FEDERAL RESERVE BANK OF NEW YORK

MONTHLY REVIEW

AUGUST 1960

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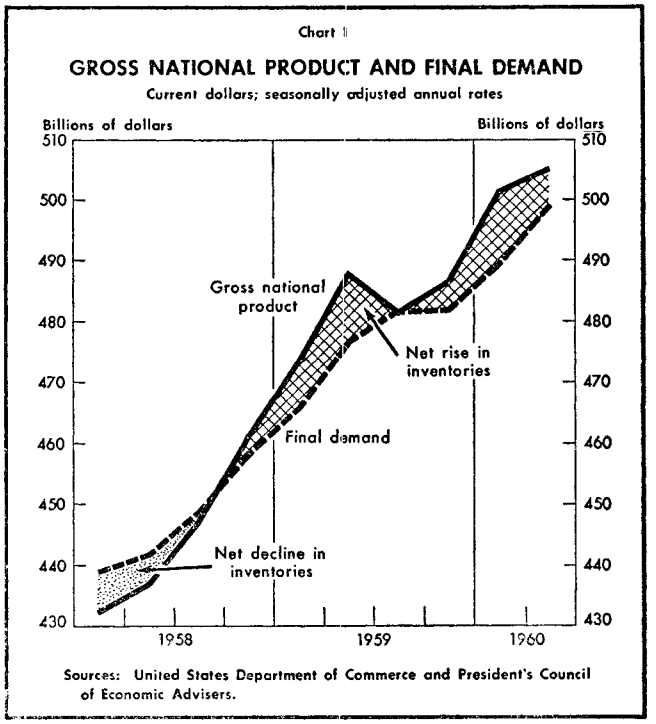
Volume 42 **No. 8**

The Business Situation

There has been little change recently in the business situation. The economy continues to move along a high plateau, and prices remain relatively stable. Divergent movements in the major components of demand, which limited the advance of gross national product (GNP) in the April-June quarter, appear to have persisted in July. Preliminary estimates show continued strength in the "final demand" of consumers, business, government, and foreign countries, which rose by a slightly larger amount in the second quarter than in the preceding three months. The leveling-off of economic activity resulted from the decline during the second quarter in the rate of accumulation of business inventories. Although this decline was sharp, the second-quarter build-up of stocks was nevertheless substantial and has, along with the dwindling of manufacturers' order backlogs, contributed to some apparent deterioration of business sentiment. While the economy continues to produce a record level of real output, some business analysts note an absence of factors which would lead to a further pronounced surge of final demand, and see the possibility that some continued reduction in the rate of inventory accumulation may be a drag on activity over the next few months.

Major monthly indicators of business activity show movements similar to those occurring in GNP. Industrial production during the second quarter hovered a point or two below the January peak, and unemployment as a percentage of the civilian labor force fluctuated around the 5 per cent mark, after seasonal adjustment, although gains in nonindustrial sectors of the economy carried total employment to new highs. Unemployment appears to have receded little in July as slackness continued in some durable goods industries, particularly steel. At the same time, however, total consumer demand appears to have been sustained at a high level, as both department store and automobile sales showed continued gains over a year ago. Current indicators suggest that business capital outlays may hold close to present levels but without any strong upward push.

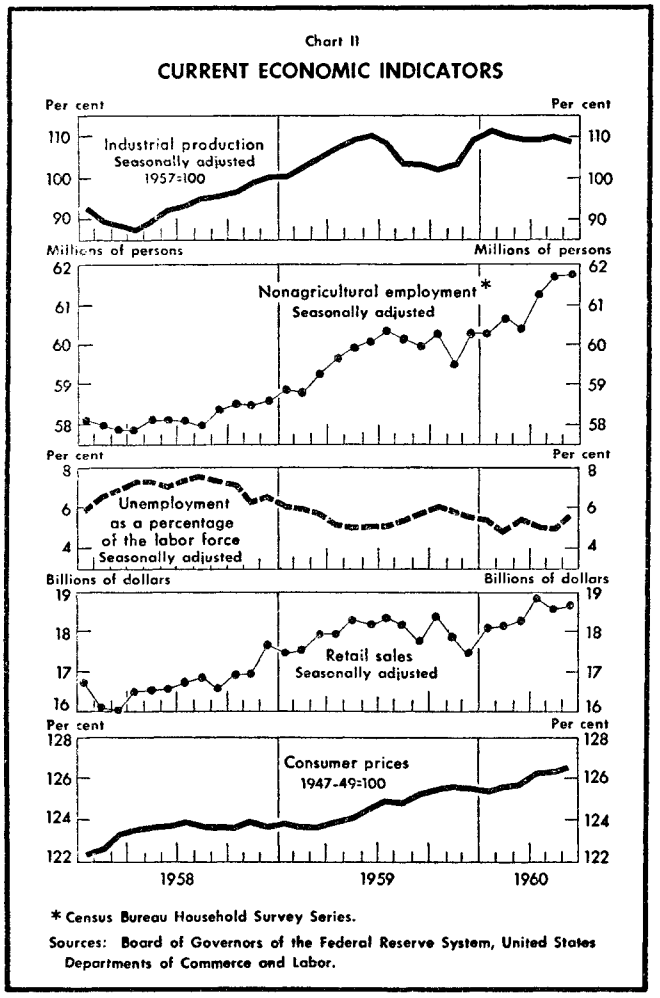


MODEST GAINS IN TOTAL OUTPUT

In the second quarter, GNP rose by $3.7 billion to a record, seasonally adjusted annual rate of $505 billion, according to preliminary estimates by the Council of Economic Advisers (see Chart I). The gain of only 0.7 per cent was significantly smaller than the 3.1 per cent spurt during the first quarter, when total output rebounded from the steel strike to surpass the previous peak reached in the second quarter of 1959. Final purchases for use by consumers and government, fixed investment by business, and net foreign purchases of United States products—that is, GNP exclusive of the change in business inventories—expanded by $9.1 billion in the second quarter, compared with an increase of $8.2 billion in the preceding quarter. Offsetting much of this increase, however, was a decline estimated at $5.4 billion in the annual rate at which businesses were adding to their inventories.

Nonagricultural employment expanded during the second quarter, but in June it showed a negligible gain of less than 0.1 per cent, seasonally adjusted, according to the Census Bureau's survey (see Chart II). Total employment (seasonally adjusted) rose more substantially in June, reaching a new record of 67.4 million persons; the major factor was a large advance in the volatile agricultural sector. The labor force, however, expanded more

sharply than employment. As a result, the seasonally adjusted unemployment rate rose to 5.5 per cent from 4.9 per cent in May. The June rate was, in fact, the highest since the steel strike period of last December. In part, the increased unemployment rate came from the upward trend of recent years in the number of teenagers and recent college graduates entering the labor force at this season, thus highlighting the challenge which the economy will have to face in the years ahead. However, the survey week —which is always the calendar week containing the twelfth day of the month—was as late as is possible this June, and as a result an unusually high proportion of students just out of school was covered in the survey. Bureau of Labor Statistics data, based on payroll information, suggest that declines in manufacturing and government employment also may have contributed to the rise in unemployment. Part of the decline in manufacturing employment, however, is traceable to a strike among aircraft workers rather than to a lack of employment opportunities.



