of “the commercial loan theory.”

The 1935 Act also gave the System an important new tool which it had asked for (but had not received) as far back as 1916. It empowered the Board of Governors to change reserve requirements within specified limits and thus increase or decrease the volume of bank deposits which a given volume of reserves would support. If, for example, a certain class of banks was allowed to reduce required reserves held with the Fed from, say, 12 to 10 per cent of their net demand deposits, these banks could then expand loans, investments, and deposits immediately.

In summary, then, the Great Depression resulted in significant changes in Federal Reserve tools. Reserve Banks could now lend to member banks on any sound banking asset. Reserve requirements could be changed within specified limits. And, finally, the System was given its first “selective” tool—the authority to set stock margin requirements.

Thus another period of business instability had brought change. Still, however, there was more to come. The Great Depression had not

yet spent itself when the roar of guns was heard once more in Europe. It was the eve of the bloodiest conflict of them all: World War II.

WAR AND ITS AFTERMATH

When national borders are threatened, all objectives become secondary to that of defense. World War II was certainly no exception to this general rule, and as part of the national effort, the money and credit-creating powers of the Federal Reserve System were placed at the disposal of the Treasury. An important objective of war finance was to see that as much war borrowing as possible should tap savings. Yet no bond would go unbought for lack of funds. The System stood ready to create additional money if it were needed to finance the war effort. This decision was to have an important influence on the System’s bag of tools—especially on its selective controls and on the postwar development of open market operations.

Pegging the Government securities market

To carry out the war policy the Treasury and the Fed agreed in March of 1942 that the then-existing pattern of interest rates on Government securities would be maintained. This would assure funds at relatively low rates and it would mean that potential buyers of securities would not delay their purchases, hoping to gain by waiting for interest rates to rise.

It also meant, however, that the Fed would have to provide funds needed to purchase any securities that others were unwilling to take at prevailing rates. For to peg a price (and an interest rate is a price) one must be willing to buy all that the market rejects. Thus the Fed lost effective control over the money supply.

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FEDERAL RESERVE TOOLS: WHO, WHAT, WHEN, WHERE, WHY, AND HOW

DISCOUNT POLICY

OPEN MARKET OPERATIONS

CHANGE IN RESERVE REQUIREMENTS

SELECTIVE INSTRUMENTS

Discount Rate

Member Bank Borrowing

Who is involved?

How is it used?

What is the impact?

