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NOVEMBER, 1929



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FEDERAL RESERVE BOARD
AT WASHINGTON

Credit and Business Developments
Revised Indexes of Factory Employment and
Pay Rolls



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FEDERAL RESERVE BULLETIN

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No. 11

REVIEW OF THE MONTH

Credit developments during the past month were characterized by large liquidation in the field of security loans. The

Liquidation of security loans. decline in security values which took place in the latter part of

October was reflected in a reduction for the month of \$2,400,000,000 in brokers' borrowings, as reported by the New York Stock Exchange. A large part of this reduction occurred during the last week of the month. Loans to brokers by nonbanking lenders declined by \$2,000,000,000 during October, reflecting withdrawals of funds from the call-loan market by foreign lenders, investment and trading companies, and other corporations and individuals. Loans to brokers for out-of-town banks, which include a considerable amount of loans for account of their customers, decreased by \$800,000,000, while loans by New York City banks for their own account increased by \$1,000,000,000. At the same time the banks in New York City also increased their security and other loans to customers, and their investments. Combined figures for the weekly reporting member banks in leading cities showed an increase in total loans and investments from October 2 to October 30 of \$1,600,000,000. Practically all of this unprecedented growth occurred during the last week of the month and nearly all was at banks in New York City. The taking over by the New York City banks of brokers' loans of nonbanking lenders and the extension by these banks of additional loans to their customers was reflected in a growth from October 23 to October 30 of \$1,500,000,000 in the New York banks' net demand deposits and in a consequent large growth of their reserve requirements, as indicated by an increase of \$240,000,000 in their reserve balances with the Federal reserve bank.

In coming to the support of the situation during this period of severe disturbance the banks in New York City had the assistance of

the Federal reserve system. The Federal Reserve Bank of New York increased its discounts for member banks by \$150,000,000 during the week and in addition purchased \$150,000,000 of United States Government securities in the open market. As a consequence of the action of the banks in New York City and of the Federal Reserve Bank of New York, the liquidation which took place in the security market was not associated with a rise in money rates. Rates on call money, which had declined from a range of 8 to 9 per cent in September to 6 per cent in the latter part of October, ranged between 5 and 6 per cent during the last week of that month. On October 31 the discount rate at the Federal Reserve Bank of New York was reduced from 6 to 5 per cent, the level prevailing at the other reserve banks.

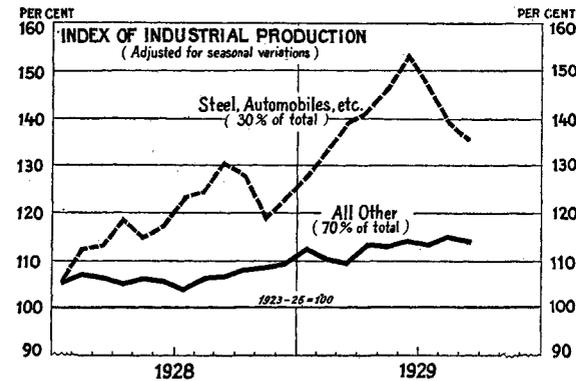
Industrial activity, as measured by the Federal Reserve Board's index of production in basic industries, has shown some decline since midsummer.

Industrial activity. The board's index is adjusted for usual seasonal variations, and while the actual physical volume of the industrial output increased somewhat in August and again in September, the index showed declines for both months, because the increases were not so large as is usual at that season of the year. The fact that this autumn's growth of industrial production was less than has been usual in recent years should be considered in connection with the unusually rapid expansion of many industries earlier in the year, which continued until midsummer contrary to the usual seasonal trend. Total production in basic industries for the first nine months of the year was 11 per cent larger than for the corresponding period of 1928, which was a year of high production, and the third quarter showed an increase of 10 per cent over the unusually high industrial record of the third quarter of the preceding year.

An analysis of the recent course of the board's index of industrial production is presented in the accompanying chart,

which divides the index into two elements, the upper line representing the production of iron and steel, automobiles, rubber tires, and other products entering to a large extent into the manufacture of automobiles, and the lower line representing the output of all other industries included in the index.

Course of production analyzed.



Broken curve includes manufacture of iron and steel, automobiles, rubber tires and tubes, copper (smelting), and coke—also mining of iron and copper ore; "all other" industries are as shown on pages 727-728.

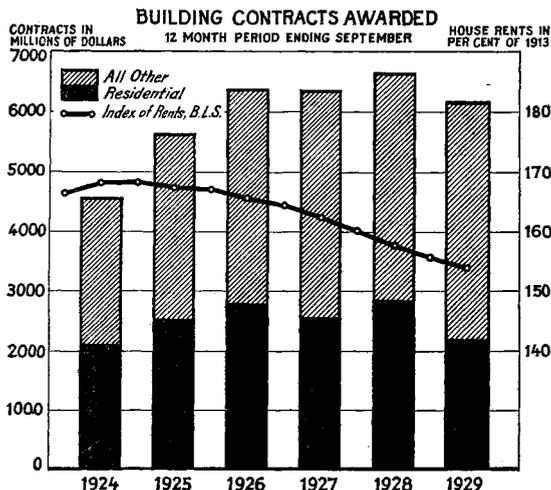
The group of industries represented by the lower line on the chart, which includes altogether 70 per cent of the entire output of basic industries, shows a steady gradual growth since the middle of 1928, indicating that operations of more than two-thirds of these basic industries have shown no marked fluctuations and have continued on a high level. In contrast to the course of the major group of industries has been the group including steel, automobiles, and other related industries, comprising in the aggregate less than one-third of the total industrial output. This group has shown a rapid rise in the first nine months of 1928, a decline in the last quarter of that year, a further growth in the first half of 1929, and a more pronounced decline in the last three months. The principal component of this group is the iron and steel industry; two important factors in the rise of the curve have been demand for steel from the automobile industry and from the railroads, while in the recent decline the principal factor has been

the reduced demand for steel by producers of automobiles. The contrast between the two lines would be still more pronounced if it were possible to subdivide steel and other products into those used in building automobiles and those used by other industries, since the demand for steel from other important consumers, such as the construction industry, the railroads, and shipbuilding, has remained high in recent months, while the demand from the automobile industry has declined.

The output of automobiles increased rapidly from 1927 and reached a peak in the late spring of this year. Since that time there has been some decline in the industry, but the total output of automobiles in September was approximately in the same volume as in September, 1928. For the first nine months of the year the number of motor cars produced was about 4,650,000, an amount 300,000 in excess of the entire annual output in 1928 when motor production exceeded all previous records. The rapid expansion in automobile output in 1928 and in the first half of 1929 was supported by a backlog of demand that had accumulated during 1927, when the Ford organization suspended activities pending the introduction of new models, and by increased exports. It would appear that during the first half of this year the output had caught up with this demand.

In the construction industry, which is not included in the index of industrial production, the volume of residential building contracts awarded declined further in September, but public works and commercial and industrial building continued in large volume. The aggregate for all classes of building, however, was smaller in September than in earlier months. Notwithstanding the decline in the past 12 months, the volume of construction, as measured by contracts awarded, has remained at a high level compared with earlier years. During the year ending September 30, 1929, total construction contracts awarded in 37 States east of the Rocky Mountains were about 8 per cent lower than in the preceding year and about 4 per cent under the corresponding years ending in September, 1926 and 1927, as is shown

by the chart. The chart also brings out the fact that the decrease during the past year was entirely due to a reduction in contracts for residential construction, which declined to the lowest levels since the 12 months ending in September, 1924, while contracts for construction other than residential have expanded during the year.



Statistics of building contracts awarded from F. W. Dodge Corporation. Figures of rents as reported by the Bureau of Labor Statistics are shown for June and December dates.

The decline in residential construction has followed a drop in house rents, as measured by the semiannual index of the Bureau of Labor Statistics, which is also shown on the chart. The shortage of housing that had developed during the war was accompanied by a rising trend in rents, which came to a peak in 1924, and was a factor in causing a steady expansion of building activity from 1921 to 1926. Activity of the construction industry was, in fact, an important element in the general expansion of industrial production during this period. The total volume of construction activity has remained on a high level since 1926, but there has been a decrease in the proportion of the total represented by residential construction.

During the past year the decline in residential construction has also been influenced by the prevailing high level of money rates and the unfavorable condition of the bond market. The financing of speculative building enterprises has been more difficult than in other recent years. The termination of the housing shortage and the availability of housing ac-

commodation fully adequate to meet the demand, and in some localities in excess of immediate demand, has led to a more conservative appraisal of mortgage values and risks than was the practice during the period of rising rents and assured demand for all new houses and apartments that were erected.

Notwithstanding the slackening of industrial activity in the past two months, factory

employment and wage payments to industrial workers, which had been increasing for the past two years, remained in large volume this autumn. Earnings of industrial workers, therefore, have been maintained, and there appears to be no considerable change in the income of farmers as compared with last year. The sustained buying power of both industrial and agricultural workers has been reflected in a large volume of distribution of commodities by the railroads and in a growth in retail sales to ultimate consumers.

Changes in Discount Rate and Bill Rates

The discount rate on all classes and maturities of paper at the Federal Reserve Bank of New York was reduced from 6 to 5 per cent, effective November 1.

Buying rates on bills with maturities under 90 days at the New York bank were reduced from 5½ to 5 effective on October 25, and effective November 1, were further reduced to 4¼ per cent. The buying rate on bills of 4 months' maturity was reduced from 5½ to 4¼ per cent and on bills of 5-6 months' maturity from 5½ to 5 per cent, effective November 1.

Changes in Foreign Central Bank Discount Rates

The following changes have been made since the first of October in the discount rates of central banks in foreign countries: October 3, Bank of Estonia, from 7½ to 8 per cent; October 10, Imperial Bank of India, from 5 to 6 per cent; October 10, Bank of the Republic of Colombia, from 7 to 8 per cent; October 31, Reserve Bank of Peru, from 6 to 7 per cent; October 31, Bank of England, from 6½ to 6 per cent; October 31, Imperial Bank of India, from 6 to 7 per cent; November 1, Netherlands Bank, from 5½ to 5 per cent; November 2, Bank of Danzig, from 7 to 6½ per cent; November 2, German Reichsbank, from 7½ to 7 per cent; and National Bank of Hungary, from 8 to 7½ per cent.

REVISED INDEXES OF FACTORY EMPLOYMENT AND PAY ROLLS ¹

The Federal Reserve Board has for several years compiled currently for the United States and published in the FEDERAL RESERVE BULLETIN index numbers of factory employment and of factory pay rolls. A revision of these indexes has recently been completed and the revised indexes together with a description of the data underlying them and of the methods used in their construction are presented in this article. The revised indexes are shown on Chart I and in Tables 1 and 2. The chart brings out the general similarity of movement

building, trade, etc., are not available. For manufacturing, however, the indexes are now on such a comprehensive basis that they are broadly representative of long-time changes in employment and earnings in all manufacturing industries, because of the inclusion of statistics at intervals of two years for industries which do not report employment currently. Monthly statistics for additional industries that have become available currently since the old indexes were constructed are included, with the result that the monthly fluctuations of the revised

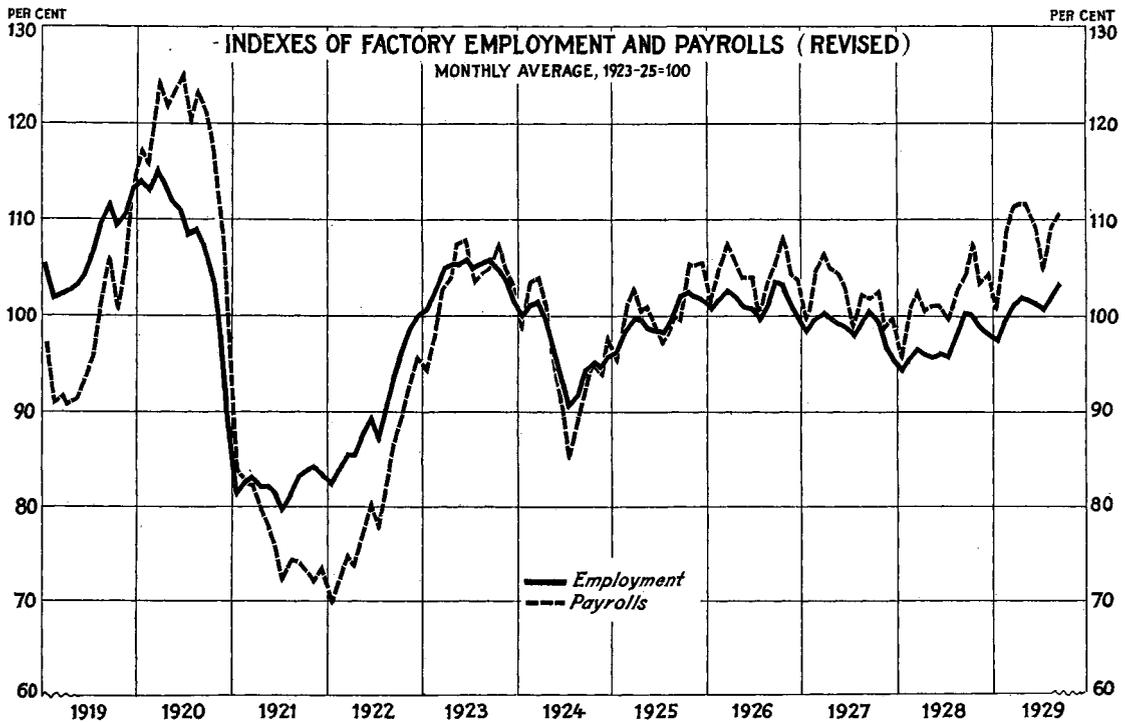


CHART I

between employment and earnings, and also the fact that earnings have fluctuated more widely than employment, both within each year and over longer periods of time. In 1920 earnings rose further than employment, and in 1921 were more sharply reduced. Within the last two years earnings have again increased more rapidly than employment.

Broader scope of revised indexes.—The revised indexes, like those which they supersede, relate to manufacturing industries only, not to all industries, since necessary basic data for

indexes are more representative. The basic data are derived from reports collected by various agencies, chiefly the United States Bureau of Labor Statistics, certain State departments of labor, and the Bureau of the Census.

While the revised indexes are constructed according to the same general principles as those which they supersede, the use of statistics from the biennial Census of Manufactures has been considerably more extensive and an improved method of computation has been used. The same base period (1923-1925=100) is adopted as that used for other indexes compiled by the board. The revised indexes are accordingly believed to be better indicators of

¹ Acknowledgment is due to Aryness Joy, of the Division of Research and Statistics, for special work in the revision of these indexes; also, for assistance in their development, to William A. Berridge and Woodliff Thomas.

changes from month to month and of trends of factory employment and pay rolls over a period of years. Primarily, however, the revised indexes are superior to the old in making comparisons extending over periods embracing the last 3, 5, or 10 years. This quality arises largely from adjustment of the index numbers to the census data afforded by the biennial Census of Manufactures for 1923, 1925, and 1927.²

Periodic adjustment.—The necessity for periodic adjustment of the index numbers that are computed monthly, to accord with census data, which become available only at biennial

of which the measure does not become available until the next biennial Census of Manufactures. For factory employment the extent of the discrepancy in recent years, together with an illustration of its approximate elimination in the revised index, is indicated by Chart II, which shows the board's former index of employment (broken line), employment in all manufacturing industries as shown by the census (hollow circles), and the board's revised index (solid line), all relative to 1923. During the period 1923 to 1927, for example, the census reported for all manufacturing industries a decline in employment of over 5 per cent, or more than

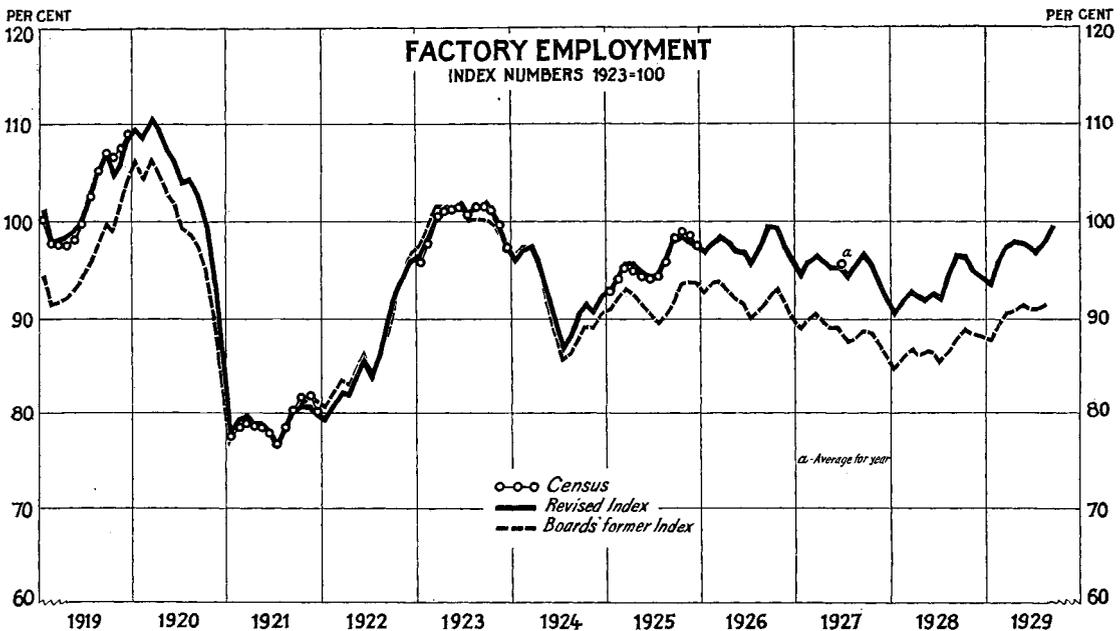


CHART II

nial intervals, arises partly from the fact that suitable monthly statistics are not currently available for a considerable number of manufacturing industries. It arises primarily, however, from the fact that the basic statistics currently available are imperfect, in that they do not cover, for example, the opening of new establishments or allow for the complete closing down of operations in old establishments. From any one month to the next they are not unsatisfactory, but over longer periods an index based upon them develops inaccuracy, frequently of progressive or cumulative character,

425,000 workers, whereas the decline in the board's former index was approximately 12 per cent, which would indicate a decrease of more than 1,000,000 workers. The revised index, as shown by the chart, practically eliminates this discrepancy and similar discrepancies in earlier years.

Data currently available.—The board's revised indexes are based in largest part on statistics of factory employment and pay rolls that become available monthly, which now embrace 50 industries arranged in 14 industrial groups (see Tables 3, 4, and 5).³ These industries in combination employed in 1927, the latest year

² Adjustments of the board's former indexes to census data for 1919 and 1921 were made in 1923 and 1925; see FEDERAL RESERVE BULLETIN for December, 1923 (pp. 1272-1279) and May, 1925 (pp. 324-327). The results of these earlier adjustments, for the period to which they relate, are embodied in the revised indexes, but the latest revision has taken account for that period, as well as for more recent years, of manufacturing industries not formerly included in the indexes.

³ For the years 1919-1922, the indexes comprise 34 industry series, representing in combination 45 of the 50 industries now currently and separately reported. The industries which are included currently from 1923, but not prior to that time are: Petroleum refining, shipbuilding, and the manufacture of fertilizers, rubber boots and shoes, and automobile tires.

for which comprehensive figures are available, 6,600,000 wage earners or about 78 per cent of the 8,350,000 wage earners employed in all manufacturing industries, and accounted for about 80 per cent of total factory pay rolls in the United States.

Estimated data for certain industries.—Other manufacturing industries, for which the necessary statistics are not available currently on a monthly basis, but for which the Bureau of the Census publishes comprehensive reports at longer intervals, are included in the revised indexes on the basis of these comprehensive census reports. Such industries employed in 1927 about 1,750,000 wage earners, or 21 per cent of wage earners in all manufacturing industries, and, in 1919, about 2,350,000 wage earners, or 25 per cent of the total. The inclusion of these industries on the basis of census data is a major point of difference between the revised indexes and those which they supersede.

The importance of their inclusion is indicated by the fact that without them an index of employment understates the number of wage earners employed in all manufacturing industries in 1927 by 2 per cent, the equivalent of more than 175,000 workers, largely in consequence of the absence of representation for certain manufacturing industries that have shown rapid growth during recent years, such as those producing rayon, radios, airplanes, motion pictures, and special mechanical devices such as washing machines and electric refrigerators. Similarly, in 1919, when monthly reports were not available for the shipbuilding industry, the exclusion of these industries understates employment by about 7 per cent, or more than 525,000 workers.

Seasonal fluctuations of an index based solely on currently reported data, furthermore, were found to vary substantially from fluctuations in employment in all manufacturing industries, as indicated by census reports. Volume of employment in the early months of the year was overstated and from midsummer to November was understated, largely because of absence of representation for the fruit and vegetable canning industry. Employment in this industry is at its low point in January or February, when between 15,000 and 35,000 workers are employed; after early summer, however, the number of employees begins to increase, rising to between 150,000 and 200,000 at the height of the packing season in September.

The inclusion of a number of these additional manufacturing industries was accomplished by using for census years—i. e., for odd alternate years—the monthly statistics given in the

census, and by using estimated figures for intervening even years. The necessary estimates were based on all available data, including particularly employment figures of limited scope collected by certain States, and monthly statistics of production for the industries concerned. Such estimates were made separately for the following industries: Petroleum refining (1920, 1922); shipbuilding (1920, 1922); automobile tires and tubes (1922); fruit canning and preserving (1920, 1922, 1924, 1926, 1928, and January–April, 1929).³

For certain other industries, however—including for example those producing rayon, radio, washing machines, and electric refrigerators, and a larger group of miscellaneous industries, and employing in the aggregate about 1,800,000 workers in 1919 and about 1,600,000 workers in 1923—month-by-month estimates for individual industries for intercensal years were impracticable. For this group of industries taken as a whole the change from one census year to another was determined from the census data and month-to-month fluctuations were arbitrarily assumed to be the same as those for the larger group of industries for which the necessary information has been currently available. For the period since 1927, however, no estimate of the rate of growth has been attempted, pending the appearance of the statistics from the 1929 Census of Manufactures. The industries concerned—here designated as “industries not elsewhere specified”—are represented in the revised index by a basic figure at the census level of 1927 but varying from month to month with variations in the group of 50 industries taken as a whole. Thus the current fluctuations of the index are determined altogether by the statistics reported by manufacturing establishments every month, while the general level of the index in 1928 and 1929 is determined in part by an allowance based on the census of 1927 for industries that do not report currently. Whatever inaccuracy in level for these years may be disclosed by the 1929 Census of Manufactures when the figures become available can then be eliminated by the same methods that have already been applied to the data for earlier years.

For the period since 1923 the majority of the series that become available monthly and are used in the revised indexes are compiled

³ The industries for which separate estimates were made by months for the years specified are those for which current figures are now available, and for these industries estimates were made only for (1) years for which currently reported figures were not available, and (2) years for which available statistics of one kind or another afford a satisfactory basis of estimate.

for individual industries by the United States Bureau of Labor Statistics.⁴ Of the 50 industries for which figures are used currently, series for all except four are from this source. Similar series compiled by the New York State Department of Labor have been used for the following industries: Women's clothing, millinery, and stamped and enameled ware, in the production of which New York led all other States in 1925. For the musical instruments industry, the New Jersey State Department of Labor series, representing in large part the manufacture of phonographs, have been combined with those of the Bureau of Labor Statistics for the manufacture of pianos and organs.

The inclusiveness of the samples varies considerably from industry to industry, from 10 per cent to over 70 per cent, but they represent in the aggregate about 40 per cent of the total number employed in the group of 50 industries. For the 46 industries, for which the series used are those of the Bureau of Labor Statistics, the reporting firms employed on different dates the following proportions of the total number of wage earners reported for these same industries by the census: December, 1923, 35 per cent; December, 1925, 42 per cent; June, 1927, 45 per cent. The corresponding figure for June, 1929, is estimated at 55 per cent, the growth being due to a substantial increase between 1927 and 1929 in the number of firms reporting to the bureau. In general it is true that the average size of establishment reporting current statistics of employment is considerably larger than the average size as reported by the census.