The decline of manufacturing employment in June reflected, in part, the slight decrease in industrial production. The total index (seasonally adjusted) declined by 1 point to 109 per cent of the 1957 base. Output of finished equipment declined by 2 points, to a large extent reflecting the already mentioned aircraft production strike. Total output of consumer goods was unchanged in June, as expansion of automobile production and consumer staples offset declines in output of some consumer durables. Materials output slipped by 1 point, primarily as a result of the continued slump in the steel industry, which depressed coal and metal mining as well as primary metal production. In July, operations in the steel industry dropped to slightly above 50 per cent of capacity and the output of automobiles was cut back in preparation for somewhat earlier-than-usual model change-overs.

Declines in production, both in the steel industry and in some lines of consumer durables, reflect in large part an attempt to bring inventories into a better relationship with sales. Additions to total business inventories dropped sharply in the second quarter (as noted above) to an estimated annual rate of $6.0 billion. The near-record $11.4 billion rate of accumulation in the first quarter represented, in good part, a post-strike restocking of steel and various steel products such as automobiles. Thus it was virtually certain that additions to inventories in the following months would be smaller if there was not to be an appreciable, and in most cases unwanted, increase in the ratio of inventories to sales. Yet the second-quarter pace of accumulation was substantial. While inventory-sales ratios remain low relative to past periods of prosperity, further efforts to cut back the rate of accumulation may exert continued downward pressure on the economy in coming months.

Over half of the $9.1 billion advance in final demand in the second quarter was accounted for by a $5.2 billion gain in personal consumption outlays. In relative terms, the rise in business fixed investment was even steeper, surpassing the first-quarter increase despite a leveling-off in nonresidential construction. Outlays for home building, however, showed a small decline. Government expenditures on goods and services rose by $1 billion—or about the same amount as in the first quarter—as the continued growth in State and local expenditures more than offset a slight decline in Federal defense outlays. Estimates indicate that net exports of goods and services also increased further to a seasonally adjusted annual rate of $2.5 billion, more than double the first quarter and the highest rate in over two years.

Personal consumption expenditures in the second quarter scored the largest quarterly gain since early 1959. Slightly more than half of the increase in spending was on nondurable goods and the rest for services, while purchases of durable goods remained at the first-quarter level. This strong advance in consumer spending had, of course, already shown up in the monthly movements of retail store sales. The all-time peak in retail sales was reached in April, partly on the strength of some purchases that had been postponed during an unusually blustery March. Sales, adjusted for seasonal influences, slipped almost 2 per cent in May, but an increase of almost 1 per cent in June recovered part of this loss. The strength in automobile sales, which in June reached the highest daily average rate since September 1955 (22,848 units), served to offset weakening sales of other consumer durable goods. Both automobile and department store sales continued strong through July.

The steady advance in personal consumption at least in part reflected the 2 per cent expansion in personal income in the second quarter. Recently revised monthly statistics show that personal income at seasonally adjusted annual rates, after a fairly sharp increase of $2.8 billion between April and May, rose by only $1.1 billion in June to $405.8 billion. The June decline in factory wages and salaries, largely attributable to the low level of activity in the steel industry and the aircraft strike, was more than offset by increases in other forms of income.

Business outlays on fixed investment in the April-June quarter reached a new record of $48.4 billion (seasonally adjusted annual rate). This resulted from a $2.1 billion rise in expenditures for producers' durable equipment to a peak $29.2 billion, surpassing the previous records posted in 1957. Meanwhile, outlays for nonresidential construction remained at about the first-quarter rate.

INDICATORS OF CAPITAL SPENDING

The important role of plant and equipment spending in the growth of economic activity during the first half of the year directs particular attention to current trends in this area of spending and, in turn, to advance indicators which may throw light on trends over the period immediately ahead. Such indicators have predictive value because fairly concrete plans and commitments normally precede major capital outlays. Well before actual spending occurs, detailed decisions must be made about specific financial outlays, and orders must be placed or contracts awarded. At almost any stage, of course, there can be subsequent modifications. Projects can be curtailed or expanded, and the schedule of actual work and expenditures can be stretched out or accelerated. It is therefore useful to study information on plans and on each subsequent stage of the investment process in assessing past trends and current prospects, even though not all plans or changes in plans are accurately reflected in published data.

Corresponding in rough fashion to the planning-ordering-spending process of business firms, there are a number of statistical series to which the analyst of capital expenditures may turn. Best known—and most comprehensive—are the surveys of planned outlays for new plant and equipment by the United States Department of Commerce and the Securities and Exchange Commission (Commerce-SEC) and by the McGraw-Hill Publishing Company. The Commerce-SEC annual survey is taken in January-February and measures the volume of outlays for fixed investment which are planned for the entire coming year and for the first and second quarters. It is followed by quarterly surveys taken throughout the balance of the year and released early in the last month of each quarter. The principal McGraw-Hill survey which is taken each spring and released in April also measures annual spending plans; it is preceded by a preliminary survey taken in the previous fall and usually released in November. Both Commerce-SEC and McGraw-Hill draw on fairly large samples, although the McGraw-Hill survey is more heavily weighted with large industrial firms (and until 1960 included certain outlays by the petroleum industry which are charged to current account).

By using the January-February results of the Commerce-SEC survey, it is possible to estimate the portion of planned annual spending expected to take place in the first half of the year and the part implicitly expected to occur in the second half. To some extent, these expectations and implications can be substantiated, or perhaps put in doubt, by the degree to which they are paralleled by the flow of new capital spending "appropriations" (official top-management approvals of expenditures on specific parts of plans) and by the flow of "commitments" (primarily new orders for equipment or contract awards for construction work).

Appropriations by an important segment of business are covered in a quarterly survey by the National Industrial Conference Board (NICB) which is released in the last month of the following quarter. This survey covers a sample of the largest manufacturing firms that have formalized budget procedures. These firms report on new spending appropriations, the volume of appropriations "used up" by firm commitments or actual expenditures, and the backlog of unused appropriations. Thus, while the Commerce-SEC and McGraw-Hill surveys measure the spending that firms expect to make within a specified time

period, the appropriations survey measures the "flow" of new spending decisions (and the backlog of approvals) without specifying when the spending will occur.

There is no theoretical reason for any hard and fast timing relationship between these two types of series. Many of the appropriations made, for example, in the last half of a year will be for spending that is planned for the first half of the following year and, therefore, covered by the annual surveys of spending plans in the first half of the calendar year. Some appropriations, however, will be for immediate spending and others may be for spending to occur a year or more later. It is possible, therefore, for movements in the volume of planned expenditures and the volume of appropriations to diverge without necessarily implying major changes in plans. However, since major turning points in the appropriations series have tended to "lead" turns in expenditures, divergent movements of the series do raise the question whether plans are being modified.

Actual commitments for spending — new equipment orders or construction contract awards—might be expected to give a more concrete indication of the extent to which plans are carried out. These commitments are also significant because they have a direct impact on production, employment, and inventory policies of the firms receiving the orders. Some of the major statistical series on commitments are the Department of Commerce measure of new orders for nonelectrical machinery, the index of new orders for nonelectrical machinery compiled by the McGraw-Hill Publishing Company, the Machine Tool Builders Association series on domestic orders for machine tools, and nonresidential building contract awards tabulated by the F. W. Dodge Corporation.[1] There are limitations, however, to the usefulness of these series as advance indicators of actual outlays, the major ones being the erratic short-run fluctuations in the series and the variation in the time lag between commitments and expenditures. In good part, the erratic nature of month-to-month fluctuations is an inevitable outgrowth of the "lumpiness" of individual large orders—for example, for complicated turbines or the construction of large plants. Changes in the time lags result in part from changes in the composition of orders; a few large orders for turbines with particular specifications and a long production time cannot be filled so quickly as many small orders for simple standardized motors which can perhaps be filled from stock or assembled from standard parts. The delay between ordering and receiving shipment may also be longer if manufacturers have large backlogs of orders.