	Discount Rate	Member Bank Borrowing	OPEN MARKET OPERATIONS	CHANGE IN RESERVE REQUIREMENTS	SELECTIVE INSTRUMENTS
1. What is it?	Rate charged member banks for borrowing from the Federal Reserve Bank.	Rules and practices involved in borrowing. Rules are not changed flexibly as a tool of policy but have an important bearing on use and impact of borrowing.	Mainly purchases and sales of Government securities.	Change in percentage of deposits which member banks are required to hold as reserves.	Instruments designed to influence the amount of credit put to use in a particular sector of the economy. At present, only margin requirements are in effect. Margin requirements: set minimum required down payments for purchasing or carrying of securities listed on national exchanges. Consumer credit controls: set minimum down payments and maximum periods of repayment applied to consumer credit. Real estate credit controls: set minimum down payments and maximum periods of repayment for credit extended to finance new construction.
2. Who has the authority?	Board of Directors of each FRB establishes rate subject to review and determination by Board of Governors.	Rules of Board of Governors (Reg. A) administered by each Federal Reserve Bank.	Federal Open Market Committee.	Board of Governors.	Board of Governors.
3. Who takes the initiative?	Federal Reserve	Member bank	Federal Reserve	Federal Reserve	Federal Reserve
4. Limits to use	Lower limit, zero; no upper limit.	Lower limit, zero; upper limit provided by tradition against borrowing, administration of discount window and total expansion of reserve credit permitted by gold certificate reserve ratio.	Limit of purchases: lower, zero; upper, gold certificate reserve ratio. Sales: lower, zero; upper, size of portfolio.	Demand deposits: Reserve City banks - 10-22% Country banks - 7-14% Time deposits: Reserve City banks } 3-6 % Country banks }	Stock Margin Requirements: lower limit, zero; upper limit, 100 per cent. Consumer Credit: the power to change the minimum down payments and maximum periods of repayment was not limited, but was left to the discretion of the Board of Governors. Real Estate Credit: power to change requirements was in some cases limited by statute.
5. Can it be used flexibly?	Changes can be small but are not easily reversed over short periods; for this reason, experimental "probing" action is more appropriate for open market operations, with later "confirmation" through change in discount rate.	With borrowing at the initiative of the banks, reserves can be supplied in precise amounts and for periods needed by individual banks.	The most subtle instrument of all; volume can be large or small; operations easily reversible.	The least subtle instrument; a large volume of deposits is affected by small change in requirements; not easily reversible.	Flexibility is limited by trade practices and administrative problems. Makes over-all policy more flexible, however, by enabling the Federal Reserve to influence credit in one area of the economy without restricting credit in others.
6. How is it coordinated with other instruments?	Generally to "confirm" prior action in open market operations; (e.g. by selling Government securities the F.R. can bring about higher rates on Treasury bills and then follow with an increase in the discount rate; also, by restrictive open market operations the F.R. can tighten reserve positions, forcing more banks to borrow from the Reserve Banks and hence making the discount rate more "effective").	Acts as a safety valve; if other instruments unduly tighten reserves of individual banks, they may resort to the discount window. Pressure on the discount window will depend partly on coordination of discount rate and open market operations (e.g. if the discount rate is significantly below rates on Treasury bills for an extended period, banks will tend to obtain reserves by discounting rather than selling bills).	Used in conjunction with discount rate and member bank borrowing (as explained under those headings); also may smooth effects of changes in reserve requirements.	Often may require use of other instruments to smooth the effects of changes.	In relation to the general instruments, selective instruments generally reinforce, compensate, or at certain times serve as a partial substitute.
7. Administrative problems?	None	Administration of discount window requires close observation of nature and purpose of borrowing by individual banks; problem of determining eligibility of paper for rediscount arises only occasionally.	Execution of open market operations requires the trading desk to be in intimate contact with the money and Government securities markets.	Because changes in requirements apply to large groups of banks, the impact on individual banks must be studied carefully in advance; also, changes impose some burdens on member banks in calculating their positions.	Administrative difficulties are much greater than for general instruments. The difficulties include problems of determining the value of collateral, recognition of trade practices, and policing actions of a large number of lenders to enforce regulations.
8. What is its psychological impact?	Varies. May be taken as reflecting a major policy decision by the monetary authorities; or may be merely a technical adjustment of discount rate to market rates. Because bank rate is so important in other countries, a change in the discount rate takes on additional symbolic significance at times of balance of payments difficulties.	Tradition against continued indebtedness means that rising volume of borrowing has increasing tightening effect through banker psychology.	Unless operations are very large scale, likely to have little effect because it receives relatively little publicity.	May be considerable. Often used for major policy actions for dramatic effects; all affected banks necessarily made aware of the action in computation of required reserves.	Impact on individuals is likely to be greater than that of general instruments because individuals are made aware of regulations in the process of borrowing or buying the listed articles.
9. How does it affect bank reserves?	Determines the price for borrowing reserves.	Borrowing increases reserves; repayment decreases reserves.	Purchases increase reserves; sales decrease reserves.	No effect on total reserves; changes the amount of deposits which a given amount of reserves will support. A reduction in requirements frees reserves for expansion of deposits; increases in requirements have been used principally to mop up excess reserves.	No effect.
10. Where is the immediate impact?	Borrowing member banks.	Borrowing member banks.	Money market banks and Government securities dealers.	All in particular class of member banks whose requirements are changed (Reserve City or Country).	Borrowers and lenders in the selected credit control area.
11. How does the effect spread?	Primarily through the complex of short-term rates in which the discount rate plays a pivotal role; a change in the discount rate influences the method by which banks adjust reserves and hence affects other rates (e.g. a rise in the discount rate above the Treasury bill rate induces banks to sell bills rather than borrow, thus tending to raise the bill rate).	By shifting indebtedness from bank to bank; because of reluctance to be in debt except for short periods, borrowing banks sell securities to repay the Federal Reserve; this reduces reserves of other banks (assuming the F.R. does not increase total reserves by other means) and forces them to borrow.	Through the normal flow of funds among banks and regions (e.g. the additional reserves from F.R. purchases spread from money market centers to other parts of the country) and through the complex of rates in the money and Government securities markets.	Changes the distribution of credit among different sectors of the economy.	
12. How does it affect credit?		Although each of the tools has its unique impact, it works through the supply, cost and availability of bank reserves and the level and pattern of interest rates. In turn, this has an effect, at the margin, on the supply, cost and availability of money and credit. And, finally, this influences the flow of expenditures and the pace of economic activity.			