Reports to agencies collecting the basic data from which the board's indexes are compiled relate almost without exception to the pay-roll period ending nearest the 15th of the month, whether this be a week, ten days, two weeks, or some other period. Although the indexes actually reflect employment and earnings in only a part of the month, it is customary to refer to them as monthly indexes. In some cases the discrepancies between the changes in employment and pay rolls in the month as a whole as compared with that part of the month included in the pay-roll period may be considerable, as, for example, in months when the

pay-roll period contains a holiday and shows an exaggerated decline in pay rolls.

The form in which the current information for a given industry becomes available is that of a series of index numbers, or, more accurately, percentages relative to a chosen base period.⁵ The original series compiled by the New York State Department of Labor are based on a fixed list of reporting firms, while the Bureau of Labor Statistics series are computed from percentages of change from one month to the next, derived from figures of number of employees and earnings reported for the two months by identical firms. Over a longer period of time, however, the number of firms reporting to the Bureau of Labor Statistics varies considerably. The statistics measure month-to-month changes in the number of workers employed by established firms, but not the original employment of additional workers in newly organized establishments or reductions in employment that arise from the permanent closing of plants. Consequently the series tend to show for expanding industries a slower rate of growth and for decadent industries a slower rate of decline than would be shown by more comprehensive reports. This accounts in part for the discrepancy (see Chart II) between the index numbers and the census data. To eliminate this error, the series representing each industry was tested by comparison with the Census of Manufactures and adjusted with a view to bringing its fluctuations into line with those of the industry as a whole.

Methods of adjustment to census data.—Census figures on employment in each month of 1923 and 1925 and average monthly employment in 1927 were compiled for each of the 50 industries and stated in index numbers, or percentages relative to the annual average for 1923.⁶ These were then compared with similar series currently reported for comparable industries, converted into percentages of the annual average for 1923. In a majority of instances, the current series exaggerated the decline in employment, and the adjustment to the census involved raising the level of the current series, but there were a few cases in which the error was in the opposite direction.

The method of adjustment may be illustrated in detail by reference to employment in

⁴ For the years 1919 to 1922, the board's indexes were based to a large extent on statistics collected by State departments of labor and by Federal reserve banks, with the addition of some material from the United States Bureau of Labor Statistics. The method of their combination into series of relatives, and their adjustment to the Census of Manufactures, was described in the FEDERAL RESERVE BULLETINS for December, 1923, and May, 1925. Inasmuch as each of these series had already been adjusted to the census, they were used in the present index with little alteration and joined to comparable series from different sources used in the years 1923 to date.

⁵ The Bureau of Labor Statistics series are chain relatives, until recently percentages of the monthly average of 1923, now percentages of the monthly average of 1926. The New York State Department of Labor has recently changed the base period of its indexes from June, 1914, to the monthly average of 1925-1927.

⁶ In obtaining census figures comparable with those of the 50 industries in the index, it was frequently necessary to combine a number of the more detailed census classifications.

the furniture industry. The broken line on Chart III shows (1) the Bureau of Labor Statistics series representing employment in the furniture industry in comparison with (2) the census series, which is represented by circles, and (3) the board's revised series, all relative to the average of 1923. In 1925, the Bureau of Labor Statistics series showed a decline from 1923 of 1.3 per cent, while the census showed an increase of 7.6 per cent. Thus during this period the current series had accumulated an appreciable error, understating employment by almost 9 per cent. In 1927 the Bureau of Labor Statistics series showed a further decline, while the census average continued to increase, the difference between the two averages approximating 15 per cent. To eliminate this discrepancy, the level of the Bureau of Labor Statistics relatives was raised beginning in

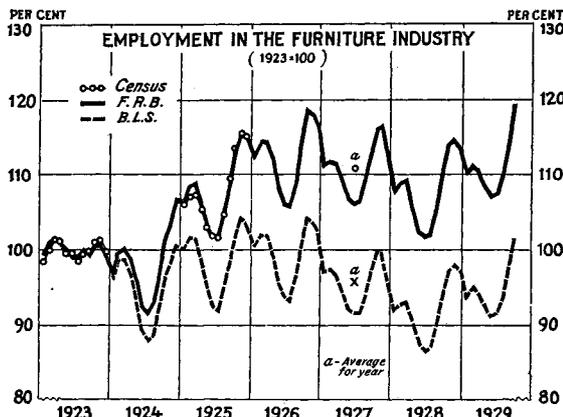


CHART III.—Illustrates method of adjustment to census. Broken line: Bureau of Labor Statistics series; average for year 1927 indicated by x. Solid line: Federal Reserve Board's revised series after adjustment to census

January, 1924, by the addition of a small increment, which was increased gradually until the average for the year 1925 equaled the average shown by the census. A similar procedure was used in the adjustment of data for the years 1926 and 1927 to the level of the 1927 census. For the years since 1927, for which no census reports are available, the Bureau of Labor Statistics relatives were adjusted, proportionately, to the level shown by the 1927 census. Thus in the case of the furniture industry, the ratio for December, 1927, between the relative arrived at by this process of adjustment (112.8) and the Bureau of Labor Statistics relative (96.2) was 117.26. This figure was used as a multiplying factor to increase all succeeding monthly relatives to the

appropriate level. No attempt has been made, pending the results of the 1929 Census of Manufactures, to estimate the extent of any error which may have accumulated since 1927.

This method of adjustment to the census was followed with minor variations in respect to most of the current series representing volume of factory employment from 1923 to date. For some industries, however, for which the current reports described the trend of employment from one census year to the next within a margin of 1 per cent, no adjustment was considered to be necessary.

In certain industries in which seasonal fluctuations in employment as reported currently did not compare favorably for census years with those shown by the census, special adjustments were made. Accordingly, the adjustment to the level of the census in 1925 occasionally began with July, 1923, with offsetting adjustments in the opposite direction in the earlier months of the year. In a few industries in census years, census data were substituted throughout for labor department data, because of widely differing seasonal fluctuations, and in other instances and for similar reasons census figures were substituted in certain months.

In the pay-rolls index a similar procedure was followed, with certain exceptions necessitated by the fact that the census publishes pay-roll data only for the year as a whole and not by months, but the annual data made possible accurate adjustments of the series for individual industries to appropriate levels. As a rule, however, the adjustments made in the employment index were duplicated in the pay-roll index, in order that the comparability of the two indexes be not affected by differences in statistical method.

Method of computing composite indexes.—For purposes of combination into a composite index, each series representing an individual industry (adjusted to the census and relative to 1923) was assigned a weight factor, measuring its proportionate importance as an employer of wage earners in manufacturing. These weight factors were derived from the Census of Manufactures for 1923, and consisted for the employment index of the actual number employed in the industry (annual average of monthly figures) and for the pay-rolls index of the total annual pay roll of the industry. These weight factors are shown in Table 5, together with the percentage each forms of the total. Each series of employment relatives was translated into terms of actual number

employed in a given month by multiplying the relatives by this weight factor; and, in a similar manner, each series representing pay rolls was translated into terms of thousands of dollars paid wage earners in the industry as a whole. Because of the fact that the series of relatives for each industry had previously been adjusted to the census on a 1923 base, the aggregates resulting from this procedure closely approximated for all census years the actual number of wage earners employed in the industry as a whole, and their total pay rolls, as shown by the census. By this device every industry was automatically given its proportionate importance in the total for every year.

These aggregates for individual industries were then combined into industrial groups, as shown in Table 5, and the group totals combined into a composite representing all manufacturing industries. These group aggregates, and the aggregate for all manufacturing industries, were converted into index numbers by dividing by the average of the thirty-six monthly aggregates in the three years 1923-1925.

Indexes not adjusted for seasonal variations.—The index numbers presented in this

article, like the board's former index numbers of factory employment and pay rolls, are not adjusted for seasonal variations. Such adjustment, which has been applied to almost all of the board's other index numbers, is under consideration, on the basis of study given separately to the available data for each of the 50 industries that enter into the groups for which indexes are given in Tables 3 and 4. While the course of employment in a certain number of these industries appears to exhibit, during the comparatively short period of about 10 years for which data are available, fluctuations from one part of the year to another that are obviously seasonal, there are other industries in which such fluctuations as appear are apparently not seasonal. Known statistical imperfections, furthermore, in the original figures furnished to the collecting agencies by the reporting establishments, especially in the case of pay rolls, further complicate the process of identifying seasonal variations. Subject to the results of further study, therefore, the indexes of factory employment and factory pay rolls will continue to be published without adjustment for seasonal variations.

TABLE 1.—INDEX OF FACTORY EMPLOYMENT (REVISED)

[Monthly average 1923-1925=100. Without seasonal adjustment]

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January.....	105.4	114.0	81.3	82.6	100.6	99.9	96.4	100.8	98.1	94.2	97.4
February.....	101.9	113.1	82.7	84.4	102.4	101.1	98.2	101.9	99.7	95.7	99.7
March.....	102.3	115.2	83.1	85.6	104.9	101.4	99.5	102.6	100.4	96.6	101.3
April.....	102.6	113.9	82.1	85.4	105.2	99.7	99.3	101.9	99.8	96.0	101.8
May.....	103.1	111.7	82.2	87.6	105.3	96.3	98.4	100.9	99.1	95.7	101.6
June.....	104.2	110.9	81.3	89.5	105.9	93.5	98.2	100.7	99.0	96.2	101.2
July.....	106.6	108.4	79.9	87.0	104.8	90.5	98.1	99.3	98.0	95.7	100.7
August.....	109.2	108.6	81.4	90.3	105.5	91.8	99.8	101.1	99.2	98.3	102.0
September.....	111.5	107.1	83.3	93.6	105.9	94.3	102.0	103.5	100.6	100.3	103.4
October.....	109.1	103.5	84.0	96.5	104.8	95.1	102.4	103.2	99.3	100.2	-----
November.....	110.4	97.5	84.2	98.5	103.4	94.6	101.9	101.2	96.9	98.8	-----
December.....	112.9	90.3	83.3	100.0	101.3	95.9	101.6	100.0	95.5	98.1	-----
Annual index.....	106.6	107.9	82.4	90.1	104.2	96.2	99.7	101.4	98.8	97.2	-----

TABLE 2.—INDEX OF FACTORY PAY ROLLS (REVISED)

[Monthly average 1923-1925=100. Without seasonal adjustment]

Month	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929
January.....	97.2	117.3	84.0	69.7	94.1	98.4	95.4	101.2	98.6	95.7	100.9
February.....	91.0	115.9	82.3	72.7	97.8	103.6	100.9	105.6	104.8	101.1	108.4
March.....	91.6	124.2	82.4	74.8	102.8	103.8	103.0	107.4	106.3	102.5	111.1
April.....	90.9	121.6	79.6	73.8	103.9	101.4	100.4	105.3	105.0	100.3	111.7
May.....	91.4	123.3	78.0	77.2	107.3	96.8	100.7	103.8	104.3	100.8	111.5
June.....	93.0	125.2	76.1	80.4	107.5	91.7	98.7	103.8	102.5	100.9	109.2
July.....	95.8	120.3	72.2	77.6	103.2	85.1	97.1	99.3	98.6	98.3	104.8
August.....	100.9	123.0	74.4	82.4	104.2	88.9	99.5	103.6	102.2	102.5	109.4
September.....	105.9	121.1	73.9	86.5	104.8	92.3	99.4	105.0	101.9	104.2	110.5
October.....	100.8	117.2	73.1	89.4	107.2	95.2	105.2	108.3	102.5	107.5	-----
November.....	105.4	108.4	72.0	93.1	104.9	93.5	105.1	104.6	98.5	103.6	-----
December.....	113.4	99.6	73.6	95.6	103.1	97.6	105.5	103.8	99.4	104.2	-----
Annual index.....	98.1	118.1	76.8	81.1	103.4	95.7	100.9	104.3	102.0	101.8	-----

TABLE 3.—FACTORY EMPLOYMENT: INDEXES BY GROUPS (REVISED)¹

[Monthly average, 1923-1925=100. Without seasonal adjustment]

Year and month	Iron and steel	Machinery	Textiles	Food products	Paper and printing	Lumber and products	Transportation equipment		Leather and products	Cement, clay, and glass	Non-ferrous metals	Chemicals		Rubber products	Tobacco products	Musical instruments
							Group ²	Automobiles				Group ³	Petroleum refining			
ANNUAL																
1919	99.5	117.2	97.8	109.0	96.8	93.2	96.3	86.6	107.5	84.7	114.6	108.3			112.9	130.4
1920	107.0	128.9	98.3	103.8	104.4	88.1	104.2	88.7	98.5	89.1	121.3	97.1			111.7	138.1
1921	65.4	77.0	93.0	94.8	89.1	74.5	71.7	53.8	87.8	73.6	74.5	70.8			110.5	86.9
1922	83.9	82.2	97.3	95.5	92.7	95.5	78.3	72.0	97.6	88.1	90.1	81.0			107.2	98.8
1923	104.4	107.7	105.3	102.0	99.3	100.9	106.9	100.6	106.2	100.8	107.1	101.5	102.9	102.5	105.8	110.2
1924	97.2	93.6	99.6	100.0	99.8	98.1	94.9	93.5	96.3	99.0	95.1	95.9	96.5	91.8	98.8	104.2
1925	98.4	98.7	99.6	98.0	101.0	101.0	98.3	105.8	97.5	100.2	97.9	102.6	100.6	105.7	95.4	85.6
1926	101.3	107.9	97.9	98.5	103.6	100.5	104.8	98.3	104.8	101.9	99.5	108.8	110.2	104.6	90.8	106.4
1927	96.8	100.0	100.8	99.1	103.1	92.3	88.4	91.6	97.3	97.5	97.4	107.9	110.2	104.0	93.6	88.9
1928	95.4	98.7	95.1	98.6	101.7	88.1	90.6	108.8	93.5	92.3	96.6	105.3	102.4	108.6	93.8	79.0
MONTHLY																
1919—January	112.1	121.0	90.7	113.1	96.1	83.3	92.9	74.3	104.3	68.6	108.1	129.8			126.1	114.3
February	106.0	118.2	84.7	110.2	95.4	83.6	91.5	75.1	104.5	66.1	107.9	127.4			124.6	120.6
March	103.4	114.5	87.4	109.3	95.5	86.2	91.0	76.6	103.9	70.8	107.6	118.8			124.8	125.0
April	100.1	113.2	91.1	105.4	94.3	86.2	91.1	79.7	102.4	81.8	107.5	111.6			122.4	128.5
May	96.4	110.2	94.9	103.5	92.7	88.4	91.9	81.2	104.0	91.3	110.0	105.8			120.6	130.2
June	95.5	107.9	97.9	104.4	95.0	88.9	93.3	84.9	105.0	94.2	112.0	104.0			111.2	133.8
July	99.8	108.7	102.2	106.4	96.3	92.0	96.3	88.7	105.7	87.1	117.5	100.2			97.6	125.6
August	104.2	114.2	102.3	108.0	97.2	96.4	97.2	91.0	108.9	94.5	120.8	99.2			87.9	126.8
September	104.8	117.9	103.7	110.3	98.0	100.1	100.7	95.3	110.4	90.0	119.6	100.3			97.3	139.9
October	79.3	122.4	105.0	110.8	98.2	103.5	102.6	98.0	111.4	93.1	120.3	100.0			103.4	136.2
November	90.1	126.8	105.3	112.4	100.2	104.3	103.5	98.1	113.7	90.5	121.7	101.0			119.7	139.5
December	101.8	131.2	107.8	114.0	103.1	105.2	103.5	95.9	115.6	88.9	122.5	102.1			119.2	144.0
1920—January	110.3	134.8	109.5	109.0	104.4	102.4	106.4	100.2	117.0	85.0	124.8	101.8			115.7	141.9
February	111.3	133.0	108.5	105.1	102.9	102.6	105.7	101.7	114.7	81.8	122.9	100.1			110.1	145.7
March	113.4	135.6	110.8	105.6	104.6	103.2	107.3	102.2	115.3	85.1	131.2	99.8			112.3	149.9
April	112.0	134.2	109.9	103.1	104.1	97.3	106.5	100.5	112.4	88.7	129.3	98.8			113.0	145.1
May	106.4	132.0	107.7	103.2	103.8	91.1	107.0	97.4	109.2	94.7	124.4	96.4			109.2	143.0
June	109.3	133.0	104.1	104.3	103.7	85.2	107.7	94.7	104.2	94.8	128.8	96.1			109.8	142.1
July	109.0	133.7	96.2	104.9	105.4	78.4	107.4	95.1	96.1	93.2	127.0	97.8			107.2	143.5
August	107.0	131.0	94.0	104.9	105.5	86.9	107.4	88.9	93.8	90.1	125.8	98.3			106.9	141.4
September	107.6	128.0	94.0	104.3	105.8	83.5	105.1	83.2	84.4	89.0	125.5	95.8			112.3	140.6
October	106.4	123.2	90.7	102.9	105.9	81.3	101.4	73.4	81.7	87.8	122.8	98.3			111.8	130.0
November	101.2	117.8	81.3	101.2	104.8	75.3	96.9	65.4	77.5	90.9	107.7	94.5			115.8	121.9
December	89.7	110.4	73.1	97.6	101.6	69.7	91.7	61.6	75.5	87.5	85.7	87.9			116.4	111.6
1921—January	72.7	103.0	71.4	90.1	96.5	69.3	72.0	31.9	74.0	72.2	76.8	81.4			109.0	82.3
February	75.4	94.8	84.1	91.8	95.2	71.9	69.0	38.8	80.4	62.6	69.9	76.0			105.0	81.7
March	72.7	89.7	89.3	93.3	93.9	73.6	67.5	47.2	83.2	67.1	70.7	75.5			101.7	88.3
April	65.8	84.0	92.7	89.7	88.7	74.4	67.8	58.5	82.5	73.1	72.1	70.9			108.0	82.0
May	65.6	78.6	93.7	90.8	83.2	75.0	70.3	61.9	85.8	78.1	73.4	69.3			110.5	86.1
June	61.1	74.3	94.3	91.4	83.6	75.2	68.4	59.1	89.0	78.0	72.6	68.8			112.7	84.6
July	53.8	68.6	94.6	93.5	84.1	73.2	70.1	59.2	90.8	76.8	68.7	66.3			109.3	74.8
August	57.5	67.0	96.0	94.5	85.5	73.5	72.8	59.6	94.2	74.9	74.7	64.7			109.9	78.9
September	59.8	66.0	100.4	98.5	87.0	74.6	74.5	59.3	94.3	76.3	75.5	65.0			114.6	86.4
October	63.9	65.0	101.5	102.1	88.8	76.0	76.5	59.0	93.0	74.9	79.9	70.2			116.3	93.9
November	67.7	65.4	99.3	103.1	91.0	78.6	77.1	57.0	91.9	75.0	80.6	72.6			114.7	101.1
December	68.3	67.3	98.9	98.3	91.5	78.1	74.4	53.6	94.0	74.7	78.9	69.0			113.7	102.9
1922—January	65.2	70.0	98.7	92.3	93.4	84.7	70.3	52.8	96.0	70.0	76.7	69.5			99.4	101.3
February	70.5	71.0	100.7	93.0	92.7	89.1	71.5	56.5	96.9	69.0	78.6	70.5			104.2	100.8
March	73.2	74.5	97.2	94.1	91.4	83.1	74.2	60.6	94.6	77.0	81.3	73.5			106.0	98.5
April	78.5	76.9	93.9	89.1	88.7	92.4	75.5	65.6	90.3	84.8	81.7	74.5			100.0	96.8
May	81.7	79.8	92.6	90.0	90.8	97.2	79.7	72.8	90.0	93.4	86.1	76.6			103.4	95.4
June	85.9	80.6	92.0	91.4	90.3	100.3	83.6	77.5	91.6	94.0	88.7	76.6			104.1	93.5
July	86.9	80.8	91.7	94.4	90.6	99.2	58.3	79.2	95.3	93.6	92.1	80.6			109.8	92.1
August	88.1	82.0	94.2	97.7	92.5	99.5	66.4	78.4	99.8	94.3	95.5	83.6			109.0	95.7
September	88.5	87.1	97.9	97.3	93.8	97.7	77.6	80.2	102.3	94.9	95.9	86.7			111.8	98.7
October	92.9	90.3	100.3	100.3	94.9	98.5	90.1	78.8	102.7	95.0	98.7	90.2			113.2	101.2
November	96.2	94.1	102.8	103.7	95.7	98.5	94.9	80.0	105.0	96.1	102.5	94.0			112.7	104.5
December	99.0	99.0	105.6	102.3	97.4	95.8	97.9	81.9	107.2	95.1	103.2	95.8			112.8	107.3
1923—January	99.2	100.7	106.9	96.4	96.8	95.6	101.8	87.4	110.5	91.7	104.7	99.7	97.5	110.4	108.0	106.2
February	101.7	104.6	108.1	97.4	97.3	97.6	103.5	95.4	111.6	92.7	108.1	104.4	98.8	115.1	107.4	106.9
March	103.8	108.2	110.5	98.7	99.6	98.6	106.6	99.5	111.4	96.3	111.3	108.5	100.7	116.3	108.6	109.1
April	104.3	110.1	109.7	97.3	99.7	100.2	107.5	103.8	109.1	101.5	112.5	104.8	105.5	116.9	105.4	108.6
May	105.5	110.5	108.1	98.2	99.0	101.5	108.3	105.1	106.5	105.1	111.9	103.9	109.3	116.4	105.4	108.1
June	107.8	110.8	105.9	101.5	99.6	103.4	109.8	104.6	103.6	106.2	111.1	101.4	108.3	111.2	105.5	108.7
July	105.1	111.2	101.8	103.2	99.0	103.9	107.9	101.1	101.7	104.4	108.9	99.8	107.8	102.1	103.2	109.3
August	107.3	110.6	101.6	104.3	98.9	103.6	108.3	100.2	105.2	104.2	107.3	99.9	106.6	90.6	100.0	107.1
September	106.6	109.6	103.1	106.4	99.1	103.1	107.8	101.3	104.7	103.6	103.4	100.0	104.0	86.0	105.1	101.9
October	106.3	107.2	103.0	109.1	100.1	102.4	108.7	102.9	103.9	102.9	102.4	98.7	101.0	85.3	106.4	114.0
November	104.2															