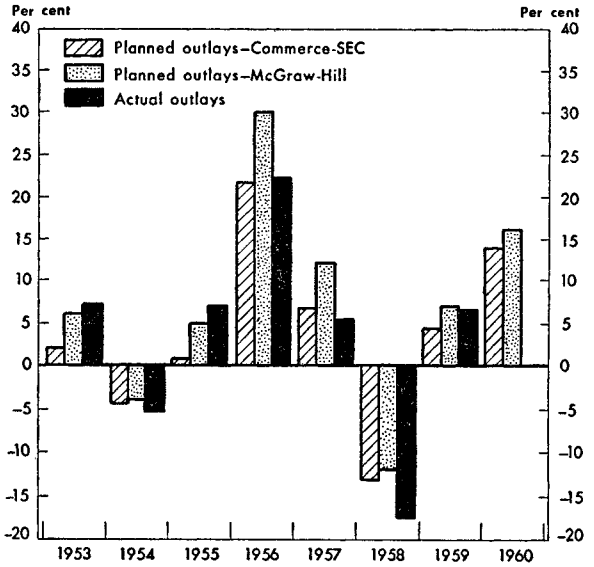
A brief historical review of the relationship among movements in the series relating to capital spending may shed some light on their analytical value. Chart III shows that both the Commerce-SEC and the McGraw-Hill surveys predicted the direction of change in actual spending correctly in each year while neither was consistently superior in estimating the magnitude of change. The Commerce-SEC survey underestimated the magnitude of changes in spending in every year except 1957. The McGraw-Hill survey, on the other hand, appears to have had a slight upward bias, overestimating an increase or underestimating a decrease in five cases out of seven. This may have resulted from the greater proportion of large firms in its sample; it has been found that large firms are more likely to overestimate their outlays than the reverse.

There also seems to be a significant relationship between the point in the business cycle at which a survey is taken and the accuracy of the forecast. In the first quarter of 1955, for example, a turning point in capital outlays was reached just as the Commerce-SEC survey was taken; the survey predicted a less than 1 per cent gain while output actually rose about 7 per cent. The McGraw-Hill survey, taken slightly later, was closer to the mark. In

Chart III

PLANNED OUTLAYS AND ACTUAL OUTLAYS ON PLANT AND EQUIPMENT

Percentage change from previous year



Sources: United States Department of Commerce, and Securities and Exchange Commission; McGraw-Hill Publishing Company.

[1] All these series are published monthly and released about a month after the data are gathered. The first two are based on broad samples, are seasonally adjusted, and include foreign orders. There are many additional surveys of more limited (usually industry-wide) scope.

1956, however, when a decided upturn had already been under way for nearly a year, the Commerce-SEC survey estimate of a 22 per cent gain was almost exactly realized.

Examination of anticipated and actual expenditures on a half-yearly basis indicates that spending plans shown in the Commerce-SEC survey have overestimated the volume of actual expenditures in the first half of each year since 1955. In the implicit forecasts for the second half, outlays were underestimated in the periods of sharp expansion—1955, 1956, and 1959. In contrast, in 1957 when a recession began around midyear, the actual level of outlays in the second half of the year fell short of the implicit estimate. In 1958, also, the level of spending in the second half was overestimated, although it was correctly anticipated early in the year that spending would decline further in the second half.

Since the appropriations series has the same broad contour as capital outlays, but with an average lead of about two quarters, appropriations, cautiously interpreted, can be used as a supplement to the Commerce-SEC quarterly data in giving a "warning signal" of turning points that may be in the offing. However, it appears that the appropriations data cannot be used to estimate the actual volume of outlays, or to improve upon estimates derived from the Commerce-SEC survey, since the appropriations series is subject to occasional abrupt deviations from a smooth cyclical pattern and since the amplitudes of the two series show no close correspondence.

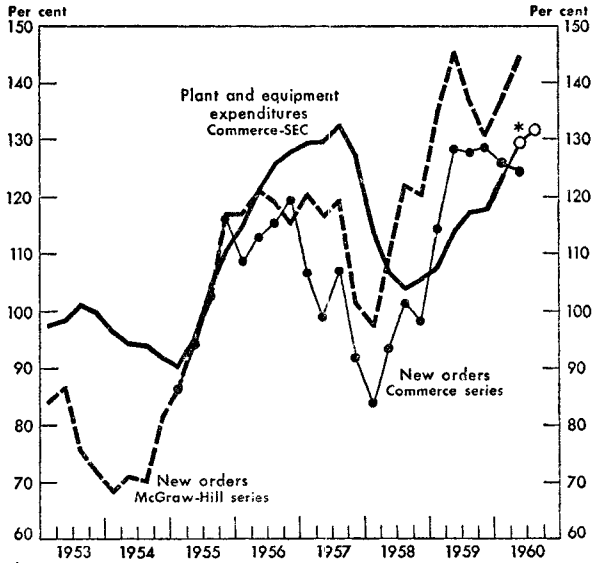
The new orders series for nonelectrical machinery also tends to foreshadow movements in capital spending (see Chart IV). Both the Commerce and the McGraw-Hill new orders series, however, exhibit frequent and large short-term fluctuations, so that there is no fixed interval between turning points in these series and in actual expenditures. The McGraw-Hill orders series, which is available over a longer period, led the 1953 downturn in spending by one quarter and the 1955 and 1958 upturns by two quarters. It moved concurrently with spending in 1957, however, after considerable random fluctuation. The Commerce series showed the same pattern as the McGraw-Hill series in 1958 but preceded the 1957 downturn by three quarters. The pattern of machine tool orders is less helpful since its coverage is limited to only one industry and it, therefore, has a slightly different contour than total outlays. The series on construction contract awards can be a misleading indicator because of strong seasonal patterns and erratic fluctuations resulting from the influence of a few large projects.

Applying these results to the present scene, in the early months of 1960 businessmen were planning to increase their plant and equipment spending this year by 14 per

Chart IV

MOVEMENTS OF NONELECTRICAL MACHINERY ORDERS AND PLANT AND EQUIPMENT OUTLAYS

Quarterly, seasonally adjusted; 1955=100



* Business plans.

Sources: United States Department of Commerce, and Securities and Exchange Commission; McGraw-Hill Publishing Company.

cent (Commerce-SEC) or 16 per cent (McGraw-Hill) over 1959. Six quarters of rising appropriations—through the fourth quarter of 1959—seemed to substantiate a firm upward trend in capital outlays. Results of the quarterly Commerce-SEC survey taken in April-May, and discussed in the last issue of the *Monthly Review*, suggested that anticipations of substantially higher spending were being fulfilled in the first half of the year but that spending in the second half would expand at a much slower rate. Earlier in the year, it seemed entirely possible that plans for spending in the second half might be revised upward, as has happened in previous periods of expansion. Furthermore, substantial backlogs of appropriations by large corporations combined with their high level of liquidity indicated the *potential* for a continued strong advance in the level of outlays. The recent behavior of new appropriations and orders does not, however, support this expectation. In the first quarter, new appropriations declined on a seasonally adjusted basis. The Commerce new orders series slipped in both the first and second quarters; although the McGraw-Hill new orders series rose during the same period, it remained slightly below the peak reached a year earlier. Shrinking profit margins, declining stock market prices, and a quite pervasive mood of hesitation are factors which may work against upward revision of capital spending

plans. On the other hand, there has been little to indicate that earlier plans have been revised downward, either. The strongest likelihood at present seems to be that the economy will continue to draw some support from gently rising capital expenditures over the balance of the year.