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This arrangement, of course, had great inflationary potential. As additional money is created the public holds additional purchasing power which can be used to bid up prices of scarce goods.

Yet during the war, prices were held relatively stable. Rationing and price controls went into effect. Moreover, the Fed was given an additional selective tool at the outset of the war—the power to set minimum down payments and maximum time-payment periods on a wide range of consumer goods.

Despite these measures war finance was to have an important impact in the postwar period.

Aftermath

Between July 1, 1941 and June 30, 1946 the Federal Government raised \$383 billion. Forty-six per cent of this amount came from taxes and 54 per cent was obtained by borrowing. Over 40 of this 54 per cent came from the banking system.

As a result, the money supply increased enormously. From \$36.6 billion in 1939, the money supply soared to \$103.5 billion in 1945. Then when wartime price controls and rationing were relaxed a flood of purchasing power descended upon a relatively limited supply of goods, and prices began to rise.

At first, the Fed found it difficult to exercise the kind of monetary restraint necessary to control the inflation. Once again the problems of managing a huge Federal debt influenced the Fed to subordinate other objectives to that of facilitating Treasury finance. If the Fed should try to mop up some of the excess liquidity by selling Government securities, the prices of these securities would fall (as there

would be a greater supply on the market) and yields would rise. Rising yields and interest rates would increase Government interest expense.

Falling prices would mean that the hundreds of thousands of investors in marketable Government securities would sustain capital losses. And it was feared at the time that such capital losses might mean real economic trouble. How? The possibility of capital losses might bring a wave of selling by investors who hoped to minimize losses. This would mean further capital losses and increases in yields and interest rates.

Heavy capital losses and rising interest rates, in turn, could disrupt the lending-investing process and demoralize the securities markets. Who wants to lend or invest when his investment might fall precipitously in value and when higher interest rates might be just around the corner? And what business wants to borrow for capital investment in such an uncertain market?

Finally, if the lending-investment process should break down, plants would not be built, houses would not be constructed. The workers who built houses and plants would be out of a job, without income, and unable to buy goods. A drying-up of purchasing power could mean depression.

This chain of events could have happened. Again, it might not have happened. At any rate, the Fed had to consider the possibility in deciding whether to support the Government securities market. The Fed and the Treasury decided the risks were too great.

Of course, the Fed did take some anti-inflation measures. When forced to buy some securities in order to maintain the rate structure, it might sell others. It also raised reserve requirements.

Short-term rates were allowed to rise some. Regulation W was restored. Moreover, the Fed was given another selective tool in 1950—the power to set minimum down payments and maximum payment periods for credit on purchases of residential real estate. But all this was not enough to contain inflation.

Then came the Korean War; when fighting broke out the risks of recession were virtually eliminated and the pressures of inflation greatly increased. So in March 1951, the Fed and the Treasury reached an accord. Gradually, securities prices were allowed to fall and interest rates to rise. Open market operations would be directed toward supplying and absorbing reserves, not toward supporting the prices of Government securities. Thus ended an important postwar episode—an episode which, as we shall see shortly, left a legacy which was to influence the use of one of the Fed's most important tools—its open market operations.

In summary, then, war and postwar developments had led to experiments with new tools of selective credit control in the area of real-estate and consumer goods (tools which subsequently were withdrawn by Congress as conditions changed). And the experience of the Government securities support program was to be partially responsible for self-imposed restraint in the use of open market operations as a tool of Federal Reserve policy. Once more the bag of tools had undergone a thorough reappraisal in the light of changed conditions.

Still, however, the story was incomplete. As the decade of the 1950's drew to a close, a new de-stabilizing force appeared on the horizon, one which was to have yet another important effect on the evolution and development of monetary tools. That force: a deficit in the balance of payments compounded by a slowdown

in our rate of growth. This is the paramount economic problem we face today.

GROWTH, THE BALANCE OF PAYMENTS, AND FEDERAL RESERVE TOOLS

Simply put, the United States balance-of-payments deficit results from the fact that we are paying out more to foreigners than we are receiving from them. To finance the difference, we have been transferring gold and dollars to foreigners.