TABLE 3.—FACTORY EMPLOYMENT: INDEXES BY GROUPS (REVISED)—Continued

Year and month	Iron and steel	Machinery	Textiles	Food products	Paper and printing	Lumber and products	Transportation equipment		Leather and products	Cement, clay, and glass	Non-ferrous metals	Chemicals		Rubber products	Tobacco products	Musical instruments
							Group	Automobiles				Group	Petroleum refining			
MONTHLY—continued																
1924—January	101.8	100.3	102.4	100.4	100.9	96.5	102.8	107.5	102.4	94.9	102.0	99.2	95.9	92.4	101.9	116.6
February	106.3	99.6	103.6	101.7	100.6	98.9	102.5	109.8	102.9	95.5	106.4	100.8	96.7	93.7	102.6	115.6
March	108.0	100.0	102.9	100.5	100.7	99.0	102.9	111.8	103.1	100.3	106.4	103.1	96.8	93.3	101.1	112.9
April	107.4	99.2	98.3	97.3	100.1	100.0	101.3	107.1	97.6	103.9	103.7	102.1	97.7	92.1	97.5	107.2
May	100.2	95.1	94.1	96.8	99.6	99.9	96.4	96.8	93.2	104.3	98.0	96.0	98.0	91.1	97.0	100.0
June	94.7	92.2	91.1	98.9	98.9	97.4	91.6	86.4	88.2	102.1	91.8	89.7	98.1	88.2	96.6	96.9
July	89.0	88.3	84.1	99.5	97.2	96.1	89.5	82.2	88.4	98.2	87.0	89.6	98.2	84.0	97.7	93.0
August	87.8	88.0	86.9	99.7	97.2	96.4	89.3	83.3	92.9	99.1	85.3	90.2	97.2	84.6	97.0	95.9
September	90.1	88.1	91.8	102.1	99.6	97.5	89.7	83.9	96.4	97.9	87.3	93.0	95.6	93.7	99.5	100.3
October	92.8	89.2	95.1	102.2	100.3	98.7	91.0	85.0	97.6	97.9	88.7	94.4	94.5	93.0	92.3	102.3
November	92.8	90.1	94.6	100.4	100.9	98.2	89.9	83.1	97.1	97.3	91.0	95.2	94.6	97.2	101.5	104.0
December	96.0	92.8	97.5	100.8	101.5	98.2	91.4	85.5	96.2	96.5	93.4	96.9	94.5	98.5	100.6	105.5
1925—January	98.9	93.9	98.8	98.1	100.8	97.8	93.2	89.4	99.5	91.8	95.3	97.3	94.1	99.6	95.9	88.2
February	101.3	95.8	101.4	98.4	100.8	99.6	94.2	90.6	101.3	93.2	98.1	101.2	95.2	102.9	96.7	85.4
March	101.9	96.8	102.8	96.2	101.5	99.3	97.0	97.1	101.2	97.5	98.5	107.2	95.2	103.7	97.4	83.6
April	99.8	97.7	101.6	93.2	100.6	100.7	99.8	104.9	97.2	102.2	97.3	107.2	96.6	104.9	89.7	80.8
May	98.4	97.3	99.0	93.7	99.7	100.5	100.0	110.9	95.0	103.4	98.7	98.3	97.2	108.2	95.4	77.7
June	96.6	97.4	97.6	97.1	99.5	101.2	97.7	105.8	90.8	103.7	98.5	98.1	100.1	109.1	93.9	77.6
July	94.5	97.0	94.8	97.2	99.5	100.7	97.3	105.1	93.8	102.8	96.6	99.5	103.0	109.7	94.0	73.3
August	95.6	97.7	96.2	97.6	99.3	101.3	97.9	106.9	98.7	101.8	96.5	100.5	104.1	110.1	93.0	74.3
September	96.3	99.3	97.9	100.1	100.4	103.0	99.2	111.5	100.6	102.4	97.1	105.2	105.7	109.0	95.2	91.0
October	97.9	101.8	101.2	102.7	102.2	103.5	101.7	118.6	100.3	102.6	97.5	105.3	105.2	102.6	98.4	95.6
November	98.8	104.0	101.7	101.5	103.3	102.9	101.2	117.4	97.3	101.5	99.6	105.7	105.4	102.2	97.7	98.1
December	100.4	105.9	101.6	100.4	103.9	101.7	100.4	111.7	94.2	99.8	100.6	106.1	105.9	106.4	98.0	102.1
1926—January	100.0	107.0	101.6	97.9	103.5	99.0	100.6	111.8	96.4	94.8	99.8	107.5	104.7	108.1	88.0	99.6
February	102.0	108.8	102.0	97.2	102.7	99.4	102.3	114.0	98.4	95.4	102.7	109.2	105.7	108.6	92.6	99.6
March	102.0	109.5	102.4	96.4	103.3	99.6	104.2	116.4	97.2	97.3	104.4	112.2	105.5	108.0	92.2	98.3
April	102.8	108.7	100.4	93.8	102.7	101.4	102.9	112.5	92.7	100.8	103.2	111.6	107.5	107.5	88.6	96.7
May	101.7	107.9	97.9	95.3	102.7	101.5	100.8	107.9	91.4	104.6	100.8	106.1	107.9	104.2	88.5	94.3
June	100.6	108.9	95.1	97.7	102.6	101.6	99.3	105.8	91.4	106.5	98.4	105.7	110.7	102.6	91.7	93.0
July	99.4	107.7	89.0	98.1	102.2	101.0	97.5	102.8	95.0	104.8	96.9	105.0	112.1	97.3	89.0	86.7
August	100.9	107.9	90.7	98.7	102.4	102.0	97.8	105.0	99.6	106.0	97.4	106.3	112.4	104.1	86.8	87.6
September	102.6	108.1	96.3	101.6	104.0	101.6	97.8	104.4	101.3	106.4	98.5	110.9	113.9	107.8	91.1	89.9
October	102.7	108.5	99.3	103.7	105.2	101.4	95.4	100.0	101.1	104.8	97.5	111.3	114.4	106.5	93.8	95.1
November	101.6	106.1	99.2	101.6	106.3	100.0	91.8	91.4	99.7	103.1	98.0	110.7	113.9	100.8	93.8	95.4
December	99.1	106.1	100.9	99.4	105.9	97.8	89.5	85.7	97.5	98.5	96.6	109.2	113.7	100.1	93.6	95.6
1927—January	97.0	104.2	101.1	97.4	104.0	93.1	88.1	85.5	99.5	91.7	96.5	110.2	115.0	100.8	85.2	91.6
February	98.9	105.3	103.0	97.2	104.1	92.2	92.4	96.5	100.2	92.8	97.4	111.5	116.1	102.2	91.5	85.3
March	100.1	104.8	103.8	96.4	104.0	91.9	93.5	100.6	100.0	97.1	100.5	115.1	117.1	102.8	91.7	82.9
April	99.9	103.3	102.1	95.4	103.2	91.7	93.7	101.1	95.4	100.7	100.4	115.0	114.7	106.9	90.2	79.9
May	99.4	101.4	100.1	96.2	102.2	92.6	93.4	101.1	93.8	102.2	101.7	106.7	112.3	110.1	91.5	76.1
June	98.2	101.1	98.8	100.7	101.9	92.7	91.0	95.1	93.7	102.6	99.0	104.5	111.3	108.4	94.1	74.0
July	95.7	99.0	96.4	99.8	101.2	92.5	87.6	88.5	97.2	100.6	98.0	103.6	111.3	105.0	94.5	69.9
August	95.7	98.7	98.4	99.1	101.8	93.4	88.0	92.1	100.6	98.8	97.7	104.0	109.4	104.3	88.6	73.3
September	96.1	97.5	101.4	102.5	102.8	94.1	86.1	88.8	101.1	98.6	96.0	106.9	107.3	104.3	98.6	76.9
October	95.2	96.7	102.1	103.1	103.4	93.5	85.1	87.5	99.2	96.8	95.1	106.3	104.3	101.9	101.0	79.3
November	93.6	94.4	101.5	101.3	104.3	91.9	80.5	79.2	94.0	96.1	93.9	105.9	102.0	99.2	100.5	79.6
December	92.2	93.6	100.7	100.2	104.5	88.5	81.2	82.7	92.3	91.7	92.8	104.5	101.2	102.2	96.3	77.2
1928—January	91.0	92.8	99.7	96.8	103.0	85.3	83.0	89.7	96.2	85.9	89.8	103.3	101.1	105.1	88.5	71.2
February	94.0	94.1	100.7	97.8	102.4	85.4	86.1	98.3	97.9	86.5	93.6	106.5	100.8	107.6	92.4	71.7
March	95.4	95.5	100.3	97.4	101.4	86.7	88.2	102.6	97.3	89.4	94.6	110.4	101.0	106.0	93.5	68.5
April	95.3	95.9	97.0	95.6	100.3	87.5	89.7	105.2	92.4	91.8	95.9	109.9	99.4	105.7	91.1	69.2
May	95.7	97.4	93.4	96.1	100.6	87.4	92.4	111.3	89.8	95.3	95.9	101.5	99.2	105.4	92.2	68.0
June	95.5	98.2	91.8	97.6	100.5	88.3	92.4	111.3	89.7	96.2	96.0	101.0	101.5	105.4	93.0	67.0
July	93.6	97.9	87.8	97.9	100.5	87.5	91.6	111.2	94.0	94.6	95.3	100.4	102.6	110.7	88.0	64.5
August	95.9	99.5	89.4	97.4	100.8	89.5	94.2	118.1	95.9	96.6	96.0	101.3	103.9	111.6	94.7	69.5
September	96.4	101.4	92.6	100.5	101.1	90.4	95.4	121.5	96.1	96.0	97.6	106.8	105.8	113.4	96.7	70.9
October	96.9	102.8	95.7	102.6	102.4	90.6	94.4	119.8	94.6	94.1	100.0	107.4	104.3	113.2	99.1	72.5
November	97.7	103.8	96.2	101.9	103.7	90.5	90.2	109.1	89.3	91.8	102.2	107.3	104.0	109.8	98.9	74.9
December	97.1	105.2	97.0	102.0	103.6	88.2	89.9	107.7	88.6	89.5	102.4	107.8	104.7	109.6	95.7	73.0
1929—January	97.1	106.7	95.9	98.6	102.5	85.5	94.0	118.3	91.9	84.3	102.4	107.6	104.0	112.2	84.1	59.0
February	98.3	110.4	98.0	98.8	103.4	85.8	99.0	129.5	94.1	84.5	106.1	110.9	106.7	112.3	92.0	57.1
March	99.3	113.8	101.0	97.6	103.1	86.6	100.5	131.1	92.7	86.8	107.9	115.5	109.2	113.3	92.0	55.6
April	99.7	116.7	99.3	96.2	102.5	88.2	101.7	131.4	90.6	90.5	107.7	119.0	111.9	114.3	91.3	58.5
May	100.7	119.1	97.3	97.3	102.8	89.2	101.5	130.0	90.3	93.1	105.3	110.3	114.4	115.3	90.3	65.1
June	100.8	120.8	96.3	99.2	103.2	90.0	97.6	120.6	89.4	9						

TABLE 4.—FACTORY PAY ROLLS: INDEXES BY GROUPS (REVISED)¹

[Monthly average 1923-1925=100. Without seasonal adjustment]

Year and month	Iron and steel	Machinery	Textiles	Food products	Paper and printing	Lumber and products	Transportation equipment		Leather and products	Cement, clay, and glass	Non-ferrous metals	Chemicals		Rubber products	Tobacco products	Musical instruments
							Group ²	Automobiles				Group ³	Petroleum refining			
ANNUAL																
1919	98.1	104.1	90.0	98.0	74.2	89.2	88.8	74.9	99.0	72.6	99.3	100.1			107.2	111.7
1920	123.8	135.6	107.8	109.2	100.3	109.2	111.5	90.4	105.9	93.6	130.4	113.7			124.6	137.0
1921	55.8	69.6	89.2	93.3	83.3	68.0	72.7	48.7	87.0	67.4	66.7	66.9			104.6	77.4
1922	69.9	72.8	91.0	90.2	86.1	82.1	76.4	66.2	96.0	73.2	82.3	73.7			99.2	86.4
1923	103.8	107.0	105.8	100.1	96.1	100.0	107.1	100.8	106.8	98.9	105.3	99.8	102.1	101.5	104.2	108.0
1924	96.7	92.6	94.4	100.5	99.7	98.4	93.2	90.2	95.5	100.7	94.8	96.3	95.2	92.7	99.4	105.2
1925	99.4	100.4	99.8	99.4	104.2	101.6	99.7	109.1	97.8	100.3	99.9	103.9	102.7	105.8	96.3	86.8
1926	104.2	111.9	98.4	101.2	110.4	102.0	99.1	105.2	98.1	101.5	103.0	111.0	111.4	106.2	92.1	99.6
1927	98.5	103.5	104.1	102.4	110.1	95.1	91.3	93.5	98.6	96.2	100.3	109.7	112.2	108.5	91.1	85.2
1928	99.9	104.7	96.4	102.5	109.8	90.5	97.2	117.6	92.4	90.4	107.1	106.0	105.7	114.8	88.4	77.6
MONTHLY																
1919—January	115.5	103.7	73.5	96.5	70.0	74.2	95.9	59.8	93.4	59.1	107.5	112.1			110.0	114.5
February	108.0	99.9	64.8	95.8	69.3	73.3	85.1	64.1	90.2	56.2	99.8	105.5			105.0	118.4
March	102.3	98.6	69.9	96.5	69.8	74.4	85.8	65.3	89.0	61.3	91.6	97.9			109.4	123.5
April	94.6	95.8	74.9	92.4	69.3	77.8	85.0	67.7	86.1	66.6	89.2	93.6			102.5	127.4
May	87.5	92.7	80.3	92.9	68.2	83.4	86.1	71.3	90.0	69.6	89.7	90.7			107.4	118.4
June	88.4	88.7	89.1	95.2	72.9	87.7	82.2	69.2	93.6	79.5	77.6	91.4			97.1	124.9
July	91.0	90.2	97.1	95.1	74.5	92.1	83.8	73.0	97.5	73.8	81.9	92.3			89.7	128.2
August	106.7	100.4	101.7	97.0	77.3	94.8	81.9	74.9	104.1	78.0	88.4	90.9			84.6	134.1
September	106.3	110.0	105.0	100.5	81.6	98.9	90.1	83.7	105.8	81.2	109.7	98.9			101.9	133.4
October	78.8	113.7	102.3	99.9	71.0	99.1	93.9	92.5	108.1	81.6	115.2	104.6			106.1	63.1
November	90.7	123.7	103.7	104.8	74.0	105.4	97.7	90.5	110.7	83.5	118.1	110.7			134.5	68.3
December	106.9	131.5	117.9	109.1	91.9	109.4	97.6	86.6	119.8	80.6	122.5	112.8			138.3	86.6
1920—January	117.5	134.9	122.9	107.2	94.3	115.9	100.5	96.6	122.9	79.4	124.5	114.5			126.8	124.8
February	122.9	128.5	121.4	103.0	93.0	114.4	99.4	94.7	116.4	74.6	125.1	110.5			115.5	133.5
March	132.0	141.3	127.8	108.6	98.8	121.3	107.3	101.1	122.4	80.7	138.9	115.7			129.2	145.9
April	125.7	139.1	124.4	100.8	96.7	114.6	106.5	97.3	120.7	88.7	137.9	115.5			126.5	148.2
May	122.4	139.7	121.3	111.7	100.3	113.6	116.2	102.8	118.3	98.6	133.5	114.0			128.9	147.7
June	128.8	144.0	119.2	115.2	100.9	113.2	116.9	97.7	118.7	101.7	140.6	116.2			130.0	147.8
July	121.6	145.6	107.1	114.1	101.0	108.3	111.2	97.2	110.0	99.5	140.8	116.3			118.3	143.5
August	124.0	143.4	105.4	112.8	103.6	113.6	124.6	96.9	106.7	99.2	138.1	118.9			117.3	142.3
September	129.7	139.1	102.7	111.9	104.3	109.1	121.1	92.6	92.0	99.0	143.7	113.4			123.7	142.6
October	132.2	130.2	93.0	111.0	106.5	105.1	120.6	88.1	84.8	100.9	134.2	119.0			125.2	135.8
November	123.6	124.1	79.0	109.6	104.8	94.4	108.6	62.5	79.9	103.3	118.2	113.3			128.6	122.7
December	105.4	117.6	69.6	104.2	99.3	87.3	104.7	56.9	78.1	97.7	88.7	97.1			125.2	108.9
1921—January	81.0	105.7	66.1	96.3	93.3	68.6	78.9	25.2	72.0	74.6	74.7	86.6			108.4	73.8
February	79.1	88.2	82.2	96.6	89.2	71.1	71.9	28.4	85.9	60.6	67.2	73.9			101.0	73.5
March	72.5	84.5	90.4	96.9	88.4	72.6	72.1	38.7	85.1	64.0	64.8	73.2			101.0	81.3
April	59.4	79.3	92.1	89.8	83.1	70.9	74.4	57.7	81.7	69.3	66.0	68.0			102.6	75.6
May	57.1	73.3	90.4	92.5	76.4	69.0	74.6	61.9	83.2	73.0	67.0	66.2			110.6	74.8
June	47.9	66.1	91.8	90.8	78.3	71.9	72.8	60.4	89.2	72.0	66.8	64.5			112.6	74.3
July	37.4	60.0	91.4	91.9	78.7	63.9	71.0	60.4	89.5	65.0	60.0	63.4			105.0	64.4
August	42.6	57.6	94.4	91.0	79.7	69.9	73.3	58.0	94.8	68.1	65.9	58.7			104.6	64.6
September	42.1	56.1	97.4	93.6	80.8	65.8	71.4	55.3	92.9	66.0	64.0	58.2			108.6	77.7
October	47.3	53.5	91.8	97.1	82.2	63.5	72.7	50.0	88.8	65.3	67.5	63.5			104.0	86.4
November	50.1	54.1	88.4	93.6	83.2	63.6	70.8	46.0	85.7	65.2	69.1	64.8			95.9	86.9
December	52.5	56.6	94.0	89.5	85.9	65.9	68.8	42.6	95.5	66.4	67.7	62.3			100.5	95.0
1922—January	47.6	57.3	90.4	85.4	83.5	68.9	57.2	31.0	97.2	58.3	66.2	62.3			87.3	87.2
February	53.2	59.4	95.0	84.4	80.9	73.9	64.2	46.6	98.1	54.0	65.7	62.3			85.9	84.8
March	56.5	62.9	91.0	86.1	84.6	78.5	69.2	50.0	92.7	58.5	71.7	64.8			92.6	88.4
April	60.1	64.6	83.8	80.4	82.5	77.6	71.0	60.0	86.8	64.1	72.5	66.1			80.7	85.0
May	64.9	68.2	83.1	85.7	84.4	81.1	76.9	68.1	86.2	74.0	72.2	67.6			93.6	83.0
June	69.6	71.0	84.4	88.9	84.5	84.4	82.3	73.3	89.5	77.4	81.0	68.3			98.9	79.0
July	65.9	71.9	87.3	90.4	83.7	82.3	62.5	73.2	92.5	79.1	81.6	73.3			104.4	75.8
August	72.6	74.8	90.1	90.1	85.6	86.4	72.9	78.7	98.5	79.9	86.5	77.4			104.1	80.5
September	77.9	78.3	94.1	94.3	88.5	86.3	81.0	76.1	100.2	81.6	91.2	79.6			107.9	83.0
October	85.2	83.0	93.9	96.2	90.0	87.5	88.9	77.1	99.3	81.7	92.8	84.2			108.0	92.8
November	91.1	87.5	97.9	101.2	91.2	89.4	93.9	79.0	103.2	84.2	98.9	87.8			113.9	98.1
December	93.9	94.8	100.5	99.0	93.8	89.3	96.3	80.9	108.4	85.1	101.8	91.2			113.3	99.8
1923—January	93.3	91.8	103.2	93.5	92.1	87.4	92.7	77.0	110.9	83.1	96.5	93.1	96.5	106.0	108.8	94.0
February	98.8	97.1	106.0	94.0	93.0	89.9	99.0	92.6	113.1	84.4	101.2	95.6	96.6	112.9	104.3	98.6
March	101.9	103.5	111.2	96.5	96.0	93.9	106.6	101.0	115.7	90.5	108.5	101.2	101.5	118.0	107.9	103.2
April	100.0	108.5	108.9	95.3	96.7	98.1	108.8	106.1	112.2	98.5	114.7	102.2	105.4	121.3	103.1	105.6
May	109.7	112.3	111.0	97.5	97.5	102.1	112.0	108.0	110.4	104.2	116.1	103.3	107.6	119.4	101.9	104.6
June	111.5	113.8	108.0	101.0	97.2	104.3	111.4	102.2	105.8	105.2	113.0	101.6	108.3	114.2	104.7	106.2
July	98.8	111.3	102.2	101.8	96.2	103.7	107.4	99.4	99.4	99.9	109.2	102.0	110.3	94.5	100.7	103.0
August	106.6	110.2	102.6	100.3	92.8	103.0	109.1	101.9	104.0	104.0	102.9	98.7	103.7	85.1	90.9	100.5
September	105.4	109.6	104.2	105.0	95.6	103.5	106.7	98.9	103.8	104.2	101.2	100.4	104.4	84.7	101.0	113.7
October	110.2	110.1	106.2	106.3	98.0	105.2	114.2	110.1	103.1	106.6	98.8	102.4	102.5	84.1	108.4	118.9
November	107.0	107.7	101.7	106.3	98.1	105.2	112.9									