Electronic Check Handling

The Federal Reserve Bank of New York will receive delivery in the next few weeks of the various components of its pilot installation of high-speed electronic check-processing equipment. Similar equipment will be installed at four other Federal Reserve Banks in the next several months, thereby providing a thorough System-wide testing of performance capability and operational feasibility of equipment of various manufacturers under the requirements of check handling in different Federal Reserve offices.[1] In efforts to move toward practical electronic processing of checks, the Federal Reserve System has been working closely with the American Bankers Association (ABA), the organization which has been the prime mover behind the progress toward check automation.

This introduction of "machines that can read if written to in their own language", the common machine language in E-13B magnetic ink characters recommended by the ABA, represents another significant step toward solution of the most pressing operational problem facing banks today —namely, how to process efficiently an enormous and ever-mounting volume of checks. The number of checks used each year was about 3.5 billion before World War II but grew to about 8 billion in 1952, and to more than 12 billion last year, of which some 4 billion passed through the Federal Reserve System. By 1970 the annual volume of checks passing through the banking system is expected to exceed 20 billion.

Staggering as these totals may be, they reveal only part of the work involved, since each check is handled ten to twenty times and by two or more different banks. Hand in hand with the expansion of check-handling operations has come an increasingly acute shortage of qualified personnel and a corresponding increase in the costs of sorting, posting, and other check-handling operations. And just as the old-fashioned hand processing became hopelessly inadequate twenty years ago, the conventional check sorting and listing machine now in general use is also rapidly becoming inadequate to cope with today's flow of checks. It was the acuteness of this problem that led the Bank Management Commission of the ABA to explore the possibility of automation.

CHECK AUTOMATION—PROGRESS SO FAR

The large-scale testing of electronic check-handling equipment about to start at five Federal Reserve Banks follows a period of intensive study, designing, and pretesting by the various institutions and manufacturers concerned. In December 1958, the common machine language in magnetic ink characters—developed under ABA auspices and with the cooperation of the check-printing industry and equipment manufacturers—was unanimously approved by all major manufacturers involved. Since about 80 per cent of all the checks deposited in or cashed at one bank must be sent to other banks for payment, the development of such a common language for all machines to "read" was an all-important step in the program. This language, which has now gained widespread acceptance, is known as MICR (Magnetic Ink Character Recognition).

The test about to be made at various Federal Reserve Banks will be meaningful only if the transit number and amount fields are encoded, as described below, on a sizable number of checks passing through the Federal Reserve Banks. The progress achieved so far has been highly encouraging. For a number of months, the Federal Reserve Bank of New York has been preprinting the routing symbol-transit number in magnetic ink on all its own checks, and has been supplying preprinted check forms to member and nonmember clearing banks for drawing on their accounts at the "Fed". The commercial banks have also begun to make significant progress in implementing the program. A survey in June by the Federal Reserve Bank of New York revealed that 125 out of the approximately 1,000 banking offices to which this Bank sends

[1] The five Federal Reserve Banks selected for these testing operations, and the major basic equipment to be used, are the following: Boston—National Cash Register Co.; New York—Ferranti-Packard Electric, Ltd. and Pitney-Bowes, Inc.; Philadelphia—IBM Corporation; Chicago—Burroughs Corporation; San Francisco—National Data Processing Corporation.

checks in the Second District had customers who were writing checks on forms that had the routing symbol-transit number preprinted in magnetic ink characters—a threefold gain since January 1960. Nearly all New York City Clearing House banks had begun to provide their customers with preprinted checks, and 82 checks per thousand drawn on these banks carried the routing symbol-transit number in magnetic ink characters, compared with only 16 per thousand in January. Outside New York City, 58 out of each one thousand items drawn on Second District banks carried the routing symbol-transit number in June as against only 22 in January.

FURTHER IMPLEMENTATION OF THE PROGRAM

Encouraging as the progress thus far may be, the potential benefits of electronic check-handling operations cannot be fully realized until a considerably higher percentage of the checks passing through the banking system is "qualified"—that is, properly prepared for handling by the new equipment. The Federal Reserve Bank of New York and the other Reserve Banks have therefore joined the ABA in urging all commercial banks to have their check forms so prepared, and to encourage depositors who have their own checks printed to do likewise.

What are the steps that a bank should take to "qualify" its check forms? These steps are quite simple and relatively inexpensive if a bank does not contemplate automation of its own check-handling operations at this time. First, some redesigning of a bank's checks may be required. This Bank understands, however, that the majority of check printers who are members of the Lithographers and Printers National Association have already redesigned their so-called catalogue or stock checks. For banks using these checks, the redesign problem will therefore be solved at only slight cost, if any. Most printers, moreover, are prepared to assist the banks in the redesign of all special checks, and in addition this Bank will be glad to lend such assistance as it can. Actually, as may be seen in the illustration, the MICR check looks very much like most conventional checks. However, its length must be at least 6 inches and must not exceed 8¾ inches, and its width must fall between 2¾ inches and 3⅔ inches. Moreover—and this is crucially important—there must be a clear "Magic Band" of ⅝-inch width, extending at least 6 inches along the bottom of the check from the lower right corner, in which no printing other than the prescribed E-13B characters in magnetic ink is permitted. Printing in non-magnetic ink of border lines is permitted in this band provided it does not interfere with the visual reading of the magnetic ink characters. The redesigning of checks to open up this "Magic Band" may require that the information now on checks be somewhat concentrated in other areas. One side benefit to banks of a widespread acceptance of these specifications is a probable significant reduction in the number of "headache" checks—nonstandard checks which cause errors and slowdowns in present check-handling procedures.