At the same time that we have been having these payments difficulties, we have also had problems connected with our domestic economic growth; our economy has not been growing fast enough to utilize our labor and capital resources.

But how does the Federal Reserve System fit into this dual problem of payments deficit and insufficient growth?

Since the System has a great deal of influence on the availability of credit and thus the level of interest rates, it is in a position to influence both international flows of funds and domestic production and employment. Some kinds of flows of funds across international borders, for example, are often especially sensitive to differences in international interest rates. Domestic production and employment, in turn, can be stimulated or damped by credit availability and interest rates.

But while greater credit availability and *lower* interest rates might be a spur to domestic growth, such conditions might cause short-term funds to flow abroad in search of higher interest rates (other things remaining the same). Thus it is conceivable that a monetary policy appropriate to growth might be inappropriate from the standpoint of our balance of payments, at least in the short run.

Given this environment, we might expect some development or modification of the tools of Federal Reserve policy. This has indeed been the case.

Operations in the longer-end of the market

One result of the balance-of-payments and growth problem has been a re-thinking of operating policies with regard to open market operations.

As already mentioned, the period of the pegs was to have an important impact on open market operations in the later postwar period. Partially as a reaction to the inflation which accompanied the postwar pegging of the Government securities market, and after careful analysis of how best to assure a smoothly functioning market for Government securities the Federal Open Market Committee agreed upon the following policy announced in March, 1953:

Under present conditions, operations for the System account should be confined to the short end of the market (not including correction of disorderly markets).

Thus was inaugurated the so-called "bills only policy" of the Federal Reserve System.

But in February 1961, contrary to the policy set in 1953, the Federal Open Market Committee authorized the purchase of intermediate- and longer-term U.S. Government securities having maturities up to 10 years. The maturity limitation was later removed. The Board of Governors in the *Annual Report* for 1961 explained this action in the following terms:

. . . the purchasing of securities in the intermediate- and longer-term areas, as contrasted with the shorter-term areas, offered the possibility of supply-

ing reserves without creating direct pressure on short-term rates. Also, such purchases, by having a moderating influence on long-term interest rates relative to short-term rates, might have the effect of facilitating the flow of funds through the capital and mortgage markets, thereby encouraging the progress of recovery.

In other words, the Committee was adapting open market operations to a new environment, to supply funds so as to have minimum impact on short-term interest rates (thus ease the impact on our balance-of-payments problem) and at the same time to facilitate financing in longer-term credit markets (thus spur domestic growth in output and employment).

Swaps

The Federal Reserve has also taken other actions and developed other tools aimed broadly at mitigating temporary developments which might adversely affect our balance-of-payments position thus providing time for other forces to take effect that would correct the basic payments problem. One of these new tools is the so-called "swap" arrangements.

Basically the "swaps" are agreements between the Federal Reserve and foreign central banks (plus the Bank for International Settlements) which provide for reciprocal "lines of credit." The Bank of England, for example, will allow the Fed to draw around 180 million pounds. The Fed, in turn, will allow the Bank of England to draw 500 million dollars.

The foreign currencies may be used for direct operations in the exchange markets but, more typically, the Fed draws foreign currencies to purchase dollars a foreign central bank has acquired (as a result of international commer-

cial and financial transactions) and which are in excess of those the central bank would ordinarily hold. These dollars would thus be absorbed and could not be used to purchase gold during the period the swap is in effect. It has worked out in numerous instances that natural forces have operated to absorb the dollars by the time the swap matured, so that a transfer of gold was avoided entirely.

In a sense, the swap arrangements represent a first line of defense against short-term developments which could cause gold drains and speculative movements of funds abroad. Moreover, the swaps represent an important step in developing tools to fit changing situations.

From this brief discussion, then, we see that the pattern of the past is repeated in the present. Once more economic instability has been accompanied by a reappraisal of the tools of Federal Reserve policy. To cope with the problems of inadequate growth and balance-of-payments deficit the Fed has adapted old tools to the current environment—flexible open market operations in all maturity areas, for example—and has developed subsidiary tools such as the swap agreements. Economic jaundice has prompted a great deal of innovation in the monetary system.