TABLE 4.—FACTORY PAY ROLLS: INDEXES BY GROUPS (REVISED)—Continued

Year and month	Iron and steel	Machinery	Textiles	Food products	Paper and printing	Lumber and products	Transportation equipment		Leather and products	Cement, clay, and glass	Non-ferrous metals	Chemicals		Rubber products	Tobacco products	Musical instruments
							Group	Automobiles				Group	Petroleum refining			
MONTHLY—continued																
1924—January	102.2	99.4	104.6	99.8	99.9	94.1	93.8	91.8	103.1	95.8	101.5	96.3	89.8	91.6	103.7	114.8
February	111.9	100.3	107.7	101.4	100.3	100.8	105.2	114.9	104.3	99.9	108.1	98.8	93.0	94.3	102.7	117.9
March	114.1	101.2	105.5	100.3	101.0	101.5	104.1	113.0	103.3	103.8	110.1	102.1	95.9	93.8	102.1	113.2
April	111.3	100.6	97.6	97.1	100.8	102.6	104.0	109.2	94.4	107.6	104.3	101.2	95.8	93.4	93.6	104.2
May	102.1	96.3	90.1	93.3	99.8	101.4	97.5	96.7	89.4	107.9	97.7	97.6	97.7	92.9	96.0	97.0
June	88.5	91.8	85.5	100.8	98.5	99.4	89.4	79.4	85.1	105.7	89.1	92.7	99.3	86.4	99.3	93.7
July	77.2	83.3	77.2	101.4	94.6	92.5	82.1	72.3	84.1	97.2	81.3	90.0	95.7	82.4	96.6	89.9
August	83.5	83.6	84.3	99.4	95.0	94.5	85.8	77.8	94.6	98.5	83.0	92.0	96.3	84.2	96.4	94.8
September	86.5	84.2	92.2	103.5	99.1	97.0	86.3	80.8	99.7	97.4	86.9	93.3	94.0	95.9	100.5	103.0
October	92.5	87.6	96.6	101.0	101.1	99.6	91.2	84.4	100.1	100.1	88.2	95.3	92.4	97.3	91.5	106.3
November	91.6	88.5	92.3	100.6	101.4	98.2	88.5	80.2	91.9	96.9	91.1	97.8	97.9	99.2	104.3	113.7
December	98.9	94.4	99.4	102.7	104.3	99.6	90.9	82.5	95.7	98.2	96.8	98.2	94.1	100.9	106.6	113.6
1925—January	101.7	94.0	100.9	99.0	103.0	93.2	83.5	71.5	99.6	88.8	98.9	97.7	92.9	99.4	99.6	85.5
February	104.9	98.2	105.3	98.2	102.8	99.6	98.1	95.2	104.2	94.5	101.6	102.5	97.4	104.9	92.9	84.8
March	105.4	99.7	108.1	97.2	104.3	101.1	101.8	103.1	104.6	98.6	101.6	108.2	100.8	106.2	94.0	84.0
April	101.2	98.4	101.5	93.1	102.8	100.3	103.4	112.8	96.0	102.0	97.1	104.8	97.8	107.2	79.1	76.8
May	101.1	100.2	97.5	96.3	102.5	101.2	104.2	118.7	95.0	104.4	101.6	102.2	102.5	112.0	96.5	77.7
June	95.8	99.1	94.3	99.9	101.7	102.7	98.8	108.9	89.9	103.4	100.3	100.5	103.2	109.1	95.9	77.7
July	89.7	97.2	93.1	99.3	100.7	99.4	96.4	107.9	93.7	99.5	97.3	100.6	102.7	110.2	94.4	69.3
August	94.8	97.7	96.2	99.1	101.0	100.7	95.8	104.7	103.9	102.7	99.6	101.8	108.0	110.4	95.5	71.5
September	92.8	97.0	94.1	99.9	102.3	103.2	96.8	111.5	99.8	100.1	94.6	102.8	104.4	105.8	95.5	89.6
October	101.0	104.3	102.5	104.1	107.5	106.8	106.3	128.1	101.1	104.7	98.2	107.5	108.2	99.8	102.9	101.6
November	100.1	107.6	101.7	103.3	109.9	105.7	107.6	128.7	93.4	103.7	101.7	109.1	108.6	99.0	104.5	108.7
December	104.8	111.3	102.4	103.0	112.2	104.9	103.2	117.1	92.1	101.0	105.9	109.1	105.8	106.5	105.1	114.0
1926—January	101.6	109.5	102.9	100.2	109.7	95.8	92.0	97.4	95.7	92.2	103.2	109.6	107.0	108.1	91.2	98.5
February	105.4	113.8	105.2	99.4	109.1	100.8	104.3	118.9	100.7	94.8	105.0	109.7	105.1	111.3	89.5	101.0
March	107.4	115.6	106.3	98.9	111.0	101.4	107.0	121.9	99.8	97.6	109.0	113.2	107.4	109.2	94.0	102.0
April	106.5	113.8	100.5	95.6	110.2	101.4	106.2	118.0	90.7	99.4	106.6	112.9	108.8	109.5	87.7	101.1
May	104.2	112.8	95.8	99.4	110.0	101.9	103.2	112.0	87.7	105.3	104.9	109.8	110.6	105.1	87.2	97.6
June	103.6	114.6	92.4	102.0	109.8	103.3	100.8	105.1	92.3	107.9	102.0	110.5	113.9	102.8	92.9	95.7
July	97.9	108.6	85.4	101.6	107.3	98.6	94.0	97.1	97.6	101.6	99.2	106.9	110.0	100.0	89.5	87.8
August	101.0	111.0	90.3	101.2	107.8	103.3	100.7	108.5	105.7	106.9	100.3	108.2	114.4	104.1	88.7	90.3
September	104.4	108.7	96.5	104.2	109.4	104.2	97.2	105.4	105.7	103.9	99.1	110.6	114.7	112.1	93.9	91.6
October	108.9	113.3	102.6	106.0	112.5	106.6	100.7	107.1	105.8	106.0	102.4	114.0	114.9	109.2	98.0	108.7
November	105.6	109.6	99.6	103.4	113.2	104.8	94.0	92.7	98.8	103.5	102.0	113.2	114.6	100.6	97.1	110.4
December	103.7	112.0	103.7	108.3	114.6	101.3	88.6	78.3	97.1	99.3	102.3	113.2	115.7	103.0	95.0	110.8
1927—January	97.2	107.1	103.9	100.1	110.8	91.4	79.5	65.8	98.9	87.1	100.9	111.0	113.3	102.4	82.5	95.8
February	103.3	111.5	109.7	100.0	111.2	93.9	95.9	98.8	105.1	92.8	103.2	114.8	120.0	108.2	85.7	87.7
March	106.0	111.5	110.9	99.3	112.0	95.1	99.0	108.0	102.9	97.6	99.4	118.1	121.2	109.2	87.4	86.7
April	105.3	108.7	104.5	98.3	110.6	93.9	101.0	111.0	96.5	101.2	101.0	116.5	118.5	115.0	84.4	83.5
May	102.6	107.3	101.2	101.1	110.1	96.4	101.6	111.6	93.9	104.1	108.8	109.3	113.2	118.1	90.4	79.9
June	101.2	106.0	100.4	105.2	108.4	96.3	92.1	91.9	95.0	101.9	103.5	110.3	116.6	114.3	93.8	75.0
July	91.7	99.7	97.1	104.1	106.3	92.8	87.4	87.4	100.6	96.2	98.8	104.5	110.8	108.5	92.8	71.9
August	96.5	101.8	101.6	102.6	107.7	96.4	91.6	95.3	108.6	97.7	99.4	105.6	110.5	108.7	86.9	77.8
September	94.9	97.5	105.7	105.1	108.7	97.5	86.9	89.6	106.1	95.9	97.7	106.3	107.6	108.2	98.0	85.6
October	95.7	98.8	107.3	105.4	110.4	98.8	89.8	93.0	99.5	96.3	98.4	107.3	105.9	105.0	99.0	91.8
November	92.6	95.0	102.4	103.8	111.4	96.3	84.1	81.5	87.5	94.0	95.6	105.8	103.7	98.4	98.1	90.3
December	93.4	97.6	104.1	103.3	113.6	92.3	86.8	88.7	88.8	89.9	98.9	107.3	103.5	106.2	94.8	97.0
1928—January	89.9	94.5	101.0	100.3	110.6	83.2	83.4	88.2	95.3	82.5	95.7	104.2	104.0	109.4	85.0	77.3
February	100.3	99.0	105.0	102.0	109.7	87.2	94.1	111.0	101.4	84.3	101.5	106.4	103.5	115.7	85.1	77.7
March	101.6	101.9	104.0	101.3	109.8	89.5	97.9	117.2	99.9	87.3	102.5	108.8	103.4	114.46	86.3	73.6
April	99.7	101.8	95.3	97.5	109.0	80.6	99.4	119.3	86.0	90.5	102.4	108.7	104.2	113.0	80.3	73.3
May	102.1	104.2	92.0	100.2	108.9	90.5	100.9	124.2	82.9	94.0	105.3	103.4	101.6	109.3	84.1	71.1
June	99.6	106.1	90.9	102.5	109.0	91.3	98.5	117.6	87.1	94.0	104.8	102.9	104.2	112.5	89.7	70.2
July	93.8	102.5	85.8	103.1	107.3	88.3	94.8	115.2	94.3	91.0	101.2	102.5	107.1	114.8	84.9	70.2
August	99.8	105.3	90.2	101.5	107.5	91.5	100.4	128.3	100.4	95.1	106.7	103.6	108.6	117.9	88.7	76.3
September	99.1	106.0	94.9	104.3	109.2	93.4	100.1	129.0	99.6	92.8	109.4	106.3	109.3	123.8	92.9	80.7
October	105.1	111.3	101.0	106.0	111.5	95.8	104.7	134.1	95.9	94.1	116.6	109.2	107.8	120.4	95.2	83.4
November	105.1	110.3	96.7	104.9	111.7	94.4	96.1	114.5	80.1	90.7	118.5	108.2	107.1	112.4	94.1	86.2
December	103.3	114.0	100.3	106.3	113.7	90.8	95.8	112.4	86.0	88.4	120.5	108.1	107.2	114.1	94.3	88.4
1929—January	101.3	112.3	97.0	102.2	111.4	83.4	93.6	114.5	90.2	79.0	117.4	106.3	105.3	118.8	76.3	63.8
February	107.2	120.7	108.6	102.5	113.0	86.5	111.4	147.4	94.5	81.0	124.1	111.3	110.2	145.8	82.3	61.5
March	108.5	126.5	108.8	101.2	114.9	88.4	113.9	148.2	91.4	84.8	127.6	113.6	117.1	146.7	84.4	64.0
April	110.5	129.5	108.2	100.4	113.3	90.9	117.0	152.0	87.9	89.3	127.0	117.8	117.1	150.2	86.1	64.7
May	111.6	131.9	99.3	103.1	114.3	92.8	116.0	147.1	88.1	91.8	125.1	113.1	118.9	146.5	86.1	

TABLE 5.—WEIGHT FACTORS USED IN REVISED INDEXES OF FACTORY EMPLOYMENT AND PAY ROLLS

INDUSTRY AND GROUP (Source: U. S. Census of Manufactures—figures for 1923 as revised in 1925)	Employment: 1923		Pay rolls: 1923	
	Average number	Per cent of total	Annual (in thousands of dollars)	Per cent of total
I. IRON AND STEEL AND THEIR PRODUCTS, not including machinery	792,314	9.1	1,200,293	10.9
Iron and steel; steel works and rolling mills, etc.....	533,904	6.1	848,127	7.7
Hardware.....	91,315	1.0	113,175	1.0
Structural iron work.....	51,591	0.6	80,833	0.8
Steam fittings and steam and hot-water heating apparatus; stoves.....	93,928	1.1	133,138	1.2
Cast-iron pipe.....	21,576	0.3	25,020	0.2
II. MACHINERY, not including transportation equipment	868,970	9.9	1,212,259	11.0
Foundry and machine-shop products, including locomotives.....	569,743	6.4	818,956	7.4
Electrical machinery.....	234,892	2.7	305,455	2.8
Machine tools.....	33,373	0.4	47,337	0.4
Agricultural implements.....	30,962	0.4	40,511	0.4
III. TEXTILES AND THEIR PRODUCTS	1,552,240	17.7	1,581,684	14.4
<i>A. Fabrics</i>	<i>1,107,858</i>	<i>12.6</i>	<i>1,059,804</i>	<i>9.6</i>
Cotton goods.....	495,197	5.7	420,645	3.8
<i>Woolen and worsted manufactures</i>	<i>229,769</i>	<i>2.6</i>	<i>271,513</i>	<i>2.4</i>
Woolen and worsted goods.....	194,552	2.2	222,985	2.0
Carpets and rugs.....	35,217	0.4	48,528	0.4
Hosiery and knit goods.....	194,244	2.2	168,272	1.5
Silk manufactures.....	125,234	1.4	126,849	1.2
Dyeing and finishing textiles.....	63,414	0.7	72,525	0.7
<i>B. Wearing apparel</i>	<i>444,382</i>	<i>5.1</i>	<i>521,880</i>	<i>4.8</i>
Clothing, men's.....	194,820	2.3	235,487	2.2
Shirts and collars.....	62,121	0.7	45,903	0.4
Clothing, women's.....	133,195	1.5	176,446	1.6
Millinery.....	54,246	0.6	64,044	0.6
IV. FOOD AND KINDRED PRODUCTS	432,470	4.9	531,212	4.8
Baking.....	162,613	1.8	214,579	1.9
Slaughtering and meat packing.....	132,792	1.5	167,569	1.5
Confectionery.....	63,485	0.7	54,881	0.5
Ice cream.....	23,132	0.3	32,435	0.3
Flour.....	35,194	0.4	41,704	0.4
Sugar refining, cane.....	15,254	0.2	20,044	0.2
V. PAPER AND PRINTING	423,862	4.8	603,494	5.5
Printing, book and job.....	129,890	1.5	201,217	1.8
Printing, newspapers and periodicals.....	116,440	1.3	196,804	1.8
Paper and pulp.....	120,677	1.4	151,477	1.4
Paper boxes.....	56,855	0.6	53,996	0.5
VI. LUMBER AND ITS PRODUCTS	767,029	8.8	813,504	7.4
Lumber, sawmills.....	495,932	5.7	475,962	4.3
Lumber, mill work.....	103,008	1.2	133,329	1.2
Furniture.....	168,089	1.9	204,513	1.9
VII. TRANSPORTATION EQUIPMENT	1,071,193	12.2	1,652,744	15.0
Car building and repairing, steam and electric.....	604,020	6.9	902,147	8.2
Automobiles.....	404,886	4.6	659,877	6.0
Shipbuilding.....	62,287	0.7	90,720	0.8
VIII. LEATHER AND ITS MANUFACTURES	299,917	3.4	339,519	3.1
Boots and shoes.....	240,214	2.7	265,735	2.4
Leather.....	59,703	0.7	73,784	0.7
IX. CEMENT, CLAY, AND GLASS PRODUCTS	247,973	2.8	310,085	2.8
Clay products (brick, tile, and terra cotta; pottery).....	139,547	1.6	170,479	1.5
Glass.....	73,335	0.8	89,898	0.8
Cement.....	35,091	0.4	49,708	0.5
X. METAL PRODUCTS, OTHER THAN IRON AND STEEL	130,298	1.5	175,890	1.6
Stamped and enameled ware.....	35,237	0.4	42,636	0.4
Brass, bronze, and copper.....	95,061	1.1	133,254	1.2
XI. CHEMICALS AND ALLIED PRODUCTS	204,838	2.3	275,994	2.5
Chemicals and drugs.....	119,549	1.3	155,795	1.4
Petroleum refining.....	66,717	0.8	103,834	0.9
Fertilizers.....	18,572	0.2	16,365	0.2
XII. RUBBER PRODUCTS	103,398	1.2	142,294	1.3
Automobile tires and tubes.....	73,963	0.9	108,623	1.0
Rubber boots and shoes.....	29,435	0.3	33,671	0.3
XIII. TOBACCO MANUFACTURES	146,337	1.7	120,462	1.1
Cigars and cigarettes.....	130,036	1.5	107,723	1.0
Chewing and smoking tobacco, and snuff.....	16,301	0.2	12,739	0.1
XIV. MUSICAL INSTRUMENTS (pianos and organs; phonographs)	54,226	0.6	69,554	0.7
XV. ALL OTHER INDUSTRIES	1,673,426	19.1	1,969,994	17.9
Canning and preserving, fruits and vegetables.....	72,534	0.8	57,153	0.5
Industries not elsewhere specified.....	1,600,892	18.3	1,912,841	17.4
TOTAL—ALL INDUSTRIES	8,768,491	100.0	10,999,282	100.0

NATIONAL SUMMARY OF BUSINESS CONDITIONS

Industrial activity increased less in September than is usual at this season. Production during the month continued above the level of a year ago, and for the third quarter of the year it was at a rate approximately 10 per cent above 1928. There was a further decline in building contracts awarded. Bank loans increased between the middle of September and the middle of October, reflecting chiefly growth in loans on securities.

Production.—Output of iron and steel declined further in September, contrary to the seasonal tendency; there was a sharp decrease in output of automobiles and automobile tires, and a smaller than seasonal increase in activity in the textile and shoe industries, which continued to produce at a high rate in comparison with the preceding year. Meat-packing plants were more active than in August. Factories increased the number of their employees during September, and pay rolls were also slightly larger.

Output of coal showed a substantial increase from August, and the average daily production of copper mines was somewhat larger. Iron-ore shipments declined seasonally, and petroleum output was reduced for the first time in several months.

For the first half of October reports indicate a further reduction in steel-plant operations, a continued increase in production of bituminous coal, and some increase in petroleum output following a moderate decrease during September.

Building contracts awarded in September declined seasonally from August and were substantially below the corresponding month in any year since 1924. For the third quarter the volume of contracts was 6 per cent less than a year ago. During the first three weeks of October contracts continued substantially below the level of last year.

October estimates by the Department of Agriculture indicate a cotton crop of 14,915,000 bales, 3 per cent larger than last year; a corn crop of 2,528,000,000 bushels, 11 per cent smaller than the crop of a year ago and 8 per cent below the 5-year average; and a total wheat crop of 792,000,000 bushels, 12 per cent below last year but only slightly under the 5-year average.

Distribution.—Freight-car loadings increased by slightly less than the usual seasonal amount in September and continued to be larger than a year ago. In the first two weeks of October car loadings were smaller than in the corresponding weeks of 1928.

Department-store sales in leading cities increased seasonally during the month of September and were 2 per cent larger than a year ago. For the third quarter as a whole sales of the reporting stores exceeded those of the third quarter of last year by 3 per cent.

Prices.—Wholesale prices showed little change from August to September, according to the index of the Bureau of Labor Statistics. Prices of meats and livestock declined considerably, while prices of grains advanced. The prices of raw silk, cotton, and cotton goods were higher in September, and the price of coal increased, while prices of iron and steel products, tin, gasoline, and cement were lower. During the first three weeks of October prices declined for a considerable number of commodities, including wheat, flour, hides, steel, tin, cotton, silk, and wool.

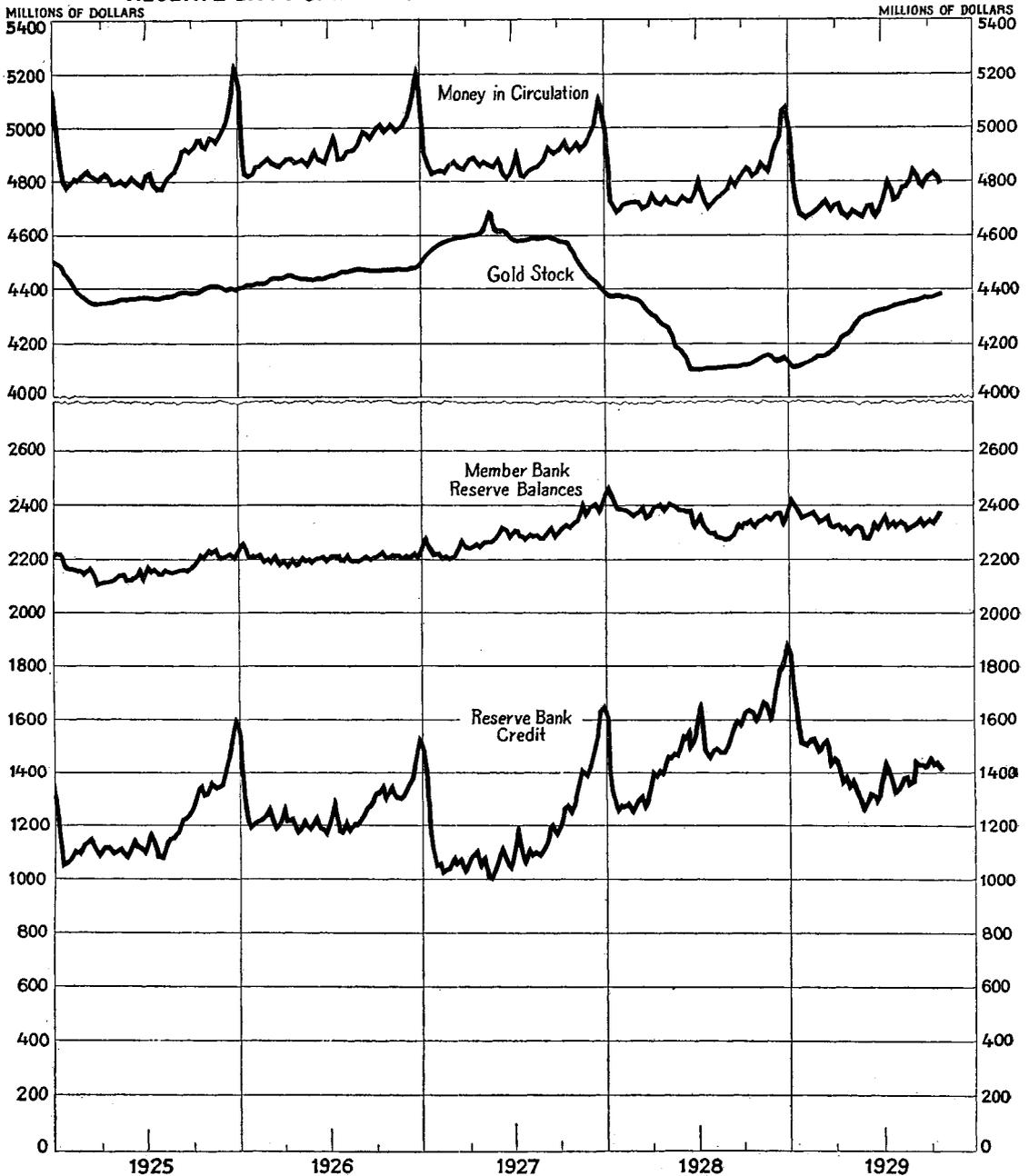
Bank credit.—Between the middle of September and the middle of October there was a slight increase in the volume of loans and investments of member banks in leading cities. The banks' loans on securities increased rapidly, while all other loans, including loans for commercial and agricultural purposes, declined somewhat after reaching a seasonal peak on October 2. Security holdings of the reporting banks continued the decline which has been almost uninterrupted for more than a year.

At the reserve banks there was little change in the volume of credit outstanding during the 4-week period ending October 19. Further increase in the holdings of acceptances by the Federal reserve banks was accompanied by a decline in discounts for member banks, largely at the Federal Reserve Bank of New York.

Open-market rates on bankers' acceptances and on prime commercial paper were unchanged during the last half of September and the first three weeks of October. On October 23 rates on bankers' acceptances declined by one-eighth of 1 per cent to a 5 per cent level for the principal maturities. Rates on demand and time loans on securities declined during the first half of October.

RESERVE BANK CREDIT

RESERVE BANK CREDIT OUTSTANDING AND PRINCIPAL FACTORS IN CHANGES



Based on weekly averages of daily figures; latest figures are for week ending October 26

RESERVE BANK CREDIT OUTSTANDING AND FACTORS IN CHANGES

[Averages of daily figures. In millions of dollars]

Month or week	Reserve bank credit outstanding				Factors of decrease ¹		Factors of increase ¹		
	Bills dis- counted	Bills bought	United States securities	Total ²	Monetary gold stock	Treasury currency outstanding	Money in circulation	Member bank reserve balances	Other factors ³
1928—August.....	1,061	178	210	1,485	4,118	1,774	4,743	2,274	360
September.....	1,064	226	240	1,581	4,125	1,787	4,804	2,314	375
October.....	975	368	237	1,621	4,133	1,786	4,836	2,352	372
November.....	897	471	238	1,653	4,151	1,787	4,860	2,352	379
December.....	1,013	483	263	1,824	4,142	1,790	5,008	2,367	381
1929—January.....	859	473	229	1,570	4,115	1,789	4,748	2,387	382
February.....	889	385	184	1,468	4,143	1,784	4,686	2,357	384
March.....	969	265	197	1,442	4,166	1,791	4,709	2,337	392
April.....	1,004	156	165	1,377	4,226	1,785	4,679	2,308	401
May.....	956	145	153	1,303	4,292	1,787	4,684	2,296	402
June.....	978	99	179	1,317	4,311	1,779	4,687	2,314	406
July.....	1,096	75	147	1,380	4,335	1,790	4,764	2,354	407
August.....	1,043	124	155	1,376	4,351	1,781	4,777	2,322	409
September.....	969	229	165	1,427	4,368	1,766	4,811	2,355	415
October.....	885	337	154	1,450	4,381	1,785	4,810	2,386	420
Week ending—									
Sept. 28.....	935	262	157	1,412	4,375	1,737	4,782	2,327	415
Oct. 5.....	928	302	148	1,454	4,374	1,753	4,814	2,350	417
Oct. 12.....	895	322	138	1,422	4,376	1,783	4,822	2,339	420
Oct. 19.....	860	349	133	1,429	4,380	1,790	4,818	2,358	423
Oct. 26.....	843	355	140	1,409	4,386	1,793	4,791	2,378	419

¹ For explanation see July BULLETIN, pp. 432-438.

² Includes "other securities," amounts due from foreign banks, and reserve bank float; for explanation see July BULLETIN.

³ Nonmember clearing balances held in Federal reserve banks and unexpended capital funds of Federal reserve banks.

ANALYSIS OF CHANGES IN MONETARY GOLD STOCK

[End of month basis. In millions of dollars]

Month	Gold stock at end of month	Increase (+) or decrease (-) during month			
		Total	Through net gold import or export	Through ear-marking operations	Through domestic production, etc. ¹
1927—October.....	4,541	-30.1	-8.6	-25.0	+3.4
November.....	4,451	-89.7	-53.2	-40.0	+3.5
December.....	4,379	-71.7	-67.4	-8.5	+4.2
Total (12 mos.).....		-112.7	+6.2	-160.1	+41.2
1928—January.....	4,373	-6.0	-13.8	+5.5	+2.3
February.....	4,362	-11.2	-11.1	+2.9	-3.0
March.....	4,305	-57.6	-94.9	+35.8	+1.5
April.....	4,266	-38.7	-91.2	+45.7	+6.8
May.....	4,160	-105.7	-81.7	-26.5	+2.5
June.....	4,109	-51.0	-79.9	+30.1	-1.2
July.....	4,113	+3.4	-63.9	+60.9	+6.4
August.....	4,123	+10.3	+7	+5.9	+3.7
September.....	4,125	+2.1	+6	-1.2	+2.8
October.....	4,142	+17.3	+13.3	+1.2	+2.8
November.....	4,128	-14.0	+6.7	-25.0	+4.3
December.....	4,141	+13.2	+23.3	-15.7	+5.6
Total (12 mos.).....		-237.9	-392.0	+119.6	+34.5
1929—January.....	4,127	-14.4	+47.1	-65.0	+3.5
February.....	4,153	+26.4	+25.5		+0.9
March.....	4,188	+34.4	+24.8	+7.5	+2.1
April.....	4,260	+72.4	+23.1	+43.6	+0.7
May.....	4,301	+40.6	+23.6	+16.1	+0.9
June.....	4,324	+23.4	+30.2	-7.5	+0.7
July.....	4,341	+16.3	+34.7	-22.0	+3.6
August.....	4,360	+18.9	+18.4	-1.0	+1.5
September.....	4,372	+12.1	+17.6	-6.6	+1.1
October.....	4,386	+14.0	+11.2	-4.5	+7.3

¹ For detailed explanation of this figure, which is derived from preceding columns, see BULLETIN for December, 1928, p. 831.