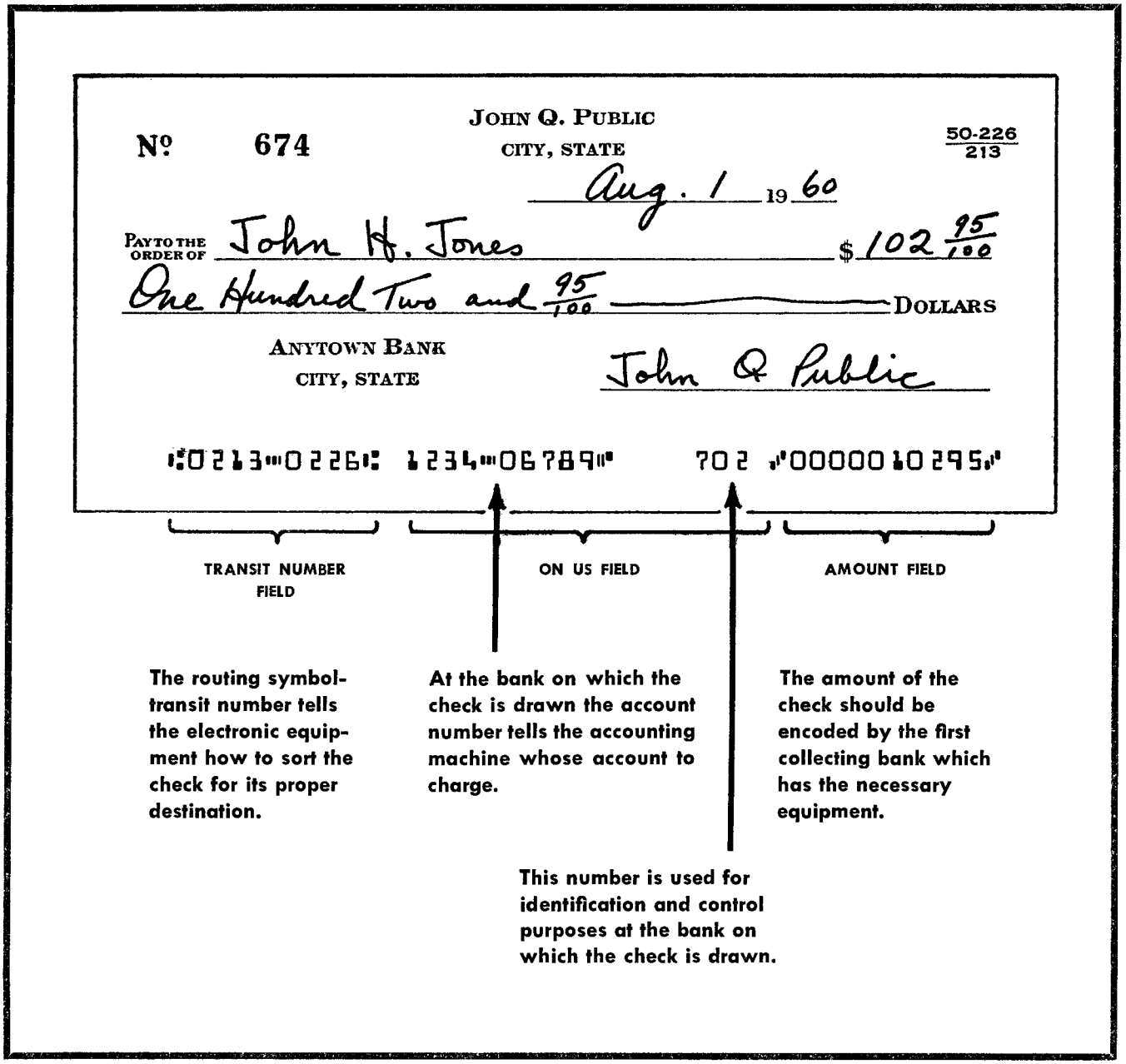
The next step is to arrange for the preprinting in magnetic ink characters of the routing symbol-transit number in the position prescribed by the ABA (see illustration)—in effect giving the check its "electronic address". For banks not contemplating the adoption of automated accounting systems for their own check handling, no other action is necessary with respect to their own checks. Other banks, however, will wish to consider the preprinting in magnetic ink of the customer's account number in the "On Us Field" of the "Magic Band", since this is required to make checks compatible with a fully automated deposit-accounting system.

The final step in making the check fully qualified involves coding the amount of the check in the "Amount Field". This operation, which calls for encoding equipment, can be performed by the first bank receiving the check that has such equipment, in most cases as a by-product of proving the deposit. In connection with testing its newly installed equipment, the Federal Reserve Bank of New York for the present will encode the amount on some checks not so coded but otherwise qualified. From the point of view of a smoothly operating MICR system, however, it is obviously desirable that as many checks as possible arrive at the "Fed" or at any other intermediate collecting bank with the amount already encoded.

Many of the large and middle-sized banks in the Second District have ordered or are considering encoding equipment. Moreover, to encourage the wider use of encoding devices, the Federal Reserve Bank of New York will be prepared to consider reciprocal agreements with any of its member banks under which it will encode dollar amounts on checks sent by it to such banks and the member banks will similarly encode checks sent by them to the "Fed" for collection. Once fully encoded, the check becomes qualified for processing through high-speed equipment capable of handling upward of 50,000 checks an hour.

COSTS AND ADVANTAGES

Questions will naturally be raised in the banker's mind regarding the costs of the program and its advantages. As to the costs, these appear quite moderate when viewed against the potential benefits. The redesigning of a bank's



checks may involve some added expenditure, but this can be minimized through the use, as previously noted, of stock or catalogue checks. For special checks, the redesigning cost will of course vary according to the design but, in any case, will be incurred only once. The preprinting of the routing symbol-transit number in magnetic ink may also involve slightly higher outlays, although this additional cost is expected to decline as experience and volume increase. Equipment to encode the amount on incoming checks will, to be sure, require a larger initial outlay than some of the smaller banks may wish to make immediately. However, it is not expected at this stage of the program that all of the smaller banks will encode the amount.

The potential advantages of a widespread adoption of the MICR system far outweigh the probable cost of the program. From the point of view of large and medium-sized banks that process a large number of checks, the use of equipment capable of handling some 50,000 checks

an hour will clearly provide important benefits, in lower handling costs, increased productivity, and greater accuracy. For these banks, MICR opens the way toward putting virtually their entire check-handling operation on a fully automated basis. While the benefits in the case of the smaller banks may not seem so great, they are nevertheless real. The new system will undoubtedly result, for example, in a reduction of mis-sent items, the speedier collection of checks, and a more prompt return of unpaid checks. Many of the smaller banks, moreover, may have depositors who draw large volumes of checks and who may be interested in using MICR in the "On Us Field" of the check, as well as in coding the amount, in order to make the check compatible with their own automated accounting systems. Under such circumstances, the addition of the routing symbol-transit number in magnetic ink characters would probably involve very little, if any, additional cost. Finally, cooperation in the program will satisfy the natural desire of most bankers to participate in any effort to improve the efficiency of the entire banking system.

The overnight adoption of MICR coding is, of course, not to be expected. Given the large number, varied size, and other characteristics of banks in this country, any major procedural innovation takes time. Furthermore, banks would not be expected to replace their present stocks of check forms with the "new" checks unless it is to their advantage to do so. A parallel can be drawn between the present program and the introduction in 1945, also under the auspices of the ABA, of the familiar fractional transit number-routing symbol now printed in the "northeast" corner of most checks. As most bankers will recall, the widespread adoption of this program took some time. However, as its advantages became apparent, an increasing number of banks began to print the fractional symbol and in recent years nearly all checks have been so printed. The use of the transit number-routing symbol permitted operators to obtain maximum speed from proof machines without requiring instruction in all transit details, eliminated the problem of determining the proper Reserve Bank or branch for States located in two Reserve Districts, and greatly reduced the number of sorting errors. And just as the introduction of this system was undoubtedly instrumental in permitting the banking system to handle efficiently the sharp increase in the volume of checks since World War II, the MICR program is expected to enable banks to handle further growth in the number of checks over the coming decade.

CODING DEMAND DEPOSITS TO FACILITATE PREPARATION OF REPORTS

A suggested coding system for classifying demand deposits was recently sent to all member banks in the Second District. These codes were developed primarily for the benefit of banks adopting automated accounting procedures, but they could be used to advantage by all banks, since once a bank has coded its accounts it can provide all the statistical information requested by the Federal Reserve Bank in quarterly condition and other reports without any further classification or identification of its accounts. Similar coding programs are being developed for time deposit and asset ledgers. Additional copies of the demand deposit codes may be obtained from the Financial and Trade Statistics Division of this Bank.