CONCLUSIONS

We all, to a certain extent, distrust change. One reason may be that change almost inevitably brings uncertainty. And the human being is one to avoid uncertainty with its ominous overtones of insecurity.

It is to the credit of men and institutions, however, that they *do* respond to changed conditions, that they *do* seek new answers and new ways of doing things when the course of events goes badly—when there are money panics, cy-

cles of inflation and deflation, when there is depression, war, and problems of growth and balance of payments. For if men are *too* timid, *too* bogged in inertia, then we must continue to suffer from problems that might yield to new tools and techniques or to new uses of old tools. As one observer has put it:

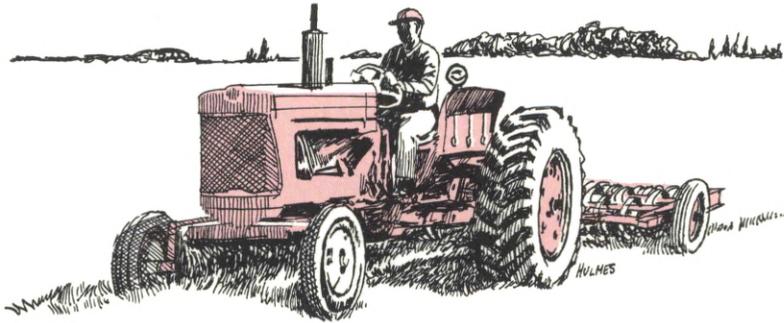
The Federal Reserve System that exists today is very different, except in its external structural features, from the System that began operations in the early months of the First World War. But for its ability to grow and adjust in pace with the shifting needs of the community it serves, the Federal Reserve would have found itself as outdated as was the National Banking System which it largely replaced. Doubtless, also, it would before now have suffered the same fate as its predecessors in the United States. Capacity for adaptation, adaptation that is seldom quick but always sure, has turned out to be a basic characteristic of the Federal Reserve System. Its capacity for change and adaptation is the cardinal virtue from which the other virtues of the System chiefly derive.⁵

In an important sense, then, it is natural for change to be a stimulus to action. It is only when this stimulus evokes an inadequate response that man's nations, his institutions, and even his culture can crumble. So it was in Rome when the Empire could not generate the internal momentum to push back the barbarians; in Germany when public policy was inadequate to deal with dissatisfactions unleashed by the Great Depression. In the final analysis, much of

⁵ C. R. Whittlesey, *Lectures on Monetary Management* (Bombay: University of Bombay, 1960), p. 3.

the history of central banking in the United States has been molded by challenge and response. And the response has been as important

as the challenge in the cumulative process of moving ahead. Not one, not the other, but both have changed the rules of the game.



ANOTHER PROBLEM YEAR FOR FARMERS

Once again agriculture qualifies as an area of the economy of the Philadelphia Federal Reserve District that must be described as something less than satisfactory. Local farmers have experienced a poor growing season for the second straight year. Production costs for both crop and livestock farmers have continued to increase, but income from sales of farm products has failed to rise proportionately.

County farm agents in leading agricultural areas of Pennsylvania, New Jersey, and Delaware have described to us what they saw of production, harvesting, and marketing problems in the 1963 season. What follows is based on their appraisal of the over-all farm situation and on estimates of crop conditions issued for this tri-state area by the United States Department of Agriculture.

A miserable growing season

As was the case in 1962, drought was the main culprit in the growing season now ending; however, late spring and early fall frosts created additional problems and damaged crops in many parts of our area. Unlike 1962, this year's drought affected fewer entire counties, consequently disaster status for farmers was neither so widespread nor so publicized as the severity of local situations might indicate. The spottiness of season-long drought conditions along with temporary relief experienced in a number of areas seems to have resulted in crop yields ranging all the way from excellent to near failure.

Wide variation in field crops

Field crops present a mixed picture. The extremely cold winter of 1962-1963 was hard on

fall-planted grains, particularly because snow cover was so light. Spring-planted oats, on the other hand, was an excellent crop, with record yields reported in Pennsylvania. Soybeans also are said to be looking good, although they have matured more slowly than usual in the dry weather. Potatoes have been small but high in quality and will make a good crop this year.