² Preliminary.

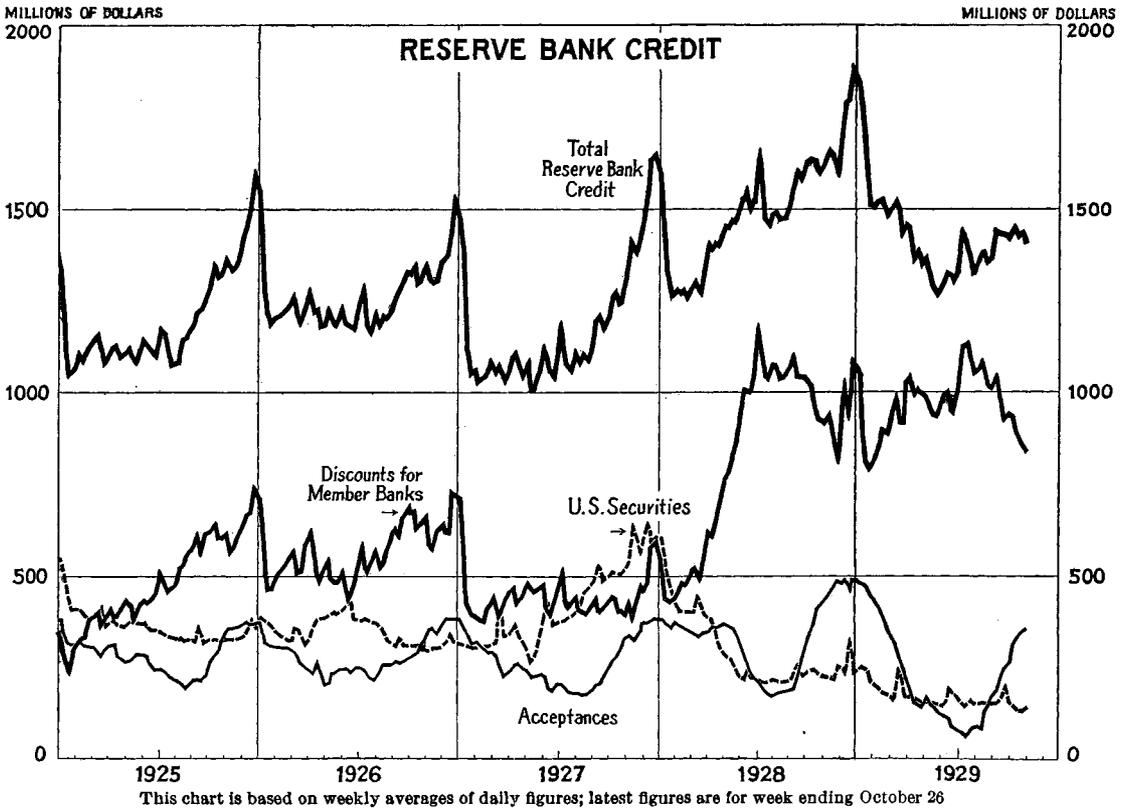
GOLD MOVEMENTS TO AND FROM UNITED STATES

[In thousands of dollars]

From or to—	1929					
	October ¹		September		January-September	
	Im-ports	Ex-ports	Im-ports	Ex-ports	Im-ports	Ex-ports
England.....	1,009		8,054		61,380	3
France.....		3,000	1		75	686
Germany.....					46,761	
Italy.....					5	
Netherlands.....					5	
Canada.....			2,841	56	65,327	279
Central America.....			94	250	662	950
Mexico.....		390	383	734	6,588	2,160
West Indies.....			6		330	33
Argentina.....	6,575		2,500		61,807	
Chile.....			23		396	
Colombia.....	2,492		589		1,469	
Ecuador.....			1		1,027	
Peru.....			132		1,368	
Uruguay.....						
Venezuela.....			96		276	1,600
British India.....						74
China and Hong Kong.....					235	2,431
Dutch East Indies.....		210	187		899	1,010
Japan.....						124
Philippine Islands.....			288		2,097	
New Zealand.....			13		660	
All other countries.....	24,900	141	3,574	165	3,720	593
Total.....	14,976	3,741	18,781	1,205	255,085	9,942

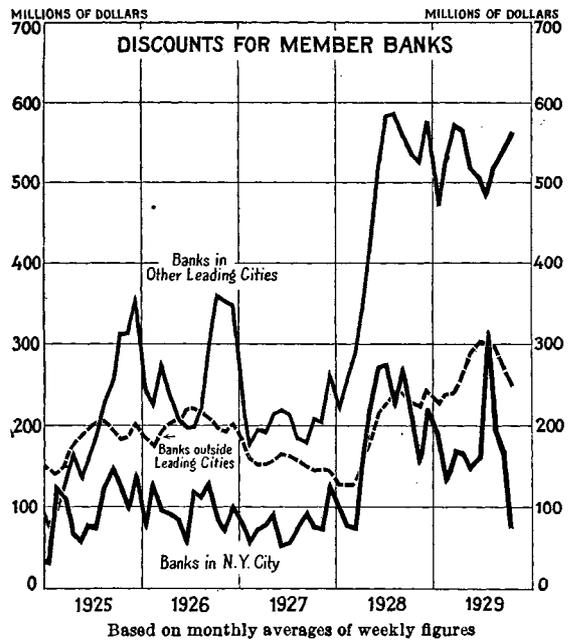
¹ October figures are preliminary; ³ customs districts—New York, St. Lawrence, and San Francisco.

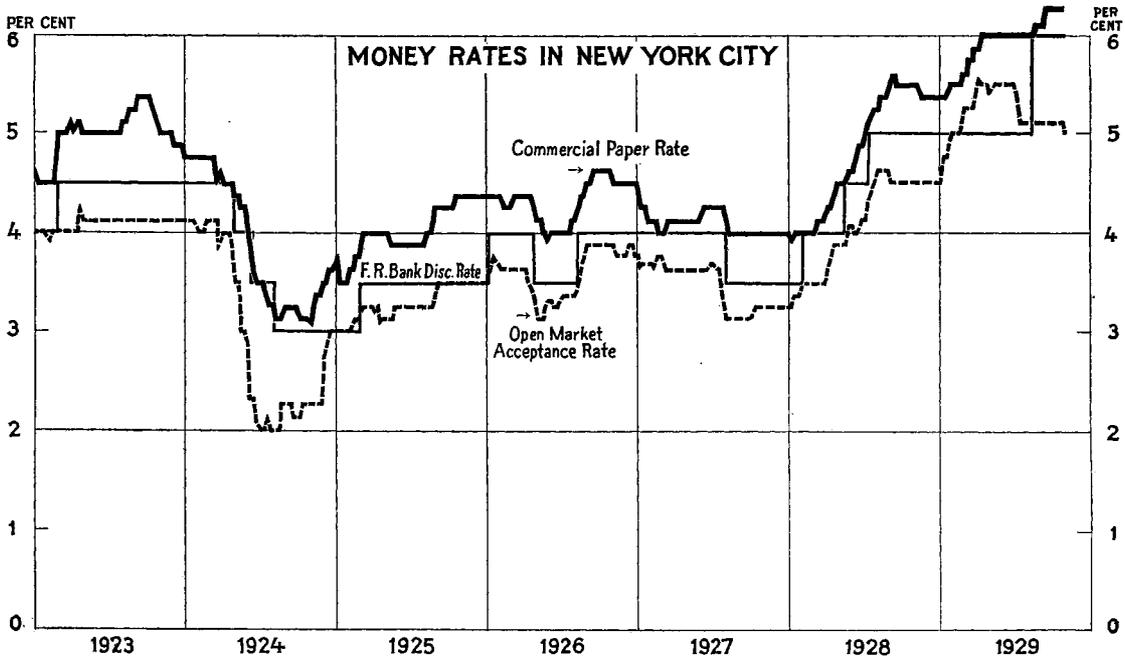
² Includes all movements of unreported origin or destination.



DISCOUNTS WITH FEDERAL RESERVE BANKS
 [Monthly averages of weekly figures. In millions of dollars]

Month	Total dis- counts	Reporting member banks in leading cities				All other dis- counts
		Total	New York City	Other leading cities		
				Total	Chi- cago	
1928—January.....	439	314	94	220	23	125
February.....	463	338	78	260	13	125
March.....	489	362	76	287	25	127
April.....	637	488	145	343	35	149
May.....	826	644	222	422	49	182
June.....	1,012	796	271	525	61	216
July.....	1,079	854	274	580	80	225
August.....	1,045	806	223	583	80	239
September.....	1,063	822	266	556	41	241
October.....	960	736	202	534	58	224
November.....	901	681	157	524	67	220
December.....	1,039	799	221	578	91	240
1929—January.....	891	663	190	473	71	228
February.....	893	659	131	528	96	234
March.....	978	740	166	574	121	238
April.....	991	725	162	563	46	266
May.....	951	661	145	516	36	290
June.....	972	670	165	505	64	302
July.....	1,100	801	319	482	47	299
August.....	1,013	717	196	521	32	296
September.....	974	706	168	540	18	268
October.....	885	634	74	560	38	251





FEDERAL RESERVE BANK RATES

DISCOUNT RATES

[Rates on all classes and maturities of eligible paper]

Federal reserve bank	Rate in effect on Nov. 1	Date established	Previous rate
Boston.....	5	July 19, 1928.....	4½
New York.....	5	Nov. 1, 1929.....	6
Philadelphia.....	5	July 26, 1928.....	4½
Cleveland.....	5	Aug. 1, 1928.....	4½
Richmond.....	5	July 13, 1928.....	4½
Atlanta.....	5	July 14, 1928.....	4½
Chicago.....	5	July 11, 1928.....	4½
St. Louis.....	5	July 19, 1928.....	4½
Minneapolis.....	5	May 14, 1929.....	4½
Kansas City.....	5	May 6, 1929.....	4½
Dallas.....	5	Mar. 2, 1929.....	4½
San Francisco.....	5	May 20, 1929.....	4½

BUYING RATES ON ACCEPTANCES

[Buying rates at the Federal Reserve Bank of New York]

Maturity	Rate in effect on Nov. 1	Date established	Previous rate
1-15 days.....	4¾	Nov. 1, 1929.....	1 5
16-30 days.....	4¾	.....do.....	1 5
31-45 days.....	4¾	.....do.....	1 5
46-60 days.....	4¾	.....do.....	1 5
61-90 days.....	4¾	.....do.....	1 5
91-120 days.....	4¾	.....do.....	5½
121-180 days.....	5	.....do.....	5½

1 Reduced from 5½ to 5 per cent on Oct 25.

NOTE.—Rates on prime bankers' acceptances. Higher rates may be charged for other classes of bills.

OPEN-MARKET RATES

RATES IN NEW YORK CITY

Month or week	Prevailing rate on—			Average rate on—		Average yield on—	
	Prime commercial paper, 4 to 6 months	Prime bankers' acceptances, 90 days	Time loans, 90 days ¹	Call loans ¹		U. S. Treasury notes and certificates, 3 to 6 months	Treasury bonds ²
				New	Re-newal		
1928							
October.....	5¼	4½	7 - 7¼	7.12	6.98	4.70	3.55
November.....	5¼-5½	4½	6½-7	6.86	6.67	4.26	3.48
December.....	5¼-5½	4½	7 - 7¼	8.86	8.60	4.26	3.53
1929							
January.....	5¼-5½	4¾-5	7¾	6.94	7.05	4.66	3.59
February.....	5½	5 - 5¼	7½-7¾	7.47	7.06	4.39	3.66
March.....	5¼-6	5¼-5½	7¾-8	9.80	9.10	4.60	3.78
April.....	6	5½	8½-9	9.46	8.89	4.80	3.67
May.....	6	5½	8½-9	8.79	8.91	5.09	3.67
June.....	6	5½	8 - 8¼	7.83	7.70	4.80	3.71
July.....	6	5½	7½-8	9.41	9.23	4.55	3.68
August.....	6 - 6¼	5½	8½-9	8.15	8.23	4.70	3.72
September.....	6¼	5½	8¾-9	8.62	8.50	4.58	3.70
October.....	6¼	5½	7 - 9	6.10	6.43	4.37	3.67
Week ending—							
Oct. 5.....	6¼	5½	9 - 9¼	8.08	8.20	4.65	3.73
Oct. 12.....	6¼	5½	8½-8¾	5.63	6.20	4.62	3.72
Oct. 19.....	6¼	5½	7¾	6.28	6.40	4.44	3.65
Oct. 26.....	6¼	4¾-5½	7 - 7½	5.35	6.00	4.18	3.56

¹ Stock exchange call loans; new and renewal rates.

² Stock exchange 90-day time loans.

³ 3 issues—3¾, 4, and 4¼ per cent; yields calculated on basis of last redemption dates—1956, 1954, and 1952.

* Change of issues on which yield is computed

† Revised.

PREVAILING RATES CHARGED CUSTOMERS BY BANKS IN PRINCIPAL CITIES

The rates shown are those at which the bulk of the loans of each class were made by representative banks during the week ending with the 15th of the month. Rates reported by about 200 banks with loans exceeding \$7,500,000,000.

FEDERAL RESERVE BANK CITIES

Month	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Prime commercial loans												
1928—October.....	5½-6	5½	5½-5¾	5½-6	5½-6	5½-6	5¼-5¾	5½-5¾	5½-5¾	5½-6	5½-6	4½-5¼
November.....	5½-6	5¼-5½	5½-6	5½-6	5½-6	5½-6	5¼-5¾	5½-5¾	5½-6	5½-6	5½-6	4½-5¼
December.....	5½-6	5½	5½-6	5¼-6	5½-6	5½-6	5¼-6	5½-6	5½-6	5½-6	5½-6	4½-5¼
1929—January.....	5½-6	5½	5½-5¾	5½-6	5½-6	5½-6	5½-6	5½-6	5½-5¾	5½-6	5½-6½	5½-6
February.....	5½	5½	5½	5½-6	5½-5¾	5½-6½	5½-6	5½-6	5½-6	5½-6	5½-6	5½-6
March.....	5½-5¾	5½-5¾	5½-6	5½-6	5½	5½-6½	5½-6	5½-6	5½-6	5½-6	5½-7	5½-6
April.....	5½-5¾	5¾	5½-6	5½-6	5½-5¾	5½-6	5½-6	5¾-6	5¾-6¼	5½-6	6	5½-6
May.....	5¾-6	5¾-6	5½-6	5½-6	5¾-6	5½-6½	5½-6	5¾-6	5¾-6¼	5½-6	6	5½-6
June.....	5¾-6	5¾-6	5½-6	5¾-6	5¾-6	5½-6½	5½-6	5¾-6	5¾-6¼	5½-6	6	5½-6
July.....	5¾	5¾-6	5½-6	5½-6	5¾-6	5½-6½	5½-6	5¾-6	5¾-6¼	5½-6	6	5½-6
August.....	5¾-6	6	5¾-6	5¾-6	5¾-6	5½-7	5¾-6	5¾-6	5¾-6	5½-6	6	5½-6
September.....	6	6	5¾-6	5¾-6	5¾-6	6	5¾-6¼	6	6	5¾-6	6	5¾-6
October.....	5¾-6	6	5¾-6	5¾-6	5¾-6	6	5¾-6½	6	6	5¾-6	6	5¾-6
Loans secured by prime stock-exchange collateral												
1929—April.....	6	6	5¾-6	5¾-6	6	6	5¾-7	6	6	5½-6	6	6
May.....	6	6	5¾-6	5¾-6	6	6	5¾-7	6	6	5½-6	6	6
June.....	6	6	5¾-6	6	6	6	6	6	6	5½-6	6	6
July.....	6	6	6	5½-7	6	6	6	6	6	5½-6	6	6
August.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
September.....	6½-7	6	6	6	6	6	6	6	6	6	6	6
October.....	6	6	6	6	6	6	6	6	6	6	6	6
Loans secured by warehouse receipts												
1929—April.....	6	6	6	6	6	6	5¾-6½	5¾-6	5¾-6	5½-6	6	6
May.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
June.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
July.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
August.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
September.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
October.....	6	6	6	6	6	6	6	6	6	5½-6	6	6
Interbank loans												
1929—April.....	5½-6	5½-6	5½-5¾	5½-6	5¾	5½-6	5¾-6	5½-6	5¾-6	5½-6	5½-6	5
May.....	5½-6	5¾-6	5¾	5½-6	5¾	5½-6½	5¾-6	5¾-6	6	6	5½-6	5
June.....	5½-6	5¾-6	5¾	5½-6	5¾-6	5½-6½	6	5¾-6	6	6	5½-6	5½
July.....	5½-6	5¾-6	5¾	5½-6	6	5½-6½	5½-6	5¾-6	6	6	5½-6	5½
August.....	6	6	5¾-6	5½-6	5¾-6	6	5¾-6	6	6	6	6	5½
September.....	6	6	5½-6	6	5¾-6	6	6	6	6	6	6	5½
October.....	6	6	5½-6	5½-6	5¾-6	6	5¾-6	6	6	6	6	5½

FEDERAL RESERVE BRANCH CITIES

City	Prime commercial loans			Loans secured by prime stock-exchange collateral			Loans secured by warehouse receipts			Interbank loans		
	August, 1929	September, 1929	October, 1929	August, 1929	September, 1929	October, 1929	August, 1929	September, 1929	October, 1929	August, 1929	September, 1929	October, 1929
Buffalo.....	6	6	6	6	6	6	6	6	6	6	6	6
Cincinnati.....	6	6	6	6½-8	6	6	6	6	6½-7	5¾-7	5¾-7	6
Pittsburgh.....	5¾-6	5¾-6	5¾-6	5¾-6	6	6	6	6	6	5¾-6	6	6
Baltimore.....	5¾-6	5½-6	5½-6	6	6	6	6	6	6	5½-6	6	5½-6
Charlotte.....	6	6	6	6	6	6	6	6	6	6	6	6
Birmingham.....	6	6	6	6	6	6	6	6	6	6	6	6
Jacksonville.....	6	6	6	6	6	6	6	6	6	6	6	6
Nashville.....	6	6	6	6	6	6	6	6	6	6	6	6
New Orleans.....	6	6	6	6	6	6	6	6	6	6	6	6
Detroit.....	6	6	6	6	6	6	6	6	6	6	6	6
Little Rock.....	6	6	6	6	6	6	6	6	6	6	6	6
Louisville.....	6	6	6	6	6	6	6	6	6	6	6	6
Helena.....	8	8	8	8	8	8	7	7	7	6	6	6
Denver.....	6	6	6	6	6	6	6	6	6	6	6	6
Oklahoma City.....	6	6	6	6	6	6	6	6	6	6	6	6
Omaha.....	6	6	6	6	6	6	6	6	6	6	6	6
El Paso.....	6	6	6	6	6	6	6	6	6	6	6	6
Houston.....	6	6	6	6	6	6	6	6	6	6	6	6
San Antonio.....	6	6	6	6	6	6	6	6	6	6	6	6
Los Angeles.....	6	6	6	6	6	6	6	6	6	6	6	6
Portland.....	6	6	6	6	6	6	6	6	6	6	6	6
Salt Lake City.....	6	6	6	6	6	6	6	6	6	6	6	6
Seattle.....	6	6	6	6	6	6	6	6	6	6	6	6
Spokane.....	6½-7	6	6	6	6	6	7	7	7	6	6	6

MEMBER BANK CREDIT

REPORTING MEMBER BANKS (REVISED SERIES)

[In millions of dollars. Monthly data are averages of weekly figures]

Date	Loans and investments					Bor- row- ings at Fed- eral re- serve banks	Month	Loans and investments					Bor- row- ings at Fed- eral re- serve banks
	Total	Loans			Total in- vest- ments			Total	Loans			Total in- vest- ments	
		Total	On securi- ties	All other					Total	On securi- ties	All other		
Total:							Total:						
Aug. 7	22,581	17,044	7,715	9,329	5,537	770	1928—September	21,871	15,898	6,840	9,059	5,973	822
Aug. 14	22,450	16,943	7,573	9,370	5,507	726	October	21,938	16,003	6,874	9,130	5,934	736
Aug. 21	22,423	16,938	7,510	9,428	5,485	687	November	21,983	16,096	7,082	9,014	5,888	631
Aug. 28	22,405	16,950	7,515	9,434	5,456	635	December	22,189	16,253	7,198	9,055	5,936	799
Sept. 4	22,591	17,150	7,632	9,518	5,441	761	1929—January	22,320	16,300	7,504	8,796	6,021	663
Sept. 11	22,570	17,142	7,578	9,564	5,429	702	February	22,263	16,260	7,522	8,737	6,004	659
Sept. 18	22,742	17,254	7,686	9,567	5,489	673	March	22,472	16,491	7,580	8,911	5,981	740
Sept. 25	22,682	17,244	7,720	9,524	5,438	688	April	22,388	16,464	7,392	9,073	5,924	725
Oct. 2	22,829	17,428	7,828	9,600	5,401	672	May	22,113	16,277	7,218	9,059	5,837	661
Oct. 9	22,673	17,269	7,687	9,582	5,403	612	June	22,231	16,480	7,332	9,149	5,751	670
Oct. 16	22,794	17,397	7,875	9,522	5,397	605	July	22,479	16,950	7,716	9,234	5,529	801
Oct. 23	22,895	17,500	7,920	9,580	5,395	554	August	22,465	16,969	7,578	9,390	5,496	717
Oct. 30	24,431	18,934	9,179	9,755	5,496	729	September	22,646	17,197	7,654	9,543	5,449	706
							October	23,124	17,706	8,008	9,608	5,418	634
New York City:							New York City:						
Aug. 7	7,512	5,775	2,961	2,813	1,737	295	1928—September	7,022	5,221	2,544	2,678	1,801	266
Aug. 14	7,381	5,653	2,822	2,830	1,728	191	October	7,013	5,209	2,559	2,650	1,803	202
Aug. 21	7,354	5,637	2,775	2,862	1,717	144	November	7,056	5,255	2,694	2,562	1,800	157
Aug. 28	7,383	5,686	2,819	2,867	1,697	153	December	7,152	5,339	2,747	2,592	1,812	221
Sept. 4	7,546	5,853	2,944	2,908	1,693	217	1929—January	7,262	5,378	2,904	2,473	1,884	190
Sept. 11	7,467	5,770	2,846	2,924	1,697	159	February	7,190	5,306	2,820	2,486	1,885	131
Sept. 18	7,542	5,814	2,894	2,920	1,729	142	March	7,296	5,424	2,823	2,601	1,872	166
Sept. 25	7,474	5,777	2,883	2,894	1,697	147	April	7,297	5,437	2,729	2,708	1,859	162
Oct. 2	7,563	5,876	2,947	2,929	1,687	63	May	7,182	5,344	2,653	2,691	1,838	145
Oct. 9	7,464	5,756	2,836	2,921	1,708	46	June	7,281	5,468	2,749	2,719	1,812	165
Oct. 16	7,526	5,817	2,964	2,853	1,709	49	July	7,496	5,804	3,045	2,758	1,692	319
Oct. 23	7,619	5,899	3,005	2,894	1,721	41	August	7,407	5,688	2,845	2,843	1,720	196
Oct. 30	9,010	7,191	4,205	2,986	1,819	170	September	7,507	5,803	2,892	2,911	1,704	166
							October	7,837	6,108	3,191	2,916	1,729	74
Other leading cities:							Other leading cities:						
Aug. 7	15,070	11,269	4,754	6,515	3,800	475	1928—September	14,849	10,677	4,296	6,381	4,172	556
Aug. 14	15,070	11,290	4,750	6,540	3,779	535	October	14,925	10,794	4,314	6,480	4,131	534
Aug. 21	15,069	11,301	4,735	6,566	3,768	543	November	14,928	10,840	4,388	6,452	4,087	524
Aug. 28	15,022	11,263	4,696	6,567	3,758	532	December	15,037	10,913	4,450	6,463	4,124	578
Sept. 4	15,045	11,297	4,688	6,609	3,748	544	1929—January	15,058	10,922	4,600	6,323	4,136	473
Sept. 11	15,103	11,372	4,732	6,641	3,731	542	February	15,073	10,954	4,702	6,251	4,119	528
Sept. 18	15,200	11,440	4,792	6,648	3,760	531	March	15,176	11,067	4,756	6,310	4,109	574
Sept. 25	15,208	11,467	4,838	6,629	3,741	540	April	15,092	11,027	4,667	6,360	4,065	563
Oct. 2	15,265	11,552	4,878	6,673	3,713	609	May	14,931	10,933	4,565	6,368	3,998	616
Oct. 9	15,209	11,513	4,852	6,662	3,696	566	June	14,950	11,012	4,582	6,430	3,938	505
Oct. 16	15,267	11,579	4,910	6,669	3,688	563	July	14,984	11,146	4,670	6,476	3,837	482
Oct. 23	15,276	11,602	4,915	6,686	3,674	513	August	15,058	11,281	4,735	6,546	3,776	521
Oct. 30	18,420	11,743	4,973	6,770	3,677	560	September	15,139	11,394	4,762	6,632	3,745	540
							October	15,288	11,598	4,906	6,692	3,690	561
City of Chicago:							City of Chicago:						
Aug. 7	2,078	1,664	963	701	414	29	1928—September	2,034	1,572	850	722	462	41
Aug. 14	2,068	1,662	948	714	406	43	October	2,061	1,604	854	751	456	58
Aug. 21	2,063	1,661	936	725	403	33	November	2,063	1,604	869	735	459	67
Aug. 28	2,046	1,650	925	725	396	23	December	2,083	1,632	889	743	452	91
Sept. 4	2,037	1,643	910	733	394	1	1929—January	2,065	1,613	887	726	452	71
Sept. 11	2,050	1,661	929	732	389	11	February	2,096	1,641	911	731	455	96
Sept. 18	2,048	1,662	929	733	386	37	March	2,130	1,676	950	726	454	121
Sept. 25	2,079	1,686	964	732	393	23	April	2,045	1,606	905	701	440	46
Oct. 2	2,105	1,717	981	735	388	66	May	2,015	1,596	897	698	419	36
Oct. 9	2,083	1,695	964	730	388	45	June	2,033	1,616	910	706	417	64
Oct. 16	2,119	1,735	1,008	727	385	72	July	2,015	1,601	906	695	414	47
Oct. 23	2,117	1,733	1,004	729	384	4	August	2,064	1,659	943	716	405	32
Oct. 30	2,173	1,786	1,034	752	387	1	September	2,054	1,663	933	730	391	18
							October	2,119	1,733	998	735	386	38