International Developments

UNITED STATES FOREIGN TRADE

The United States merchandise trade surplus showed a pronounced increase during the first half of 1960. With imports fluctuating around a monthly average not much above the year-earlier level, commercial exports rose sharply and exceeded imports during January-June 1960 by $2.0 billion. This trade surplus was nearly four times the surplus during the comparable months of 1959.

Contributing significantly to this year's enlarged export margin were nonmilitary shipments of $5.0 billion in the second quarter, the highest total for any such period since the all-time record of $5.1 billion set in April-June 1957. A particularly encouraging aspect of these recent results was that total exports achieved this near-record volume notwithstanding the substantial decline of raw cotton shipments from their abnormally high January volume. With the exception of fuels and metals, all major categories of exports have approximately returned to their earlier peak levels.

The pervasiveness of the recent export surge is clearly evident in the five-month comparison shown in the accompanying table (detailed commodity data for June are not yet available). Shipments of unmanufactured cotton, spurred by booming textile production abroad and by last summer's upward adjustment of the United States Government's export subsidy payment, scored the most notable increase—an advance of more than 220 per cent—and accounted for about one fourth of the year-to-year gain in all United States exports.[1] Although the peak of the marketing season for raw cotton has passed, shipments have remained well above the values recorded in the corresponding five months of 1959. Another large share of the year-to-year increase was provided by the 90 per cent gain in commercial jet aircraft exports. These shipments leveled off in April and May at about the average monthly rate estimated by the industry on the basis of their scheduled deliveries for 1960 as a whole. Wheat exports, which move largely under Government aid programs, advanced by about one fourth.

Higher industrial activity in Western Europe and Japan, together with the more gradual effects of the progressive elimination of restrictions against dollar goods, has been a basic supporting factor in the recent upsurge in this country's exports. Shipments of machinery, vehicles, metals, and chemicals showed an especially notable response to the rapid cyclical expansion of business activity abroad. In the case of machinery and vehicles, the most important single commodity subgroup and frequent bellwether of American exports, shipments during January-May of this year were 17 per cent above the year-earlier period. Part of that increase was attributable to a sharp upturn in truck and passenger-car exports to a January-May rate approaching the record levels of 1955 and 1956. Another sizable share of the rise in machinery and vehicle exports can be traced to the fact that European automobile manufacturers are engaged in a massive tooling-up operation comparable with that which took place in the United States in 1955 and 1956. For the present at least, they are turning to this country for special types of machinery and machine tools, as well as for some standard units that heavily booked European tool builders cannot supply as readily as American firms, whose export potential has been enhanced by unused capacity in some lines.

Overseas shipments of chemicals and related products, which had increased more than 80 per cent from 1953 to 1959, registered a further advance of 16 per cent in the first five months of this year as compared with the year-earlier period. The largest percentage increase of all the products shown in the table was for aluminum semimanufactures, which have assumed unaccustomed prominence in the American export list this year as the result of Europe's growing use of aluminum in a wider range of industrial and consumer goods.

Steel exports made a rapid recovery following the virtual halt of output during the 1959 strike. But the recent rise was also helped by strong demand for steel in Europe, where local consumption of some types currently exceeds capacity. This is said to be particularly true of cold-rolled steel for Europe's booming automobile industry.

While American imports have been on a high plateau for almost one year, the ratio of this country's general imports to gross national product has declined since the second quarter of 1959. Although imports in that quarter were boosted in anticipation of the steel strike, United States purchases abroad continued to be supported to some extent by temporary influences through the first six

United States Merchandise Trade, January-May 1959 and 1960
In millions of dollars

Major commodity groups and selected subgroups	1959	1960
Exports		
Crude materials	664	1,033
Cotton, unmanufactured	*156*	*502*
Crude foodstuffs	602	675
Wheat	*293*	*369*
Manufactured foodstuffs	391	443
Semimanufactures	976	1,389
Synthetic rubber	*64*	*94*
Iron and steel plates, sheets, strips, and bars	*70*	*107*
Copper semimanufactures	*61*	*100*
Chemicals and related products	*605*	*703*
Aluminum semimanufactures	*18*	*79*
Finished manufactures	4,448	4,877
Machinery and vehicles	*2,603*	*3,033*
Aircraft, parts and accessories	*304*	*567*
Re-exports	76	86
Total	7,157	8,503
Total, excluding military-aid shipments	6,598	8,022
Imports		
Crude materials	1,245	1,264
Crude rubber	*148*	*149*
Crude petroleum	*356*	*348*
Crude foodstuffs	802	740
Coffee, raw or green	*469*	*410*
Manufactured foodstuffs	646	639
Cane sugar	*320*	*231*
Semimanufactures	1,322	1,389
Iron and steel semimanufactures	*75*	*141*
Aluminum	*49*	*49*
Copper	*60*	*131*
Industrial chemicals	*37*	*42*
Finished manufactures	1,964	2,284
Steel mill products	*116*	*163*
Iron and steel advanced manufactures	*42*	*51*
Automobiles and parts	*350*	*360*
Agricultural machinery and implements	*81*	*105*
Other machinery	*166*	*217*
Vehicles, except automobiles	*48*	*52*
Entries into bonded warehouses	79	2
Total	6,058	6,318
Export surplus, excluding military-aid shipments	540	1,704

Source: United States Department of Commerce, Bureau of the Census.

[1] See "United States Cotton Export Program", *Monthly Review*, May 1960, p. 89.

months of 1960. To cite the most important, almost half of the rise in imports in January-May from a year earlier was generated by greatly increased deliveries of foreign iron and steel products, large quantities of which had been ordered last year when supplies were tight because of the steel strike. These arrivals dropped perceptibly in May, however, and further reductions are widely expected. Imports of copper semimanufactures more than doubled in the same period but in this case, too, the rise was partly transient, since the increase was largely associated with an attempt, first, to meet copper requirements during the work stoppages in the domestic copper industry and, later, to replace depleted inventories.

A particularly significant development in the first five months of this year was the slower advance of automobile imports. Compared with a more than 50 per cent rise from 1958 to 1959, the value of imports of automobiles and parts in January-May 1960 was only 3 per cent higher than in the comparable 1959 period. This suggests that European cars may be losing a share of their markets in the United States to competing domestic "compact" models. The latter now account for 26 per cent of all American cars sold, compared with 12 per cent last year. With the phenomenal surge of automobile imports apparently being checked and with vehicle exports showing a good advance, it is widely expected that exports of vehicles and parts will make their traditional net contribution to the United States merchandise surplus this year, compared with 1959 when they fell $66 million short of the record import volume of $844 million.

The main shift in the geographical pattern of United States foreign trade in the first five months of 1960 was a sharp rise in sales to Western Europe and Japan. In contrast to the increases of 57 per cent and 50 per cent, respectively, in exports to those two areas, the value of our shipments to Latin America was practically unchanged. United States exports to Venezuela fell 21 per cent during the first five months of this year, reflecting that country's foreign exchange difficulties which were in large part due to the softening of world petroleum markets. In the same period the depressed world level of coffee prices was reflected in a 25 per cent decline in exports to Brazil, while the unsettled situation in Cuba caused declines in our shipments there. On the other hand, there were large increases in exports to Argentina, Chile, Colombia, Peru, and Uruguay.