Hay appears to have suffered most severely from the drought in just about all our southeastern counties. Elsewhere, yields have ranged from fair to good. Although total production has exceeded last year's short crop, this season's yield will be far below average. Corn, another crop counted on heavily by our dairymen, is requiring a longer-than-normal growing season because of the drought. Some of it already has been hit by frost and further damage is feared. Much corn planted for grain must be cut for silage and, being prematurely harvested, will lose some of its food value.

Tobacco hit by frost

Killing frost in late September caught unharvested tobacco in Pennsylvania but did not affect the bulk of the crop hanging in drying sheds. The damage estimate applies to about 15 per cent of the total acreage of tobacco. The early crop is said to be high in quality, although plants are somewhat smaller than usual because of the drought. This portion could use a lot of warm, dry weather for proper curing. A smaller planted acreage in 1963 plus the frost damage will result in a crop appreciably smaller than a year ago and below the 1957-1961 average.

Irrigation saved vegetables

Wherever fields were irrigated—and in our area this means much of southern New Jersey—

vegetables were high in quality, and yields were up to or better than average. Where drought conditions prevailed, crops grown for both the fresh market and for processing were smaller and frequently lacked quality. Plant disease problems were not too severe this year, although tomatoes were a possible exception. This crop was somewhat of a problem from the very beginning, with a late spring frost having necessitated much replanting. Later, as the drought intensified, dry rot resulted in widespread losses on unirrigated acreages.

Market prices of fresh vegetables showed considerable fluctuation over the season and in some areas there were reports of persistent weakness. Contract prices from processors seem to have been something less than satisfactory from the grower's standpoint. Conditions varied considerably, however, by crop and by locality. In one important tomato area, farmers bemoaned a cut of \$1.50 a ton in the contract price but at the same time they were rejoicing because the processor was accepting every basket of standard quality that could be delivered.

Berry crops were hurt

The small fruits generally were damaged more by drought and other unfavorable weather conditions than orchard fruits. Strawberries seem to have come through much better than either blueberries or cranberries. Some winter kill of blueberry bushes was reported and fruit subsequently was damaged by late spring frosts. In our New Jersey bogs, cranberries, too, suffered permanent damage from last winter's low temperatures. Latest estimates indicate a very short cranberry crop—down about one-fourth from 1962 and nearly one-fifth below the 1957-1961 average. Although a short crop is expected in Massachusetts, above-average production in

important areas of the Midwest and far West may tend to weaken prices this fall.

Fruit growers are optimistic

Orchard fruits have been less affected by the drought than probably any other crop. Peaches and early apples were somewhat smaller than usual but quality was high and the fruit brought good prices in markets that were lightly supplied. Late apples are said to be sizing and coloring nicely and quality seems excellent. Our apple crop will be smaller this year but light crops also are expected in some nearby competing areas so there should be less pressure on prices of packaged fruit. Processing demand is expected to be fairly strong since it is reported that the carryover of last season's apple products is not heavy.

Feed shortage acute for dairymen

Our dairymen are having an especially hard time. For many, the situation has gone from bad in 1962 to worse in 1963. In last year's drought situation, the dairy farmer had at least something in the way of a feed carryover to fall back on. This year he started with a deficit instead. Along with another inadequate hay crop, much corn must be harvested before reaching maturity to avoid frost damage. Not only will feed value as corn silage be reduced, but corn for grain may be very short again this year. Thus, the feed bill for the coming winter promises to be larger than ever.

Faced with this situation, a dairyman must cull his herds more severely—he cannot afford to keep other than his top producers. And in all probability he may have to delay purchases of replacement stock until the feed situation improves. It now looks as though the trend toward building up herds and barn modernization may be interrupted for quite a while.

Feeder cattle operations on reduced scale

Farmers producing finished cattle for market are said to have scaled down their operations to meet a reduced feed supply. Finished cattle prices, although fairly strong, have not been high enough to justify increasing the size of the feed bill. Under these circumstances, feeder cattle seem to be moving to market at somewhat lighter weights. As replacement stock are not to be had at what might be called bargain prices, the near-future trend of feeding operations is tied closely to the feed situation.

Overproduction still plagues poultrymen

Poultrymen have seen many years that were worse—but also some that were better than 1963 to date. Their main problem seems to be making the proper adjustments to market conditions. Egg prices hit a few low spots but were fairly well maintained over much of the season. The market for poultry meat showed a mixed trend. Heavy birds continued in light demand, but broilers fared somewhat better. Early in the year broiler prices were very low, although they recovered considerably at mid-season, when quotations for a time ran above year-ago levels. A continuing trend among poultrymen has been the elimination of small operators. This has been especially true in the case of those who raise broilers.