BANKERS' BALANCES

[Monthly averages of weekly figures for reporting member banks in leading cities. In millions of dollars]

Month	Due to banks					
	Total		New York City		Other leading cities	
	1928	1929	1928	1929	1928	1929
January	3,484	3,074	1,137	1,012	2,347	2,062
February	3,374	2,918	1,098	949	2,276	1,969
March	3,292	2,861	1,089	916	2,203	1,945
April	3,207	2,709	1,053	874	2,154	1,835
May	3,064	2,545	1,020	817	2,044	1,728
June	2,897	2,532	933	796	1,964	1,736
July	2,936	2,738	957	935	1,979	1,803
August	2,801	2,604	901	827	1,900	1,777
September	2,948	2,718	934	887	2,014	1,830
October	3,073	2,916	992	1,023	2,081	1,833
November	3,040	2,851	981	956	2,059	1,803
December	3,011	2,811	956	911	2,055	1,798

ACCEPTANCES AND COMMERCIAL PAPER

[Amounts outstanding in millions of dollars. Figures for acceptances as compiled by American Acceptance Council; for commercial paper as reported by about 25 dealers]

End of month	Bankers' acceptances outstanding						Commercial paper outstanding		
	1927			1928			1927	1928	1929
	1927	1928	1929	1927	1928	1929	1927	1928	1929
January	774	1,058	1,279	551	577	407	551	577	407
February	785	1,056	1,228	577	567	411	577	567	411
March	809	1,085	1,205	606	570	387	606	570	387
April	811	1,071	1,111	599	571	351	599	571	351
May	775	1,041	1,107	582	541	304	582	541	304
June	751	1,026	1,113	579	503	274	579	503	274
July	741	978	1,127	569	483	265	569	483	265
August	782	952	1,201	591	458	267	591	458	267
September	864	1,004	1,272	600	430	265	600	430	265
October	975	1,123	1,200	611	427	265	611	427	265
November	1,029	1,200	1,200	603	421	265	603	421	265
December	1,081	1,284	1,284	555	383	265	555	383	265

BROKERS' LOANS

BROKERS' BORROWINGS ON COLLATERAL IN NEW YORK CITY REPORTED BY THE NEW YORK STOCK EXCHANGE
 [Net borrowings on demand and on time. In millions of dollars]

End of month	Total				From New York banks and trust companies				From private banks, brokers, foreign banking agencies, etc.							
	1926		1927		1928		1929		1926		1927		1928		1929	
	1926	1927	1928	1929	1926	1927	1928	1929	1926	1927	1928	1929	1926	1927	1928	1929
January	3,513	3,139	4,420	6,735	3,043	2,670	3,805	5,664	470	469	615	1,071	470	469	615	1,071
February	3,536	3,256	4,323	6,679	3,080	2,757	3,737	5,619	455	499	585	1,080	455	499	585	1,080
March	3,000	3,290	4,640	6,804	2,553	2,790	3,947	5,713	447	500	693	1,091	447	500	693	1,091
April	2,836	3,341	4,908	6,775	2,468	2,865	4,246	5,580	367	476	662	1,194	367	476	662	1,194
May	2,767	3,458	5,274	6,665	2,392	2,968	4,568	5,482	375	490	707	1,183	375	490	707	1,183
June	2,926	3,569	4,898	7,071	2,509	3,065	4,169	5,797	417	504	730	1,275	417	504	730	1,275
July	2,998	3,642	4,837	7,474	2,583	3,145	4,150	6,154	415	497	687	1,320	415	497	687	1,320
August	3,142	3,674	5,051	7,882	2,698	3,170	4,260	6,492	444	504	791	1,390	444	504	791	1,390
September	3,219	3,915	5,514	8,549	2,745	3,340	4,647	7,077	474	575	866	1,472	474	575	866	1,472
October	3,111	3,946	5,880	6,109	2,668	3,363	4,994	5,313	444	583	886	76	444	583	886	76
November	3,129	4,092	6,392	6,392	2,636	3,519	5,412	5,412	493	573	979	66	493	573	979	66
December	3,293	4,433	6,440	6,440	2,804	3,812	5,401	5,401	489	621	1,039	66	489	621	1,039	66

¹ Call loans, \$5,238,000,000; time loans, \$871,000,000.

LOANS TO BROKERS AND DEALERS IN SECURITIES MADE BY REPORTING MEMBER BANKS IN NEW YORK CITY
 [In millions of dollars. Monthly data are averages of weekly figures]

Date or month	Total		For banks						For others	
	1928	1929	Total		In New York City ¹		Outside New York City ¹		1928	1929
			1928	1929	1928	1929	1928	1929		
Date: ¹										
Aug. 7	4,274	6,020	2,388	2,878	860	1,089	1,528	1,789	1,885	3,143
Aug. 14	4,223	5,952	2,342	2,775	783	965	1,559	1,810	1,881	3,178
Aug. 21	4,201	6,085	2,322	2,713	809	926	1,513	1,787	1,880	3,372
Aug. 28	4,235	6,217	2,328	2,749	793	992	1,535	1,756	1,907	3,468
Sept. 4	4,289	6,354	2,429	2,888	907	1,103	1,522	1,784	1,861	3,467
Sept. 11	4,385	6,474	2,464	2,858	865	1,017	1,599	1,841	1,921	3,616
Sept. 18	4,470	6,569	2,559	2,944	925	1,046	1,634	1,897	1,911	3,626
Sept. 25	4,525	6,761	2,524	2,900	850	1,024	1,674	1,876	2,001	3,860
Oct. 2	4,570	6,804	2,612	2,897	930	1,071	1,682	1,826	1,958	3,907
Oct. 9	4,590	6,713	2,582	2,772	867	973	1,715	1,799	2,008	3,941
Oct. 16	4,664	6,801	2,623	2,926	890	1,095	1,733	1,831	2,041	3,875
Oct. 23	4,772	6,634	2,604	2,810	957	1,077	1,737	1,733	2,078	3,823
Oct. 30	4,907	5,538	2,753	3,074	1,021	2,069	1,732	1,005	2,154	2,464
Month:										
January	3,802	5,408	2,812	2,974	1,342	1,173	1,470	1,801	990	2,434
February	3,784	5,555	2,667	2,899	1,167	1,082	1,500	1,817	1,117	2,656
March	3,761	5,679	2,514	2,800	1,064	1,071	1,450	1,729	1,247	2,879
April	4,062	5,477	2,809	2,583	1,193	934	1,616	1,649	1,252	2,893
May	4,414	5,491	2,900	2,526	1,272	861	1,628	1,665	1,514	2,965
June	4,360	5,383	2,616	2,443	1,048	895	1,568	1,548	1,744	2,940
July	4,232	5,811	2,472	2,849	929	1,198	1,543	1,651	1,760	2,992
August	4,239	6,069	2,357	2,778	835	993	1,522	1,786	1,881	3,290
September	4,417	6,540	2,494	2,898	887	1,048	1,607	1,850	1,924	3,642
October	4,701	6,498	2,653	2,896	933	1,257	1,720	1,639	2,048	3,602
November	5,102	5,102	2,854	2,854	1,105	1,105	1,749	1,749	2,248	2,248
December	5,193	5,193	2,874	2,874	1,114	1,114	1,760	1,760	2,319	2,319

¹ Dates for 1929; corresponding dates for 1928 are slightly later.
² Weekly reporting member banks in New York City.

¹ Member and nonmember banks outside New York City (domestic banks only); includes unknown amount for customers of these banks.
² Call loans, \$6,082,000,000; time loans, \$416,000,000.

COMMODITY PRICES, SECURITY PRICES, AND SECURITY ISSUES

WHOLESALE PRICES, BY COMMODITY GROUPS¹
[1926=100]

Month	All commodities	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	Nonagri-cultural commodities
1928—August	98.9	107.0	104.1	121.0	96.3	84.6	100.4	94.6	94.7	97.2	79.3	96.7
September	100.1	108.8	106.9	120.7	95.6	85.1	100.5	94.7	95.1	97.2	79.7	97.8
October	97.8	103.5	102.3	117.5	96.1	84.9	101.0	95.0	95.6	96.5	80.3	96.4
November	96.7	101.6	100.1	115.5	96.1	84.4	101.7	96.0	96.0	96.4	80.0	95.4
December	96.7	103.6	98.0	115.7	96.1	83.5	102.9	96.8	96.1	96.4	80.1	94.8
1929—January	97.2	105.9	98.8	113.6	96.4	82.5	103.6	96.6	95.9	96.6	80.5	94.9
February	96.7	105.4	98.1	109.0	96.1	81.3	104.4	97.5	96.1	96.6	80.4	94.3
March	97.5	107.1	98.1	108.3	96.1	80.6	106.4	98.8	95.6	96.5	80.0	94.9
April	96.8	104.9	97.7	107.9	95.5	80.6	106.4	97.9	94.9	96.7	79.2	94.7
May	95.8	102.2	97.7	106.8	94.2	81.1	105.2	96.8	94.2	96.7	79.6	94.1
June	96.4	103.3	98.9	108.0	93.3	83.3	105.1	96.4	93.4	96.6	80.4	94.6
July	98.0	107.6	102.8	109.2	92.8	82.0	105.0	96.7	93.4	97.2	81.3	95.5
August	97.7	107.1	103.1	109.7	93.1	80.9	104.3	96.7	93.7	97.1	81.3	94.3
September	97.5	106.6	103.2	110.8	93.1	81.1	104.1	97.5	93.9	97.1	81.7	95.1

¹ Index of Bureau of Labor Statistics.

PRICES OF FARM PRODUCTS AT THE FARM¹
[August, 1909-July, 1914=100]

Month	27 commodities	Grains	Fruit and vegetables	Meat animals	Dairy and poultry products	Cotton and cottonseed	Un-classified
1928							
August	139	120	137	162	136	153	87
September	141	117	127	174	145	142	85
October	137	116	114	160	150	147	83
November	134	110	109	150	155	146	86
December	134	112	108	143	159	148	90
1929							
January	133	115	109	146	149	148	92
February	136	123	111	150	148	149	91
March	140	124	112	160	144	155	90
April	133	120	110	164	138	152	88
May	136	113	119	164	137	148	86
June	135	111	120	163	137	146	85
July	140	122	136	167	137	145	85
August	143	129	160	165	141	146	86
September	141	131	160	156	146	146	85
October	140	128	168	151	151	141	89

¹ Index numbers of Department of Agriculture.

FOREIGN CAPITAL ISSUES
[In millions of dollars]

Class of issue	September, 1929		January-September			
	Gov-ernment	Cor-po-rate	1929		1928	
			Gov-ernment	Cor-po-rate	Gov-ernment	Cor-po-rate
Total	13.7	14.1	237.5	415.1	716.4	502.5
New issue	11.8	14.1	220.1	399.6	614.5	378.7
Europe		6.7	84.1	82.5	281.5	202.9
Canada and Newfoundland			5.0	63.3	97.4	80.4
Latin America	11.8		70.7	49.7	233.8	23.0
United States insular possessions			2.0	7.7	6.2	
Miscellaneous		2.4		162.2	56.5	72.4
Refunding issues	1.9		17.4	15.5	101.9	123.9
Total Government and corporate		27.8		652.6		1,218.9

SECURITY PRICES

Month or week	Common stocks ¹ (1926=100)				Bonds: Average price of 40 issues
	405 stocks combined	338 industrials	33 rails	34 public utilities	
1928—June	145.3	148.2	126.7	148.1	97.38
July	144.2	147.8	124.6	145.3	96.56
August	148.3	152.6	126.5	147.9	95.82
September	156.1	161.6	129.7	155.2	96.47
October	159.1	166.2	128.2	154.5	96.58
November	169.2	177.1	133.7	165.5	96.90
December	172.9	180.0	135.9	174.7	96.24
1929—January	183.6	191.4	141.0	188.3	96.12
February	186.8	192.4	142.3	203.1	95.60
March	189.4	196.1	140.8	204.4	94.82
April	186.6	193.4	138.3	201.4	94.68
May	189.7	195.2	138.7	213.2	94.46
June	188.6	189.3	143.8	228.1	93.49
July	207.2	202.7	160.0	272.8	93.30
August	218.0	210.3	165.4	303.4	62.51
September	225.2	216.1	168.1	321.0	92.29
October	208.5	201.0	159.1	289.2	92.68
Week ending—					
Oct. 5	209.7	201.6	157.2	296.1	92.04
Oct. 12	222.1	213.2	164.2	316.8	92.16
Oct. 19	215.4	208.8	162.3	295.4	92.89
Oct. 26	186.9	180.4	152.5	248.5	93.61

¹ Index of common-stock market values (revised series) computed by Standard Statistics Co. from closing prices on Thursday.

DOMESTIC CAPITAL ISSUES
[In millions of dollars]

Class of issue	September, 1929		January-September			
	New	Re-fund-ing	1929		1928	
			New	Re-fund-ing	New	Re-fund-ing
Total	1,298.6	307.1	7,769.4	1,251.8	4,199.3	1,406.8
Corporate issues	1,200.8	306.6	6,865.6	1,242.9	3,198.7	1,387.5
Bonds and notes—						
Long term	156.6	69.8	1,545.1	475.3	1,531.7	960.3
Short term	15.6		143.3	43.9	157.3	38.3
Stocks	1,028.6	236.8	5,177.2	723.7	1,509.7	388.9
Farm-loan issues					40.1	
Municipal issues	97.8	.5	903.8	8.9	960.5	19.3
Total new and refunding		1,605.7		9,021.2		5,606.1

PRODUCTION, EMPLOYMENT, AND TRADE

[Index numbers of the Federal Reserve Board. Monthly average 1923-1925=100]

Year and month	Industrial production ¹	Production of manufactures ¹	Production of minerals ¹	Factory employment ² (*)	Factory pay rolls ² (*)	Building contracts awarded		Freight car loadings ¹	Wholesale distribution		Department-store sales		Department-store stocks	
						Unadjusted	Adjusted		Unadjusted	Adjusted	Unadjusted	Adjusted	Unadjusted	Adjusted
ANNUAL INDEX														
1919.....	83	84	77	107	98	64	-----	84	111	-----	78	-----	79	-----
1920.....	87	87	89	108	118	63	-----	91	115	-----	94	-----	105	-----
1921.....	67	67	70	82	77	57	-----	79	87	-----	87	-----	89	-----
1922.....	85	87	74	90	81	81	-----	86	89	-----	88	-----	89	-----
1923.....	101	101	105	104	103	84	-----	100	100	-----	98	-----	98	-----
1924.....	95	94	96	96	96	95	-----	98	98	-----	99	-----	101	-----
1925.....	104	105	99	100	101	122	-----	103	102	-----	103	-----	102	-----
1926.....	108	108	108	101	104	130	-----	107	101	-----	106	-----	103	-----
1927.....	106	106	107	99	102	128	-----	103	97	-----	107	-----	103	-----
1928.....	110	111	106	97	102	135	-----	104	96	-----	108	-----	101	-----
MONTHLY INDEX														
1925														
June.....	102	102	101	98	99	137	128	101	95	100	99	101	98	101
July.....	104	104	104	98	97	133	128	101	97	102	75	100	94	101
August.....	103	102	107	100	99	149	135	105	112	102	78	101	98	102
September.....	102	104	89	102	99	138	135	102	117	102	94	102	107	103
October.....	105	108	90	102	105	129	125	100	123	106	130	111	112	101
November.....	107	109	94	102	105	116	127	105	102	102	114	104	115	102
December.....	109	111	93	102	106	129	145	106	92	98	178	106	97	102
1926														
January.....	107	109	92	101	101	111	143	102	95	104	88	105	93	105
February.....	107	109	95	102	106	106	145	104	96	103	81	104	98	104
March.....	108	108	104	103	107	146	129	104	106	101	101	101	107	104
April.....	108	108	107	102	105	139	120	107	96	99	103	103	107	103
May.....	107	107	104	101	104	134	123	107	95	101	107	108	104	102
June.....	108	109	106	101	104	133	121	109	95	100	101	103	98	101
July.....	108	108	107	99	99	126	124	108	95	100	79	105	93	100
August.....	111	111	109	101	104	148	133	108	111	101	83	107	97	101
September.....	112	112	110	103	105	137	134	109	118	103	101	109	107	102
October.....	111	111	114	103	108	126	122	109	111	96	123	109	114	104
November.....	108	107	118	101	105	119	130	109	101	101	121	106	117	103
December.....	106	104	119	100	104	131	142	107	87	98	184	110	96	102
1927														
January.....	107	105	116	98	99	94	120	105	88	95	89	106	93	104
February.....	109	107	118	100	105	96	131	109	91	97	83	107	98	103
March.....	112	110	118	100	106	151	134	108	102	98	100	105	107	103
April.....	109	109	106	100	105	147	127	108	92	95	111	105	107	103
May.....	111	112	108	99	104	135	122	106	91	97	102	103	104	102
June.....	109	109	105	99	102	154	141	104	91	96	102	103	98	101
July.....	106	108	99	98	99	130	128	101	91	96	75	104	95	102
August.....	107	107	106	99	102	135	121	104	112	102	89	111	98	102
September.....	105	106	103	101	102	127	125	104	113	98	100	108	108	104
October.....	103	103	105	99	103	137	133	101	108	94	119	106	114	104
November.....	99	99	101	97	98	114	125	97	97	97	122	107	117	104
December.....	100	99	102	95	99	116	126	95	85	95	186	111	96	103
1928														
January.....	105	106	103	94	96	104	133	100	88	96	88	104	92	103
February.....	109	110	102	96	101	113	153	102	93	99	86	105	98	103
March.....	109	110	108	97	103	144	128	102	100	96	103	104	105	101
April.....	109	110	105	96	100	157	135	104	88	92	102	103	106	101
May.....	109	110	105	96	101	163	148	105	93	99	108	103	102	100
June.....	109	111	101	96	101	158	145	102	89	92	104	105	96	99
July.....	110	111	100	96	98	142	139	102	98	94	78	107	93	100
August.....	112	113	105	98	103	126	113	104	110	101	85	105	97	101
September.....	114	115	107	100	104	143	140	106	111	96	107	119	103	99
October.....	114	114	114	100	107	145	141	106	112	97	124	105	112	102
November.....	112	112	113	99	104	115	126	104	99	99	122	106	115	102
December.....	113	114	112	98	104	105	116	103	84	95	189	116	94	100
1929														
January.....	117	117	117	97	101	100	128	104	93	101	92	105	89	100
February.....	117	117	120	100	108	88	119	107	90	96	86	110	95	100
March.....	119	121	107	101	111	118	104	103	101	97	110	113	102	99
April.....	122	123	115	102	112	156	135	111	96	100	104	105	103	99
May.....	123	124	116	102	112	143	130	111	96	102	110	107	101	99
June.....	126	128	112	101	109	133	122	108	91	96	106	112	95	98
July.....	124	125	114	101	105	159	156	108	96	101	80	106	92	99
August.....	123	124	115	102	109	119	107	109	113	103	90	112	96	100
September.....	121	122	118	103	111	108	106	108	114	99	109	123	103	99

¹ Adjusted to allow for seasonal variations.
* Revised indexes; see pp. 706-716.

² Not adjusted for seasonal variations.

† Preliminary.

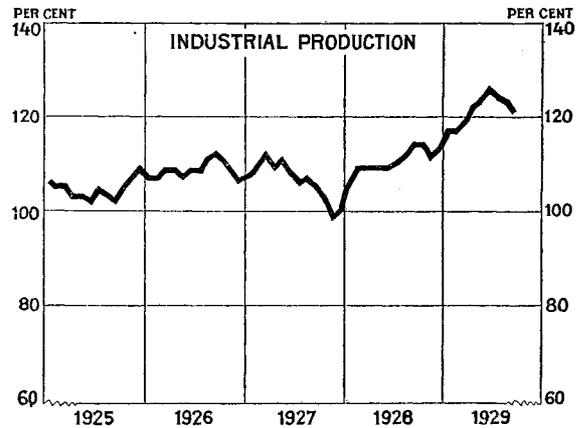
‡ Revised.