The trend of exports and imports has a close, but not necessarily decisive, influence on this country's balance-of-payments position. In the first quarter of 1960—the latest period for which balance-of-payments data are available—the merchandise surplus was $3.0 billion at a seasonally adjusted annual rate, up sharply from the $0.9 billion surplus recorded in 1959. The improvement in the over-all payments position was not, however, of comparable size, since repayments of United States Government loans were lower in the first quarter of this year and net receipts from unrecorded transactions declined. As a result, the first-quarter payments deficit remained large at $2.8 billion (seasonally adjusted annual rate) although down from 1959's $3.8 billion deficit (excluding the quota transfer to the International Monetary Fund). The fact that changes in the trade balance are not always fully reflected in the balance-of-payments position means that the further improvement in the trade balance in the second quarter does not necessarily imply that the payments position in that quarter will turn out to have been stronger than in the first quarter. A cautionary note is also sounded by the fact that the substantial increase in the United States trade surplus during the past year was due in part to the strong cyclical expansion in business activity in industrial nations abroad. While not the only means of attacking our balance-of-payments problem, encouragement of exports is still a very worthy national goal.

EXCHANGE RATES

In the New York foreign exchange market spot sterling moved rather erratically during July. Substantial demand for sterling from Continental sources, attracted by the continued high short-term interest yields in London, caused appreciable advances in the rate at the beginning of July and again shortly after midmonth. The quotation in the latter period reached $2.8107, but subsequently eased and closed the month at $2.8089. In the forward market the discounts on three and six months' sterling generally widened to 170 and 240 points by July 20, the widest spreads since August 1958. Thereafter they tended to narrow, and at the month end were 138 and 216 points.

The Canadian dollar, after easing to 1.01^{47}/_{64}$ during the first week reportedly on movements of short-term capital from Canada to London, subsequently firmed steadily in a thin market. A general inflow of capital funds to Canada during the latter half of the month appeared to be the primary factor in advancing the rate to 1.02^{29}/_{32}$ on July 28. At the month end it closed at 1.02^{19}/_{32}$.

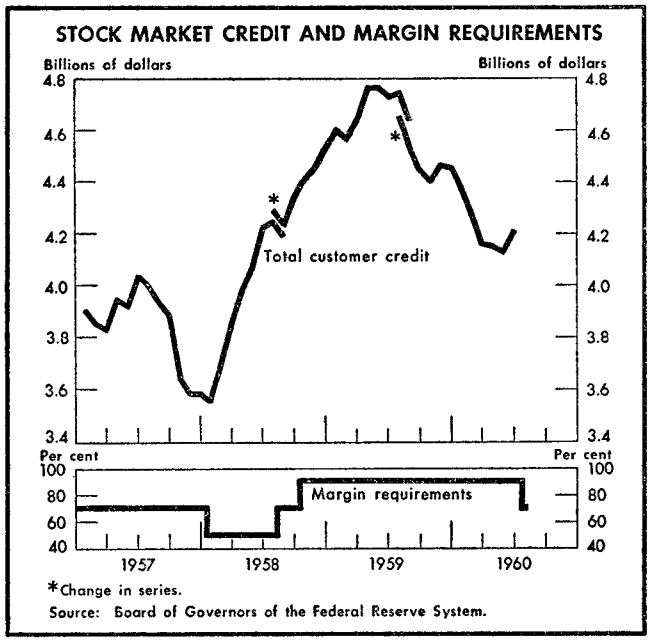
The Belgian franc, reflecting the political unrest in the Congo, was quoted for a short time toward the month end below its parity of 50 francs to the dollar for the first time since December 1959. The Swiss franc, under upward pressure from the repatriation of capital, gradually advanced from $0.2316½ at the beginning of July to $0.2323½ by the end of the month.

Money Market in July

Bank reserve positions eased further in July. Much of the easing in reserve positions occurred at country banks; the New York City and Chicago banks remained under moderate pressure and were net purchasers of Federal funds during most of the month. Federal funds trading was predominantly at the 3½ per cent ceiling except around country bank settlement dates, and rates posted by the major New York City banks on loans to Government securities dealers ranged from 3¾ to 4½ per cent.

Prices for most Government securities rose during the month, influenced by continuing uncertainty over economic prospects, the marked stock market decline, and current indications and expectations that credit policy might be easing further. Prices of many notes and bonds rose to new highs for the year, as the market drew encouragement from the absence of a longer offering in the Treasury's July financing operations. The Treasury's financing operations included the auction on July 6 of $3.5 billion of March tax anticipation bills and the July 12 auction to roll over $1.5 billion of the $2.0 billion in one-year bills maturing July 15. The weight of these financings, in which the Treasury raised $3.0 billion of new money, was temporarily felt in the bill market, and yields on most bills moved moderately higher during the early part of the month. Thereafter rates declined irregularly and were generally down on balance over the month. Late in the month the Government securities market was bolstered by the Treasury announcement that it would refinance only about $9 billion of the $9.6 billion in Treasury securities maturing August 15 and would redeem the $800 million of Federal National Mortgage Association (FNMA) debentures maturing August 23. The Treasury also announced that holders of its maturing issue would not be offered pre-emptive rights to subscribe for the new issues, as had been the practice in the past.

Effective July 28, the Board of Governors of the Federal Reserve System reduced stock margin requirements to 70 per cent from the 90 per cent level at which they had stood since October 1958 (see chart).



MEMBER BANK RESERVES

Member bank reserve positions were somewhat easier in July than in June. Federal Reserve System holdings of Government securities rose sharply early in the month, offsetting in part the large currency outflow around the July 4 holiday and other reserve-absorbing factors. Bank reserve positions remained comfortable over the remainder of the month despite the increase in required reserves during the July 20 statement week in the wake of bank payments for the new March tax anticipation bills through credits to Treasury Tax and Loan Accounts. Partly as a result of bank participation in the Treasury's new financing, bank credit rose substantially during the month, as reflected in a more-than-seasonal rise in member banks' required reserves over the four statement weeks ended in July. Total reserves of the banks also rose more than is usual for the month.

System open market operations, on balance, added substantially to member bank reserves during the month. From June 29 to July 27, Federal Reserve holdings of Government securities were increased by $465 million, including $443 million in outright holdings and $22 million through repurchase agreements. For the four statement weeks ended in July member bank excess reserves rose to $491 million, $16 million over the June statement weeks' average, while borrowings from the Federal Reserve banks fell by $44 million to $390 million. Average free reserves of all member banks rose to $101 million during

Changes in Factors Tending to Increase or Decrease Member Bank Reserves, July 1960
In millions of dollars; (+) denotes increase, (—) decrease in excess reserves