Production costs still rising

The results of this season's drought are clearly evident in the increased cost of production so many of our farmers have had to face. Top billing must go to the heavy out-of-pocket expense of the dairyman who has such a large quantity of feed to purchase. Vegetable growers who were so fortunate as to have irrigation, discovered that these systems could be costly

to operate in a year of persistent rainfall deficiency. The upward trend of farm wage rates continued this year with further advances reported for both experienced workers and migrant harvest hands. Taxes are the remaining major factor in this year's increased costs, as expanding urban developments brought with them the need for improved facilities.

Capital spending off

For the second year in a row the necessity for "belt tightening" seems likely to limit outlays for major pieces of farm machinery, farm modernization, and purchases of new acreages to increase the efficiency of farming operations. To be sure, there are exceptions, one especially worthy of note being the outlays made by some broiler growers in Delaware, where new poultry houses are going up and others are being modernized. Some fruit growers, too, report they are spending more for equipment and storage capacity than in several other recent years. But

the dairyman, who until last year had been one of the most liberal spenders, understandably has made a further sharp cutback in his program of capital improvements.

Financial status a little worse

Two bad years in succession have offered our farmers little opportunity to increase their working capital or to reduce their outstanding indebtedness. Farm cash income in Pennsylvania, New Jersey, and Delaware has shown considerable fluctuation since early spring. Over the first seven months as a whole, receipts from farm marketings were up about 2 per cent from a year earlier. And taking into account the far from satisfactory growing season experienced by so many, this small increase is perhaps a better showing than might have been expected. It should be remembered, however, that 1962 was one of the poorer years from the income standpoint in each of these states making up the Philadelphia Federal Reserve District.

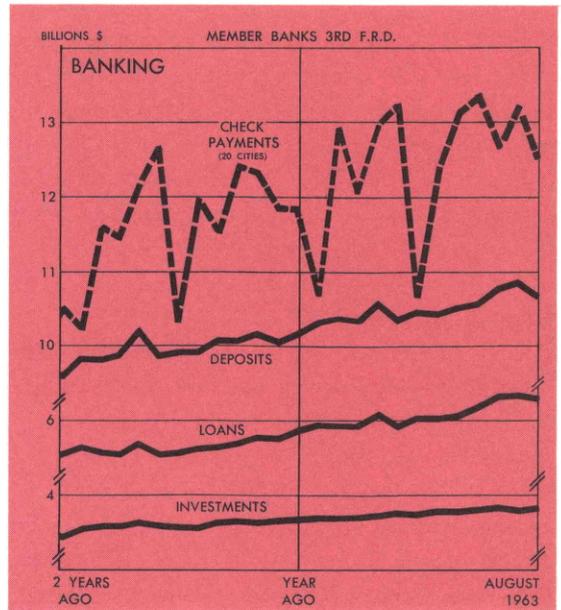
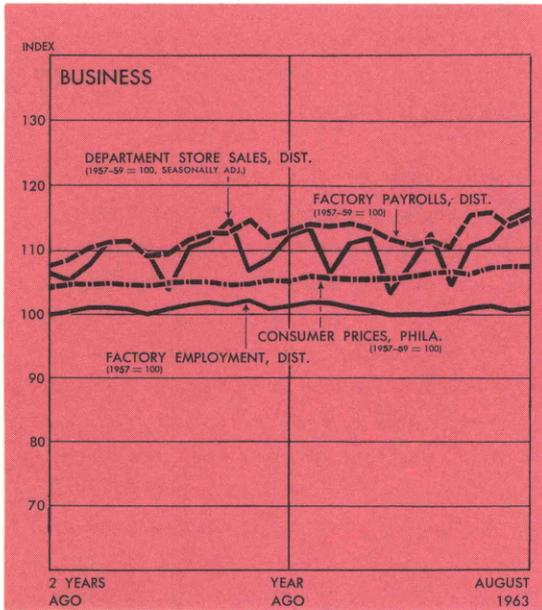
UNIFORM COMMERCIAL CODE—REVISED DIGEST OF SECURED TRANSACTIONS

Several years ago the General Council of this Bank devised a two page Digest of Secured Transactions under Article 9 of the Uniform Commercial Code which condensed its rules in a functional manner. The Pennsylvania Legislature recently amended its statute to conform to the amended 1962 Official Text of the Code, which includes a few changes in Article 9.