INDUSTRIAL PRODUCTION

INDEX OF INDUSTRIAL PRODUCTION

[Index numbers, adjusted for seasonal variations. 1923-1925 average=100]

Month	1923	1924	1925	1926	1927	1928	1929
January.....	100	100	106	107	107	105	117
February.....	100	102	105	107	109	109	117
March.....	103	101	105	108	112	109	119
April.....	107	95	103	108	109	109	122
May.....	107	89	103	107	111	109	123
June.....	106	85	102	108	109	109	126
July.....	104	84	104	108	106	110	124
August.....	102	89	103	111	107	112	123
September.....	100	94	102	112	105	114	121
October.....	99	95	105	111	103	114	-----
November.....	98	97	107	108	99	112	-----
December.....	97	101	109	106	100	113	-----
Annual index.....	101	95	104	108	106	110	-----



INDEX OF PRODUCTION OF MANUFACTURES, BY GROUPS

	All manu- factures	Iron and steel	Textiles	Food products	Paper and printing	Auto- mobiles	Leather and shoes	Cement, brick, and glass	Non- ferrous metals	Petro- leum refining	Rubber tires	Tobacco manu- factures
1928												
May.....	110	116	107	96	118	107	96	116	111	150	133	120
June.....	111	115	108	93	120	117	108	123	115	153	143	125
July.....	111	124	100	89	117	119	112	119	113	156	149	125
August.....	113	121	107	90	117	133	112	126	117	160	151	129
September.....	115	128	107	95	118	139	110	130	117	162	169	128
October.....	114	126	112	98	116	122	103	122	121	160	167	126
November.....	112	120	113	102	115	94	97	122	126	159	155	124
December.....	114	123	111	104	114	103	92	130	128	159	143	127
1929												
January.....	117	117	116	103	122	154	95	134	124	159	147	131
February.....	117	126	113	101	123	152	98	123	123	161	152	129
March.....	121	132	116	96	125	163	99	136	129	160	152	126
April.....	123	135	120	102	122	157	97	127	137	166	161	142
May.....	124	145	121	97	126	151	101	124	137	168	159	142
June.....	128	155	121	96	128	166	113	134	126	170	162	139
July.....	125	151	118	96	122	146	114	138	127	171	141	131
August.....	124	143	120	99	125	146	116	142	122	176	114	133
September.....	122	139	116	102	125	136	116	143	126	174	117	143

INDEX OF PRODUCTION OF MINERALS, BY PRODUCTS

	All min- erals	Bitumi- nous coal	Anthracite coal	Crude petroleum	Iron ore shipments	Copper	Zinc	Lead	Silver
1928									
May.....	105	93	112	120	80	110	113	101	85
June.....	101	91	76	118	107	110	117	100	93
July.....	100	93	67	119	104	113	117	97	76
August.....	105	91	94	123	104	116	120	107	87
September.....	107	94	95	124	110	123	114	115	79
October.....	114	99	119	127	114	128	110	108	79
November.....	113	99	113	127	106	131	111	111	93
December.....	112	96	98	132	-----	133	106	109	100
1929									
January.....	117	103	110	138	-----	129	100	111	93
February.....	120	109	110	138	-----	136	106	99	91
March.....	107	89	77	134	-----	135	112	-----	93
April.....	115	100	95	133	-----	141	116	-----	103
May.....	116	102	86	135	143	139	120	122	93
June.....	112	100	76	136	126	124	122	112	94
July.....	114	101	72	144	119	122	125	114	88
August.....	115	97	81	146	121	119	127	107	106
September.....	118	101	106	141	121	124	124	119	80

* Preliminary.

* Revised.

NOTE.—These tables contain, for certain months, index numbers of industrial production, together with group indexes for important components. The combined index of industrial production is computed from figures for 60 statistical series, 52 of manufactures, and 8 of minerals. Adjustments have been made in the different industries for the varying number of working days in each month and for customary seasonal variations, and the individual products and industries have been weighted in accordance with their relative importance. The sources of data and methods of construction were described in the BULLETIN for February and March, 1927. Revisions of figures from 1923 to 1928 were published in the BULLETIN for March, 1929, pp. 192-194.

PRODUCTION OF MANUFACTURES, BY INDIVIDUAL LINES¹

	Septem- ber, 1929	August, 1929	Septem- ber, 1928		Septem- ber, 1929	August, 1929	Septem- ber, 1928
Iron and steel:				Leather and products:			
Pig iron.....	121	128	107	Leather, tanning—			
Steel ingots.....	141	144	130	Sole leather ¹	95	93	107
Textiles:				Upper leather—			
Cotton consumption.....	115	119	106	Cattle.....	87	80	71
Wool—				Calf and kip.....	103	108	99
Consumption.....	106	114	96	Goat and kid.....	144	136	150
Machinery activity ¹	90	86	84	Boots and shoes.....	122	*125	112
Carpet and rug loom activity ¹	90	90	85	Stone, clay, and glass:			
Silk—				Cement.....	118	122	123
Deliveries.....	158	161	145	Face brick.....			131
Loom activity ¹	128	130	117	Plate glass.....	174	168	135
Food products:				Nonferrous metals:			
Slaughtering and meat packing—				Copper.....	127	126	118
Hogs.....	106	94	86	Lead.....	119	*107	115
Cattle.....	91	88	92	Zinc.....	124	127	114
Calves.....	99	85	94	Tin ¹	131	121	121
Sheep.....	126	126	125	Chemicals and allied products:			
Flour.....	114	99	96	Petroleum refining—			
Sugar meltings.....	84	112	111	Gasoline ¹	208	209	188
Paper and printing:				Kerosene.....	95	108	103
Wood pulp and paper—				Fuel oil ¹	141	142	139
Newsprint.....	94	95	90	Lubricating oil ¹	123	131	122
Book paper.....		134	124	Coke production—			
Fine paper.....		118	114	By-product.....	148	152	132
Wrapping paper.....		101	102	Beehive.....	56	*63	*35
Paper board.....	126	130	123	Rubber tires and tubes:			
Wood pulp, mechanical.....		101	106	Tires, pneumatic.....	120	118	176
Wood pulp, chemical.....		120	111	Inner tubes.....	90	87	119
Paper boxes.....	181	*171	148	Tobacco products:			
Newsprint consumption.....		135	130	Cigars.....	101	99	101
Lumber:				Cigarettes.....	178	163	152
Flooring.....	93	89	123	Manufactured tobacco and snuff.....	99	94	93
Transportation equipment:							
Automobiles.....	136	*146	139				
Locomotives.....	49	55	22				
Shipbuilding.....			95				

¹ Without seasonal adjustment.

* Revised.

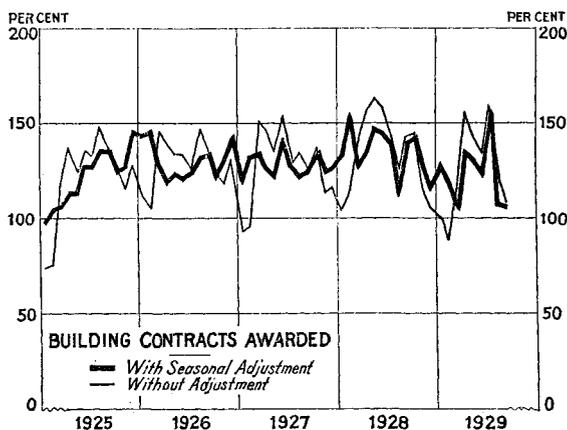
BUILDING

BUILDING CONTRACTS AWARDED

[Index numbers based on value of contracts. Monthly average, 1923-1925=100]

Month	Without seasonal adjustment				With seasonal adjustment			
	1926	1927	1928	1929	1926	1927	1928	1929
January.....	111	94	104	100	143	120	133	128
February.....	106	96	113	88	145	131	153	119
March.....	146	151	144	118	129	134	128	104
April.....	139	147	157	156	120	127	135	135
May.....	134	135	163	143	123	122	148	130
June.....	133	154	158	133	121	141	145	122
July.....	126	130	142	159	124	128	139	156
August.....	148	135	126	119	133	121	113	107
September.....	137	127	143	108	134	125	140	106
October.....	126	137	145	109	122	133	141	106
November.....	119	114	115	-----	130	125	126	-----
December.....	131	116	105	-----	142	126	116	-----
Annual index.....	130	128	135	-----	-----	-----	-----	-----

* Revised.



BUILDING CONTRACTS AWARDED, BY FEDERAL RESERVE DISTRICTS

[Value of contracts in thousands of dollars]

Month	Total	Federal Reserve District										
		Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas
1928												
September.....	587,674	60,918	156,588	45,634	67,748	39,843	25,989	99,176	33,241	9,213	22,611	17,715
October.....	597,104	39,521	189,696	46,098	57,118	40,329	36,097	110,795	32,409	12,645	15,699	16,697
November.....	471,482	29,154	136,525	28,017	56,684	33,621	18,560	99,429	27,302	7,896	13,908	20,397
December.....	432,756	26,405	140,159	32,082	31,755	29,973	23,362	76,924	31,378	5,886	16,511	18,323
1929												
January.....	409,968	26,556	104,447	26,306	54,680	28,748	25,745	77,439	25,479	7,466	15,668	17,435
February.....	361,274	25,552	76,064	32,369	36,360	34,252	22,363	69,845	23,372	4,757	12,874	23,665
March.....	484,848	30,044	113,466	35,399	47,078	32,979	25,398	107,289	38,795	8,343	22,854	23,204
April.....	642,061	38,459	171,551	67,064	51,469	52,139	37,387	103,181	54,363	14,735	22,365	24,346
May.....	587,766	41,095	125,125	37,809	64,736	37,072	33,578	141,450	41,020	17,309	23,955	24,616
June.....	545,891	33,050	110,180	38,327	53,011	34,451	46,110	134,832	41,848	11,835	19,654	22,614
July.....	652,436	39,515	222,993	33,928	59,937	51,364	31,802	106,374	38,682	11,667	24,659	31,515
August.....	488,832	30,536	97,130	24,902	62,111	29,414	46,637	100,433	39,224	11,465	24,802	21,929
September.....	445,402	32,411	83,109	35,047	64,140	22,712	17,768	102,562	39,465	10,346	20,883	16,900

BUILDING CONTRACTS AWARDED, BY TYPES OF BUILDING

[Value of contracts in thousands of dollars]

Month	Residential	Industrial	Commercial	Public works and public utilities	Educational	All other
1928						
August.....	213,705	42,607	53,911	118,890	35,713	47,144
September.....	202,807	114,780	60,063	119,014	38,801	52,205
October.....	239,692	62,259	67,330	148,697	31,293	47,833
November.....	200,226	38,665	63,309	93,228	30,023	41,032
December.....	178,323	38,248	66,773	80,194	25,370	43,849
1929						
January.....	138,069	63,109	100,378	66,522	17,746	24,145
February.....	129,486	56,092	63,265	57,593	22,577	27,261
March.....	197,172	55,837	75,584	71,508	37,525	47,221
April.....	256,780	68,230	77,988	152,127	29,857	57,079
May.....	192,015	80,769	86,471	139,388	38,195	50,928
June.....	189,809	70,036	80,884	120,841	43,417	40,904
July.....	199,926	66,604	91,348	194,547	47,979	52,032
August.....	146,088	75,265	71,955	119,288	32,349	43,937
September.....	118,381	52,640	76,921	117,229	29,826	50,405

BUILDING PERMITS ISSUED, BY FEDERAL RESERVE DISTRICTS

[Value of permits in thousands of dollars]

Federal reserve district	Number of cities	September, 1929	August, 1929	September, 1928
United States.....	168	169,474	199,120	217,626
Boston.....	14	4,293	11,668	8,438
New York.....	22	53,694	61,626	72,056
Philadelphia.....	14	6,261	9,261	11,100
Cleveland.....	12	14,209	16,742	15,624
Richmond.....	15	8,804	8,849	13,226
Atlanta.....	15	5,456	6,286	8,289
Chicago.....	19	32,687	39,960	42,857
St. Louis.....	5	5,329	5,009	6,067
Minneapolis.....	9	3,686	4,156	4,421
Kansas City.....	14	9,701	8,798	8,021
Dallas.....	9	5,693	7,353	5,620
San Francisco.....	20	19,752	19,412	21,907

NOTE.—Figures for building contracts awarded are for 37 States east of the Rocky Mountains, as reported by the F. W. Dodge Corporation. Adjusted indexes by months back to 1910 were published in the BULLETIN for August, 1927, p. 563.

TRADE AND DISTRIBUTION

FREIGHT-CAR LOADINGS, BY LINES

Index numbers adjusted for seasonal variations. 1923-1925=100

Month	Total	Grain and grain products	Live-stock	Coal	Forest products	Merchandise l. c. l. and miscellaneous
1928—September	106	109	93	100	90	111
October	106	107	91	102	91	111
November	104	108	82	105	92	107
December	103	105	85	102	91	108
1929—January	104	99	82	108	90	109
February	107	106	82	118	86	109
March	103	103	81	89	87	111
April	111	98	90	102	94	114
May	111	99	86	103	98	114
June	108	113	79	98	92	112
July	108	132	80	94	92	112
August	109	109	78	100	94	113
September	108	91	86	106	88	113

DEPARTMENT STORE SALES AND STOCKS

[Index numbers. Monthly average 1923-1925=100]

Federal reserve district	Number of stores	Without seasonal adjustment				With seasonal adjustment		
		1929		1928		1929		
		Sept.	Aug.	Sept.	Sept.	Aug.	Sept.	
SALES								
United States	523	109	90	107	123	112	119	
Boston	38	98	83	97	114	111	113	
New York	64	118	82	111	136	117	127	
Philadelphia	60	84	69	89	104	95	109	
Cleveland	59	101	92	101	114	109	114	
Richmond	29	103	81	96	122	113	114	
Atlanta	44	97	85	98	112	110	112	
Chicago	105	128	100	124	136	122	132	
St. Louis	19	120	87	107	123	113	110	
Minneapolis	20	97	88	99	102	96	104	
Kansas City ¹	27	105	85	102	—	—	—	
Dallas	22	110	85	112	112	116	113	
San Francisco	36	113	120	113	127	122	127	
STOCKS								
United States	433	103	96	103	99	100	99	
Boston	38	97	87	98	94	94	94	
New York	45	109	101	106	104	106	101	
Philadelphia	47	88	80	92	85	85	88	
Cleveland	53	98	90	100	94	95	96	
Richmond	29	98	89	102	93	97	97	
Atlanta	31	98	93	104	93	95	98	
Chicago	81	119	113	114	113	116	107	
St. Louis	19	97	90	98	91	90	83	
Minneapolis	16	74	71	84	71	72	80	
Kansas City ¹	21	125	119	123	—	—	—	
Dallas	21	89	81	88	82	79	81	
San Francisco	32	107	102	106	103	103	102	

¹ Monthly average 1925=100.

^r Revised.

Index described in BULLETIN for February, 1928.

INDEX OF WHOLESALE DISTRIBUTION—EIGHT LINES

[Monthly average, 1923-1925=100]

Month	Sales without seasonal adjustment			Sales with seasonal adjustment		
	1927	1928	1929	1927	1928	1929
January	88	88	93	95	96	101
February	91	93	90	97	99	96
March	102	100	101	98	96	97
April	92	88	96	95	92	100
May	91	93	96	97	99	102
June	91	89	91	96	92	96
July	91	90	96	96	94	101
August	112	110	113	102	101	103
September	113	111	114	98	96	99
October	108	112	—	94	97	—
November	97	99	—	97	99	—
December	85	84	—	95	95	—
Annual average	97	96	—	—	—	—

SALES IN INDIVIDUAL LINES OF WHOLESALE TRADE

[Index numbers. Monthly average, 1923-1925=100]

Month	Groceries	Meats	Dry goods	Men's clothing	Boots and shoes	Hardware	Drugs	Furniture
Without seasonal adjustment								
1928								
September	100	130	105	137	110	100	119	126
October	108	125	99	123	108	108	134	133
November	100	117	90	66	105	98	114	106
December	88	108	69	51	59	86	120	89
1929								
January	91	117	84	74	98	82	131	80
February	83	113	84	114	84	76	105	91
March	90	117	92	136	110	95	119	105
April	92	115	80	85	100	99	118	101
May	96	121	78	60	113	98	111	99
June	95	122	70	49	90	97	105	83
July	99	123	74	69	110	95	111	88
August	101	120	111	156	130	99	121	117
September	102	128	109	139	129	105	124	130
With seasonal adjustment								
1928								
September	92	122	84	89	90	92	112	112
October	95	111	85	99	87	97	116	112
November	94	122	91	95	100	100	113	101
December	89	115	86	101	72	93	128	94
1929								
January	99	117	88	96	119	92	133	91
February	95	119	83	88	107	86	114	91
March	91	122	88	98	95	92	108	93
April	96	123	90	88	95	97	116	100
May	99	121	89	101	112	96	118	104
June	93	120	79	96	96	93	112	106
July	98	121	80	80	138	97	117	107
August	100	118	91	95	118	98	124	115
September	93	120	88	91	106	97	116	115

Index described in BULLETIN for December, 1927.

^r Revised.

SALES OF CHAIN STORES

[Index numbers of sales. Monthly average 1923-1925=100]

Chains	Number of reporting firms	Number of stores			Sales without seasonal adjustment ¹			Sales with seasonal adjustment ¹		
		September, 1929	August, 1929	September, 1928	September, 1929	August, 1929	September, 1928	September, 1929	August, 1929	September, 1929
Grocery	34	30,134	30,129	29,308	216	233	202	240	245	224
5-and-10 cent	14	3,534	3,503	3,126	147	161	144	168	174	165
Drug	13	1,267	1,253	1,020	200	214	164	215	214	177
Shoe	7	(²)	737	674	(²)	134	131	(²)	161	146

¹ Figures relate to reporting firms—with no adjustment to eliminate the influence of increase in the number of stores operated; [thus indexes give an effect the full growth of the business of the reporting companies.]

² Not available.

^r Revised.

OCTOBER CROP REPORT, BY FEDERAL RESERVE DISTRICTS

[Based on estimates, by States, for Oct. 1 as made by the Department of Agriculture]

[In thousands of units]

Federal reserve district	Corn		Total wheat		Spring wheat		Winter wheat	
	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929
	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bushels</i>
Boston.....	8,890	9,343	96	116	96	116	.....	.....
New York.....	25,884	24,511	5,506	5,636	173	134	5,333	5,502
Philadelphia.....	45,500	42,214	16,140	18,761	85	71	16,055	18,690
Cleveland.....	174,381	165,452	13,167	38,638	164	109	13,003	38,529
Richmond.....	139,133	140,968	25,880	26,352	.....	.....	25,880	26,352
Atlanta.....	137,350	170,654	4,392	4,460	.....	.....	4,392	4,460
Chicago.....	1,017,822	867,992	42,993	62,964	6,582	4,622	36,411	58,342
St. Louis.....	358,882	300,449	30,699	45,785	724	427	29,975	45,358
Minneapolis.....	282,101	283,060	279,572	178,829	263,069	166,155	16,503	12,674
Kansas City.....	520,235	412,395	334,956	262,816	14,716	13,853	320,240	248,963
Dallas.....	114,742	100,956	23,064	36,943	188	343	22,876	35,700
San Francisco.....	10,758	10,983	125,726	111,368	38,261	37,705	87,465	73,663
Total.....	2,835,678	2,528,077	902,191	791,768	324,058	223,535	578,133	568,233

Federal reserve district	Oats		Tame hay		Tobacco		White potatoes		Cotton	
	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929	Production, 1928	Estimate, Oct. 1, 1929
	<i>Bushels</i>	<i>Bushels</i>	<i>Tons</i>	<i>Tons</i>	<i>Pounds</i>	<i>Pounds</i>	<i>Bushels</i>	<i>Bushels</i>	<i>Bales</i>	<i>Bales</i>
Boston.....	7,921	9,170	4,996	5,063	38,915	35,091	47,672	54,819	.....	.....
New York.....	35,050	26,744	6,811	7,033	1,317	1,100	36,991	27,820	.....	.....
Philadelphia.....	21,770	19,968	3,353	2,999	49,580	45,708	30,208	22,037	.....	.....
Cleveland.....	106,377	66,377	5,940	7,046	117,608	138,067	23,511	20,012	.....	.....
Richmond.....	22,865	27,636	4,426	4,410	713,590	736,571	48,361	34,274	1,606	1,741
Atlanta.....	10,746	14,591	2,986	3,059	157,057	177,931	14,843	11,306	2,758	3,394
Chicago.....	624,072	502,829	16,781	23,163	49,005	42,406	76,982	46,261	.....	.....
St. Louis.....	66,278	47,406	7,573	8,922	243,978	289,423	19,510	12,865	1,271	1,391
Minneapolis.....	321,611	278,381	12,026	11,454	4,141	3,464	75,449	44,881	.....	.....
Kansas City.....	158,774	150,459	12,381	11,574	2,948	2,764	40,120	31,023	1,147	1,227
Dallas.....	37,983	46,057	1,281	1,375	.....	.....	3,747	3,256	5,946	4,889
San Francisco.....	35,230	36,955	14,429	14,484	.....	.....	47,089	36,623	306	373
Total.....	1,448,677	1,226,573	92,983	100,582	1,378,139	1,472,525	464,483	345,177	14,478	14,915

¹ Includes 7,000 bales grown in miscellaneous territory.

² Includes 11,000 bales grown in miscellaneous territory.

FINANCIAL STATISTICS FOR FOREIGN COUNTRIES

GOLD HOLDINGS OF CENTRAL BANKS AND GOVERNMENTS

[In millions of dollars. Figures for end of month or latest available preceding date; see BULLETIN for June, p. 396]

Month	Total (40 countries) ¹	United States	Argentina	Australia	Belgium	Brazil	Canada	England	France	Germany	India	Italy	Japan	Netherlands	Russia	Spain	Switzerland	24 other countries
1926—December	9,185	4,083	451	107	86	56	158	735	711	436	109	221	562	166	85	493	91	634
1927—December	9,536	3,977	529	105	100	101	152	742	954	444	119	239	542	161	97	502	100	672
1928—June	9,748	3,732	622	109	111	140	104	838	1,136	496	119	259	541	175	80	503	86	694
July	9,840	3,737	622	110	112	140	98	857	1,173	524	119	263	541	175	85	503	86	694
August	9,879	3,749	621	110	112	143	101	856	1,190	536	119	263	541	175	75	503	87	698
September	9,925	3,752	621	107	112	143	106	843	1,200	571	119	266	541	175	76	504	90	699
October	9,944	3,769	611	107	113	146	108	803	1,207	603	119	266	541	175	82	504	91	701
November	9,990	3,754	610	107	115	148	133	778	1,239	625	120	266	541	175	92	494	91	702
December	9,999	3,746	607	108	126	149	114	750	1,254	650	124	266	541	175	92	494	103	702
1929—January	10,032	3,746	605	109	126	149	79	744	1,333	650	128	266	541	175	92	494	93	702
February	10,054	3,776	603	109	126	150	78	736	1,334	650	128	266	541	175	92	494	93	703
March	10,085	3,814	585	110	126	150	78	748	1,340	639	128	270	542	170	92	494	93	706
April	10,042	3,889	569	110	134	150	78	762	1,403	451	128	270	542	174	92	494	95	701
May	10,123	3,931	564	116	134	151	78	795	1,435	420	128	270	542	176	93	494	96	701
June	10,136	3,956	527	117	139	151	76	780	1,436	455	128	271	542	176	93	494	96	699
July	10,149	3,974	513	118	141	151	76	694	1,462	512	128	271	541	181	103	495	98	692
August	10,235	3,995	507	123	141	151	77	670	1,526	520	128	271	541	178	119	495	98	694
September	10,265	4,008	496	126	142	151	77	648	1,545	527	128	272	541	178	132	495	103	696
October		4,022						643	1,562	531					142			

[†] Revised.

[‡] Preliminary, based on latest available figures.

¹ All countries for which satisfactory figures are available; see explanation in Bulletin for April, 1929 (p. 263), where separate figures for each country are given by years back to 1913. The 16 countries for which figures are here shown separately by months include all those which have held gold in recent years to the amount of \$90,000,000 or more.

² Treasury and Federal reserve banks.

³ Government conversion fund and Bank of the Nation.

⁴ Bank of Brazil and stabilization fund.

⁵ Includes gold held by Government against Dominion notes and savings bank deposits, and such gold as is held by chartered banks in the central reserve.

⁶ Gold held by Bank of England.

⁷ Currency and gold standard reserves.