Factor	Daily averages—week ended				Net changes
	July 6	July 13	July 20	July 27	
Operating transactions					
Treasury operations*	— 12	+ 95	— 128	+ 64	+ 19
Federal Reserve float	— 128	+ 98	+ 285	— 336	— 81
Currency in circulation	— 288	— 206	+ 162	+ 158	— 174
Gold and foreign account	+ 20	— 28	— 26	— 53	— 87
Other deposits, etc.	+ 29	+ 42	+ 57	+ 1	+ 129
Total	— 380	+ 3	+ 349	— 167	— 195
Direct Federal Reserve credit transactions					
Government securities:					
Direct market purchases or sales	+ 362	+ 26	— 101	+ 106	+ 393
Held under repurchase agreements	+ 62	+ 34	+ 44	— 63	+ 77
Loans, discounts, and advances:					
Member bank borrowings	+ 28	— 99	+ 88	— 78	— 61
Other	—	—	—	—	—
Bankers' acceptances:					
Bought outright	+ 1	— 3	—	—	— 2
Under repurchase agreements	—	—	+ 2	— 2	—
Total	+ 452	— 41	+ 32	— 36	+ 407
Member bank reserves					
With Federal Reserve Banks	+ 72	— 38	+ 381	— 203	+ 212
Cash allowed as reserves†	— 93	+ 57	+ 40	— 30	— 26
Total reserves†	— 21	+ 19	+ 421	— 233	+ 186
Effect of change in required reserves†	— 30	+ 111	— 467	+ 146	— 240
Excess reserves†	— 51	+ 130	— 46	— 87	— 54
Daily average level of member bank:					
Borrowings from Reserve Banks	440	341	429	351	390‡
Excess reserves†	438	568	522	435	491‡
Free reserves†	— 2	227	93	84	101‡

Note: Because of rounding, figures do not necessarily add to totals.
* Includes changes in Treasury currency and cash.
† These figures are estimated.
‡ Average for four weeks ended July 27, 1960.

the four statement weeks ended in July from $41 million in June.

GOVERNMENT SECURITIES MARKET

In the Treasury bill market, attention during the first half of July centered on the Treasury's cash financing operations. The July 6 auction of $3.5 billion of March 1961 tax anticipation bills, dated July 13, brought tenders aggregating $4.4 billion, as commercial banks were permitted to make full payment by credit to Treasury Tax and Loan Accounts. The average issuing rate on this issue was 2.823 per cent. Following the auction, the bills traded at rates of 2.93 per cent to 3.02 per cent, reflecting the value to subscribing banks of the Tax and Loan Account privilege, and by the end of the month were 2.82 per cent bid.

Reversing the late June downtrend in bill yields, which had carried the weekly auction rates to 2.307 per cent on 91-day bills and 2.805 per cent on 182-day bills on July 1, rates on most outstanding bills, and particularly on longer bills, moved moderately upward during the early part of July as banks were heavy sellers and dealers apparently sought to lighten their inventories. In the regular weekly auctions on July 11, rates were 26 and 37 basis points higher than in the previous auctions, reaching 2.567 and 3.175 per cent on the new 91- and 182-day bills, respectively. A more confident tone surrounded the next day's auction of $1.5 billion of one-year bills to replace the $2.0 billion maturing July 15. In aggressive bidding, the average issuing rate was 3.265 per cent, somewhat below earlier market estimates and far less than the 5.067 and 4.608 per cent average rates in the last two quarterly roll-overs of one-year bills.

Continuing market confidence carried rates on most bills downward during the following week, and the average rates in the July 18 weekly auctions declined to 2.307 and 2.625 per cent. However, a note of caution became evident in the market soon thereafter, as widespread demand failed to materialize and the rate decline was interrupted. By July 25, in the final auctions of the month, average rates were slightly above the previous week's level, at 2.404 per cent on 91-day bills and 2.701 per cent on 182-day bills. In the closing days of the month rates declined, influenced by the implications of the Treasury's August refinancing program, which provided for a substantial reduction of outstanding short-term debt and foreshadowed a potential reinvestment demand in mid-August. Over the month as a whole, rates on short-term bills were generally unchanged to 10 basis points higher and longer bills were 8 to 20 basis points lower.

The market for Treasury notes and bonds was relatively buoyant during July, reinforced by a growing realization of the Treasury's more comfortable budget position, combined with continuing uncertainties over the economic outlook and declining stock prices. The absence of a longer issue in the Treasury's cash offering in early July added another strengthening influence, bringing a rise in note and bond prices at the start of the month, and although the uptrend was interrupted by market reports of a possible longer offering to be included in the August refunding, the rise was resumed by midmonth.

Prices of most issues reached new highs for the year, and recent high coupon issues set new records. By July 15, yields on all notes and bonds had dropped below 4 per cent—for the first time since December 1958. Demand came partly from market professionals and partly from investors apparently influenced by the decline in stock prices. Buying interest in the 2½ per cent "tap" bonds issued during World War II increased, as talk of possible advance refunding of these issues following the August refunding revived. Trading activity was light, particularly in the latter half of the month, as the market

awaited the Treasury's announcement of the terms of the August refunding.

The Treasury announced after the close of business on July 28 that it would borrow about $8¾ billion—about $7¾ billion through a 3⅛ per cent 11½-month certificate and about $1 billion through a 3⅞ per cent 7-year 9-month bond issued last June and now reopened. The new funds will be used, in conjunction with a reduction of about $1½ billion in the Treasury's cash balance, to pay off in cash $9.6 billion of a maturing Treasury 4¾ per cent note ($3.9 billion of which is publicly held) and $800 million of a 3⅝ per cent FNMA note maturing in August. Subscription books for the new issues, which will be dated August 15 for payment in either cash or by means of the maturing issues, were open August 1 and 2 without preemptive rights for holders of the maturing issues. Announcement of the new issues met an enthusiastic market response and contributed to strength throughout the Treasury securities list at the close of the month.

Over the month, prices of notes and intermediate bonds generally rose by ¾ to 3½ points and longer term bonds by 2⅛ to 3½ points. The average yield on three- to five-year issues declined 52 basis points from June 30 to close at 3.46 per cent on July 29, while the average yield on issues due in ten years or more fell by 22 basis points to 3.74 per cent.

OTHER SECURITIES MARKETS

Prices of seasoned corporate bonds moved upward during most of the month, in line with long-term Government bonds, as increased investor demand contributed to a firm undertone in the market. Prices of seasoned tax-exempt bonds, on the other hand, were sluggish under the pressure of exceptionally heavy dealer inventories of new issues. This overhanging inventory was sharply reduced late in the month, and prices of State and local bonds advanced. The average yield for seasoned Aaa corporate bonds, as measured by Moody's, declined 9 basis points over the month to 4.35 per cent to reach a new low for 1960, while the average for similarly rated State and local issues declined 2 basis points to 3.28 per cent.

Offerings of corporate bonds for new capital amounted to an estimated $420 million, somewhat below the $505 million June total but far greater than the $170 million marketed in July 1959. Most issues carrying protection against early call met excellent investor response, while other issues tended to move slowly. A $50 million finance company flotation of 4¾ per cent notes maturing in 1979 (nonrefundable for eight years), not rated by Moody's, was reoffered to yield 4.83 per cent and quickly moved to a premium. New tax-exempt bond offerings totaled an estimated $550 million, a substantial decrease from the estimated $950 million sold in June but about in line with the July 1959 total of $567 million. Receptions accorded new tax-exempt issues were mixed.

Rates on some short-term debt instruments were reduced during the month, apparently reflecting earlier declines in Treasury bill yields. Commercial paper rates were reduced by ⅛ per cent on July 1 and again on July 6, bringing the offered rate on 4- to 6-month paper to 3⅜ per cent. Major sales finance companies lowered rates on their paper of shorter maturities by ¼ per cent on July 20, making the new rate on 60- to 89-day paper 2½ per cent.