The Digest has now been revised to reflect these changes, and it has been distributed to Pennsylvania banks within the Third Federal Reserve District. It may also be useful in other states which have adopted the Code and in states where it is being studied for adoption.

Copies may be obtained by writing to the Bank and Public Relations Department of this Bank.

FOR THE RECORD...



SUMMARY

	Third Federal Reserve District		United States					
	Per cent change		Per cent change					
	Aug. 1963 from		8 mos. 1963 from		Aug. 1963 from		8 mos. 1963 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
MANUFACTURING								
Production	.....	.....	.....	+ 2	+ 5	+ 5	.....	.....
Electric power consumed	+ 5	+ 8	+ 4	.....	.....	.....	.....	.....
Man-hours, total*	+ 1	- 1	- 2	.....	.....	.....	.....	.....
Employment, total	0	0	- 1	+ 1	+ 1	+ 1	.....	.....
Wage income*	+ 1	+ 2	+ 1	.....	.....	.....	.....	.....
CONSTRUCTION**								
.....	+ 3	- 8	- 8	- 2	+ 12	+ 8	.....	.....
COAL PRODUCTION								
.....	+ 65	+ 33	+ 9	+ 56	+ 15	+ 7	.....	.....
TRADE***								
Department store sales	+ 1	+ 3	0	+ 4	+ 9	+ 4	.....	.....
Department store stocks	+ 2	0	.....	- 1	+ 4	.....	.....	.....
BANKING								
(All member banks)	.....	.....	.....	.....	.....	.....	.....	.....
Deposits	- 2	+ 5	+ 6	- 2	+ 7	+ 7	.....	.....
Loans	0	+ 7	+ 8	0	+ 11	+ 11	.....	.....
Investments	0	+ 4	+ 5	- 1	+ 3	+ 4	.....	.....
U.S. Govt. securities	- 1	- 2	- 1	- 3	- 6	- 3	.....	.....
Other	+ 3	+ 19	+ 19	+ 2	+ 23	+ 23	.....	.....
Check payments	- 6†	+ 7†	+ 9†	- 5	+ 6	+ 7	.....	.....
PRICES								
Wholesale	.....	.....	.....	0	0	0	.....	.....
Consumer	0†	+ 2†	+ 2†	0	+ 2	+ 1	.....	.....

LOCAL CHANGES

	Factory*				Department Store†				Check Payments	
	Employment		Payrolls		Sales		Stocks			
	Per cent change Aug. 1963 from		Per cent change Aug. 1963 from		Per cent change Aug. 1963 from		Per cent change Aug. 1963 from		Per cent change Aug. 1963 from	
	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago	mo. ago	year ago
Lehigh Valley	0	- 1	- 1	0	.....	.....	.....	.....	+ 4	+ 9
Harrisburg	+ 1	+ 2	+ 1	+ 3	.....	.....	.....	.....	- 8	+ 12
Lancaster	+ 1	0	+ 4	- 1	+ 7	+ 9	+ 2	- 1	- 6	+ 3
Philadelphia	0	- 1	+ 3	+ 2	- 1	+ 1	+ 2	- 1	- 5	+ 7
Reading	+ 2	+ 1	+ 1	+ 7	+ 9	+ 12	+ 3	- 3	- 2	+ 7
Scranton	+ 3	- 4	+ 4	- 3	+ 5	+ 9	- 1	+ 6	- 8	0
Trenton	0	+ 4	+ 3	+ 11	- 2	+ 8	+ 5	+ 22	- 17	- 5
Wilkes-Barre	+ 1	+ 1	0	+ 2	+ 4	+ 10	- 2	+ 9	- 8	+ 4
Wilmington	- 2	+ 5	- 5	+ 8	- 6	- 7	- 2	+ 1	- 5	+ 7
York	+ 3	- 3	+ 3	0	+ 9	+ 7	+ 1	+ 1	- 5	0

*Production workers only.
 **Value of contracts.
 ***Adjusted for seasonal variation.

†20 Cities
 ‡Philadelphia

*Not restricted to corporate limits of cities but covers areas of one or more counties.
 †Adjusted for seasonal variation.