⁸ Domestic holdings of Bank of Japan and the Japanese Government

GOLD MOVEMENTS

[In thousands of dollars]

Month	United States			Germany			Great Britain			Netherlands			South Africa	India
	Im-ports	Ex-ports	Net	Im-ports	Ex-ports	Net	Im-ports	Ex-ports	Net	Im-ports	Ex-ports	Net	Net	Net
1929														
January	48,577	1,378	47,199	1,250	577	672	11,844	27,891	-16,047	504	14	490	-16,607	4,730
February	26,913	1,425	25,488	1,338	764	574	12,347	21,383	-9,036	181	6	175	-17,848	7,700
March	26,470	1,635	24,835	1,701	804	897	25,734	7,746	17,987	133	14,320	-14,187	-21,542	13,063
April	24,687	1,594	23,093	1,768	223,247	-221,480	16,144	3,714	12,430	165	2	163	-15,871	6,580
May	24,097	467	23,630	1,946	781	1,165	28,284	4,652	23,632	4,338	23	4,315	-17,975	6,076
June	30,762	550	30,212	7,493	681	6,812	21,085	40,001	-18,917	190	17	173	-22,625	3,596
July	35,525	807	34,718	48,728	716	48,012	22,578	100,479	-77,901	129	8	121	-14,816	4,164
August	19,271	881	18,390	27,728	879	26,849	17,226	59,278	-42,052	103	2,522	-2,419	-20,981	2,771
September	18,781	1,205	17,576	9,939	851	9,088	18,301	41,283	-22,982	80	17	63	-15,375	

[†] Revised.

MOVEMENTS TO AND FROM GREAT BRITAIN

[In thousands of dollars]

From or to—	1929				1928	
	September		January-September		Calendar year	
	Im-ports	Ex-ports	Im-ports	Ex-ports	Im-ports	Ex-ports
France	155	20,959	1,533	109,313	912	97,178
Germany		7,624	3,194	88,205	258	102,423
Netherlands		124	14,382	1,435	145	7,081
Russia					18,582	
Spain and Canaries		22	4	330	9,733	199
Switzerland		1,237		8,473		13,493
United States		9,053	64	61,293	32,532	32,132
South America		994		8,971	1,166	1,074
British India		784		8,027		10,770
British Malaya		33		1,812	71	1,810
Egypt		267		3,183	1,309	1,384
Rhodesia		345		3,405		5,280
Transvaal		16,435		133,127		144,482
West Africa		309		3,029	8	3,384
All other countries		62		5,835	24,347	14,803
Total	18,301	41,283	173,543	306,427	232,658	294,539

MOVEMENTS TO AND FROM BRITISH INDIA

[In thousands of dollars]

From or to—	1929				1928	
	July		January-July		Calendar year	
	Im-ports	Ex-ports	Im-ports	Ex-ports	Im-ports	Ex-ports
England	545		7,643		11,071	
United States			22		4,086	
Aden and dependencies					910	
Arabia	50		810		870	6
British Oceania	330		1,923		5,067	
Bahrein Islands	8		100		285	
Ceylon	447		2,209	1	720	
China	25		133		153	
Mesopotamia	180		1,460		1,543	
Straits Settlements			17	18	200	48
Egypt	625		4,414		6,714	
Natal	1,738		26,634		44,387	
All other countries			5	15		44
Total	4,164		45,943	33	76,007	99

CONDITION OF CENTRAL BANKS

[Figures are for the last report date of month]

	1929			1928		1929			1928
	Sep-tem-ber	August	July	Sep-tem-ber		Sep-tem-ber	August	July	Sep-tem-ber
Bank of England (millions of pounds sterling):					National Bank of Belgium (millions of belgas):				
Issue department—					Gold.....	1,023	1,014	1,012	807
Gold coin and bullion.....	131.9	136.4	141.4	170.6	Foreign bills and balances in gold.....	551	566	451	505
Notes issued.....	391.9	396.4	411.4	190.3	Domestic and foreign bills.....	748	797	781	584
Banking department—					Loans to State.....	343	348	347	377
Gold and silver coin.....	1.3	1.3	1.2	2.6	Note circulation.....	2,628	2,624	2,554	2,220
Bank notes.....	30.9	32.3	29.6	55.8	Deposits.....	90	159	100	116
Government securities.....	68.9	73.3	62.3	31.7	National Bank of Bulgaria (millions of leva):				
Other securities.....	22.2	22.3	24.2	41.6	Gold.....	1,385	1,387	1,379	1,312
Discounts and advances.....	3.2	3.8	10.0	9.7	Net foreign exchange.....	1,200	1,111	1,226	969
Public deposits.....	14.7	20.5	11.1	103.7	Total foreign exchange.....	1,640	1,638	1,630	1,155
Bankers deposits.....	57.0	58.0	60.3	51.5	Loans and discounts.....	1,614	1,532	1,537	4,371
Other deposits.....	36.4	36.1	37.7	78.2	Government obligations.....	3,546	3,546	3,546	4,501
Reserve ratio ¹ (per cent).....	29.7	29.3	28.2	293.9	Note circulation.....	4,222	4,121	3,974	2,073
Bank notes in circulation ¹	361.1	364.0	371.8		Other sight liabilities.....	2,204	2,164	2,309	
Currency notes and certificates.....					Central Bank of Chile (millions of pesos):				
Bank of France (millions of francs):					Gold at home.....	63	63	62	61
Gold.....	39,411	38,930	37,300	30,623	Deposits abroad.....	471	384	430	530
Sight balances abroad.....	7,210	7,248	7,325	12,692	Loans and discounts.....	77	81	71	11
Foreign bills.....	18,623	18,587	18,524	18,473	Note circulation.....	359	341	352	309
Loans and discounts.....	11,576	11,888	10,782	6,173	Deposits.....	211	120	146	200
Negotiable bonds.....	5,612	5,612	5,769	5,930	Bank of the Republic of Colombia (thousands of pesos):				
Note circulation.....	66,639	66,468	64,135	62,654	Gold at home.....	24,957	26,233	26,036	24,651
Public deposits.....	13,629	13,444	12,179	10,960	Gold abroad.....	22,722	24,347	29,371	41,291
Other deposits.....	5,958	6,175	7,420	5,169	Loans and discounts.....	15,360	13,867	11,316	5,985
German Reichsbank (millions of reichsmarks):					Note circulation.....	41,862	43,309	45,485	49,851
Gold reserve.....	2,062	2,034	1,999	2,311	Deposits.....	9,941	10,496	9,996	11,903
Gold abroad.....	150	150	150	86	Czechoslovak National Bank (millions of Czechoslovak crowns):				
Reserves in foreign exchange.....	335	308	334	179	Gold and silver.....	1,205	1,205	1,207	1,159
Loans and discounts.....	2,828	2,834	2,798	2,691	Foreign balances and currency.....	1,838	1,757	1,696	2,092
Deposits.....	501	434	516	503	Loans and advances.....	1,147	953	918	473
Reichsmarks in circulation.....	4,914	4,897	4,726	4,830	Assets of banking office in liquidation.....	392	396	397	450
Rentenmarks in circulation.....	439	440	443	577	Note circulation.....	7,697	7,500	7,321	7,806
Bank of Italy (millions of lire):					Deposits.....	475	345	425	590
Gold at home.....	5,176	5,160	5,159	5,052	Danish National Bank (millions of kroner):				
Credits and balances abroad.....	5,604	4,971	4,936	6,594	Gold.....	173	173	173	173
Loans and discounts.....	5,433	5,402	5,220	4,414	Foreign bills, etc.....	94	105	92	99
Total note circulation.....	16,916	16,701	16,887	17,476	Loans and discounts.....	70	70	79	85
Public deposits.....	300	300	300	300	Note circulation.....	353	361	351	360
Other deposits.....	1,544	1,632	1,772	2,561	Deposits.....	30	37	38	32
Bank of Japan (millions of yen):					Bank of Danzig (thousands of Danzig guilder):				
Gold.....	1,062	1,062	1,062	1,063	Balances with Bank of England.....	17,070	16,200	16,429	15,372
Advances and discounts.....	770	768	755	868	Foreign bills, etc.....	12,360	13,418	13,263	22,086
Government bonds.....	194	211	210	188	Loans and discounts.....	22,926	23,427	22,108	22,987
Notes issued.....	1,286	1,334	1,266	1,308	Note circulation.....	39,494	39,688	38,263	38,651
Total deposits.....	837	808	867	916	Deposits.....	2,007	1,717	1,882	2,659
Commonwealth Bank of Australia (thousands of pounds sterling):					Bank of Estonia (thousands of kronas):				
Issue department—					Gold.....	6,350	6,338	6,328	10,045
Gold coin and bullion.....	23,441	23,206	22,721	22,001	Net foreign exchange.....	21,025	20,808	19,725	25,943
Securities.....	18,272	18,331	18,832	21,852	Loans and discounts.....	26,356	26,075	26,165	26,522
Banking department—					Note circulation.....	35,791	34,343	33,089	39,564
Coin, bullion, and cash.....	2,504	2,164	1,459	1,406	Deposits—				
Money at short call in London.....	6,653	8,538	10,053	23,773	Government.....	9,121	10,117	9,820	15,803
Loans and discounts.....	13,691	12,719	11,042	11,182	Bankers.....	4,420	3,959	4,187	1,346
Securities.....	14,922	15,125	14,375	11,766	Other.....	1,958	1,657	2,054	5,038
Deposits.....	36,558	37,258	35,224	46,791					
Bank notes in circulation.....	37,908	38,005	37,528	41,106					
Austrian National Bank (millions of schillings):									
Gold.....	169	169	169	134					
Foreign exchange of the reserve.....	216	231	217	298					
Other foreign exchange.....	357	383	365	327					
Domestic bills.....	289	226	247	120					
Government debt.....	110	110	110	166					
Note circulation.....	1,079	1,046	1,047	1,008					
Deposits.....	65	74	61	40					

¹ Ratio of gold and notes in banking department to deposit liabilities.
² Notes issued, less amounts held in banking department and in currency note account.

CONDITION OF CENTRAL BANKS—Continued

[Figures are for the last report date of month]

	1929			1928		1929			1928
	Sep-tember	August	July	Sep-tember		Sep-tember	August	July	Sep-tember
Bank of Finland (millions of Finnish marks):									
Gold.....	302	301	301	307					
Balances abroad and foreign credits.....	547	520	505	601					
Foreign bills.....	19	20	10	77					
Domestic bills.....	1,290	1,352	1,369	1,183					
Note circulation.....	1,440	1,448	1,439	1,599					
Demand liabilities.....	146	178	194	182					
Bank of Greece (millions of drachmae):									
Gold.....	623	619	605	537					
Net foreign exchange in reserve.....	2,822	2,721	2,897	3,362					
Total foreign exchange.....	4,996	4,871	5,092	4,268					
Loans and discounts.....	174	158	142	177					
Government obligations.....	3,597	3,597	3,597	3,790					
Note circulation.....	5,414	5,214	5,304	5,719					
Other sight liabilities.....	1,496	1,551	1,596	1,707					
National Bank of Hungary (millions of pengös):									
Gold.....	163	163	163	197					
Foreign bills, etc.....	43	40	37	47					
Loans and discounts.....	315	293	326	398					
Advances to treasury.....	89	89	89	104					
Other assets.....	62	108	74	129					
Note circulation.....	478	480	491	500					
Deposits.....	112	117	94	223					
Miscellaneous liabilities.....	54	68	78	126					
Bank of Java (millions of florins):									
Gold.....		148	148	172					
Foreign bills.....		35	36	33					
Loans and discounts.....		146	124	104					
Note circulation.....		306	302	320					
Deposits.....		68	60	52					
Bank of Latvia (millions of lats):									
Gold.....	24	24	24	24					
Foreign exchange reserve.....	49	46	45	86					
Bills.....	92	89	89	84					
Loans.....	57	58	59	41					
Note circulation.....	46	45	44	46					
Government deposits.....	91	93	96	114					
Other deposits.....	76	73	71	66					
Bank of Lithuania (millions of litas):									
Gold.....	34	34	34	34					
Foreign currency.....	53	42	37	41					
Loans and discounts.....	90	87	87	86					
Note circulation.....	94	87	85	95					
Deposits.....	78	73	70	71					
Netherlands Bank (millions of florins):									
Gold.....	443	443	449	435					
Foreign bills.....	186	154	178	193					
Loans and discounts.....	187	162	160	154					
Note circulation.....	852	801	812	797					
Deposits.....	20	13	15	38					
Bank of Norway (millions of kroner):									
Gold.....	147	147	147	147					
Foreign balances and bills.....	55	41	39	37					
Domestic credits.....	251	259	263	268					
Note circulation.....	316	315	315	313					
Foreign deposits.....	1	2	1	2					
Total deposits.....	91	82	88	85					
Reserve Bank of Peru (thousands of libras):									
Gold.....		3,535	4,237	4,128					
Gold against demand deposits.....		880	178	288					
Foreign exchange reserve.....		1,893	729	1,220					
Bills.....		2,178	2,337	1,862					
Note circulation.....		6,447	6,606	6,028					
Deposits.....		1,761	357	576					
Bank of Poland (millions of zlotys):									
Gold at home.....	432	432	432	408					
Gold abroad.....	232	219	195	195					
Foreign exchange of the reserve.....	422	441	444	462					
Other foreign exchange.....	96	84	82	200					
Loans and discounts.....	805	796	782	744					
Note circulation.....	1,354	1,359	1,293	1,261					
Current account of the treasury.....	282	299	286	302					
Other current accounts.....	157	145	154	136					
Bank of Portugal (millions of escudos):									
Gold.....	9	9	9	9					
Balances abroad.....	380	351	308	275					
Bills.....	321	308	300	229					
Note circulation.....	1,936	1,912	1,921	1,916					
Deposits.....	48	54	53	66					
National Bank of Rumania (millions of lei):									
Gold at home.....	5,178	5,158	5,126	5,005					
Gold abroad.....	3,592	3,592	3,592	3,644					
Foreign exchange of the reserve.....	6,032	5,793	1,465	(3)					
Other foreign exchange.....	79	79	147	(4)					
Loans and discounts.....	10,000	10,060	10,009	13,732					
State debt.....	7,472	7,472	7,631	10,679					
Note circulation.....	21,393	20,340	19,188	21,054					
Deposits.....	10,757	10,495	7,356	1,255					
State Bank of Russia (thousands of chervontsi):									
Loans and discounts.....		395,607	386,876	354,205					
Deposits.....		202,747	203,706	180,253					
Issue department—									
Gold.....		23,098	20,098	14,810					
Other precious metals.....		4,045	4,151	4,709					
Foreign exchange.....		8,428	9,021	8,703					
Note circulation.....		135,989	126,983	109,010					
National Bank of the Kingdom of Serbs, Croats, and Slovenes (millions of dinars):									
Gold.....	94	94	94	91					
Foreign notes and credits.....	282	255	261	275					
Loans and discounts.....	1,891	1,612	1,549	1,698					
Advances to State.....	3,000	3,000	2,966	2,966					
Note circulation.....	5,695	5,659	5,299	5,751					
Deposits.....	1,025	898	1,020	648					
South African Reserve Bank (thousands of pounds sterling):									
Gold.....	7,941	7,901	7,669	8,089					
Foreign bills.....	7,185	7,655	8,114	7,657					
Domestic bills.....	1,995	1,600	748	737					
Note circulation.....	9,131	9,533	8,460	9,011					
Deposits—									
Government.....	2,160	1,687	2,272	1,190					
Bankers.....	4,625	4,816	4,822	5,282					
Others.....	291	292	634	210					
Bank of Spain (millions of pesetas):									
Gold.....	2,565	2,565	2,563	2,609					
Silver.....	712	719	720	700					
Balances abroad.....	89	90	96	39					
Loans and discounts.....	2,241	2,086	1,952	2,013					
Note circulation.....	4,359	4,327	4,289	4,323					
Deposits.....	924	938	931	903					
Bank of Sweden (millions of kroner):									
Gold.....	242	242	234	238					
Foreign bills, etc.....	222	205	208	119					
Loans and discounts.....	376	346	332	401					
Note circulation.....	580	549	522	565					
Deposits.....	163	149	157	121					
Swiss National Bank (millions of francs):									
Gold.....	533	507	507	468					
Foreign balances and bills.....	216	210	217	211					
Loans and discounts.....	226	209	218	238					
Note circulation.....	944	911	900	892					
Demand deposits.....	71	51	67	64					

* Converted into the terms of the leu adopted Feb. 7, 1929.

* Foreign exchange not reported separately.

CONDITION OF COMMERCIAL BANKS

[Figures are for the last report date of month except for London clearing banks, which are daily averages]

	1929			1928		1929			1928
	Sep-tember	August	July	Sep-tember		August	July	June	August
Nine London clearing banks (mil-lions of pounds sterling):					Joint-stock banks of Denmark (mil-lions of kroner):				
Money at call and short notice.....	149	144	143	142	Loans and discounts.....	1,775	1,774	1,767	1,873
Advances and discounts.....	1,192	1,205	1,219	1,175	Due from foreign banks.....	145	138	143	134
Investments.....	242	242	242	244	Due to foreign banks.....	62	66	64	95
Deposits.....	1,754	1,759	1,778	1,732	Deposits and current accounts.....	1,969	1,952	1,955	1,972
Six Berlin banks (millions of reichs-marks):					Joint-stock banks of Finland (mil-lions of Finnish marks):				
Bills and treasury notes.....	2,594	2,498	2,365	2,254	Loans and discounts.....	9,891	9,931	10,047	9,621
Due from other banks.....	1,224	1,219	1,189	1,005	Due from abroad.....	247	236	189	279
Miscellaneous loans.....	7,254	7,135	7,098	6,362	Due to abroad.....	527	544	633	460
Deposits.....	10,413	10,162	9,989	8,947	Deposits.....	7,628	7,660	7,730	7,613
Acceptances.....	444	446	463	414	Four commercial banks of France (millions of francs):				
Tokyo banks (millions of yen):					Bills and national-defense bonds.....	19,959	20,664	20,722	20,722
Cash on hand.....	297	301	259	276	Loans and advances.....	10,598	9,974	8,325	8,325
Total loans.....	2,055	2,086	2,087	2,061	Demand deposits.....	32,455	33,225	33,104	33,104
Total deposits.....	2,077	2,106	2,090	2,067	Time deposits.....	1,003	990	693	693
Total clearings.....	1,631	1,948	2,192	2,553	Four private banks of Italy (millions of lire):				
					Cash.....	1,103	1,138	1,185	1,185
					Bills discounted.....	8,404	8,390	8,872	8,872
					Due from correspondents.....	5,501	5,437	4,975	4,975
					Due to correspondents.....	13,556	13,505	13,628	13,628
					Deposits.....	3,102	3,061	2,926	2,926
Banks of Buenos Aires, Argentina (millions of gold pesos):					Joint-stock banks of Norway (mil-lions of kroner):				
Gold—					Loans and discounts.....	1,268	1,266	1,253	1,410
Bank of the Nation.....	65	67	78	140	Due from foreign banks.....	129	124	102	102
Other banks.....	12	12	13	12	Due to foreign banks.....	86	83	78	98
Other cash—					Rediscounts.....	102	97	100	146
Bank of the Nation.....	126	129	125	158	Deposits.....	1,558	1,557	1,557	1,615
Other banks.....	167	162	184	216	Joint-stock banks of Poland (mil-lions of zlotys):				
Loans and discounts—					Loans and discounts.....	841	837	826	733
Bank of the Nation.....	572	561	569	485	Due from foreign banks.....	36	37	31	32
Other banks.....	884	883	873	770	Due to foreign banks.....	171	181	171	137
Deposits—					Rediscounts.....	150	141	146	148
Bank of the Nation.....	761	761	777	778	Deposits.....	541	540	522	466
Other banks.....	1,011	1,007	1,015	970	Joint-stock banks of Sweden (mil-lions of kronor):				
Chartered banks of Canada (mil-lions of dollars):					Loans and discounts.....	4,197	4,179	4,130	4,128
Gold coin and bullion ¹	61	62	61	68	Foreign bills and credits abroad.....	306	277	259	303
Current loans and discounts.....	1,585	1,572	1,566	1,407	Due to foreign banks.....	117	117	112	125
Money at call and short notice.....	584	577	594	566	Rediscounts.....	202	191	262	215
Public and railway securities.....	462	470	525	500	Deposits.....	3,530	3,530	3,462	3,547
Note circulation.....	190	170	187	176					
Individual deposits.....	2,551	2,578	2,559	2,533					
Gold reserve against Dominion notes.....	60	59	59	77					
Dominion note circulation.....	199	196	210	197					

¹ Not including gold held abroad.

^p Preliminary.

^r Revised.

DISCOUNT RATES OF 34 CENTRAL BANKS

[Rate prevailing November 4, 1929, with date of latest change]

Country	Rate	In effect since—	Country	Rate	In effect since—	Country	Rate	In effect since—	Country	Rate	In effect since—
Austria.....	8½	Sept. 28, 1929	England.....	6	Oct. 31, 1929	Japan.....	5.48	Oct. 10, 1927	Portugal.....	8	July 27, 1926
Belgium.....	5	July 31, 1929	Estonia.....	8	Oct. 3, 1929	Java.....	5½	July 22, 1929	Rumania.....	9½	May 14, 1929
Bulgaria.....	10	July 2, 1929	Finland.....	7	Nov. 16, 1928	Latvia.....	6-7	Apr. 1, 1928	Russia.....	8	Mar. 22, 1927
Chile.....	6	Oct. 22, 1928	France.....	3½	Jan. 19, 1928	Lithuania.....	7	Feb. 1, 1925	South Africa.....	6	Aug. 17, 1929
Colombia.....	8	Oct. 10, 1929	Germany.....	7	Nov. 2, 1929	Netherlands.....	5	Nov. 1, 1929	Spain.....	5½	Dec. 19, 1928
Czechoslovakia.....	5	Mar. 8, 1927	Greece.....	9	Nov. 30, 1928	Norway.....	6	Sept. 27, 1929	Sweden.....	5½	Sept. 27, 1929
Danzig.....	6½	Nov. 2, 1929	Hungary.....	7½	Nov. 4, 1929	Peru.....	7	Oct. 31, 1929	Switzerland.....	3½	Oct. 22, 1925
Denmark.....	5½	Sept. 27, 1929	India.....	7	Oct. 31, 1929	Poland.....	9	Apr. 19, 1929	Yugoslavia.....	6	June 23, 1922
Ecuador.....	10	May 16, 1929	Italy.....	7	Mar. 14, 1929						

Changes.—Bank of Estonia from 7½ to 8 per cent on Oct. 3, 1929; Bank of the Republic of Colombia from 7 to 8 per cent on Oct. 10, 1929; Imperial Bank of India from 5 to 6 per cent on Oct. 10, 1929, and from 6 to 7 per cent on Oct. 31, 1929; Bank of England from 6½ to 6 per cent on Oct. 31, 1929; Reserve Bank of Peru from 6 to 7 per cent on Oct. 31, 1929; Netherlands Bank from 5½ to 5 per cent on Nov. 1, 1929; Bank of Danzig from 7 to 6½ per cent on Nov. 2, 1929; German Reichsbank from 7½ to 7 per cent on Nov. 2, 1929; National Bank of Hungary from 8 to 7½ per cent on Nov. 4, 1929. 1

MONEY RATES IN FOREIGN COUNTRIES

Month	England (London)				Germany (Berlin)			Netherlands (Amsterdam) ¹		Switzerland
	Bankers' acceptances, 3 months	Treasury bills, 3 months	Day-to-day money	Bankers' allowance on deposits	Private discount rate	Money for 1 month	Day-to-day money	Private discount rate	Money for 1 month	Private discount rate
1927										
September	4.32	4.33	3.55	2½	5.90	8.30	6.00	3.56	3.82	3.39
October	4.32	4.33	3.57	2½	6.69	8.72	7.19	4.11	4.29	3.38
November	4.33	4.34	3.02	2½	6.76	8.72	6.03	4.50	4.73	3.39
December	4.31	4.31	3.44	2½	6.87	9.10	7.24	4.49	4.85	3.40
1928										
January	4.19	4.13	3.49	2½	6.27	7.66	5.16	4.29	4.10	3.29
February	4.18	4.18	3.63	2½	6.20	7.30	6.66	3.97	3.80	3.12
March	4.12	4.07	3.63	2½	6.72	7.51	6.81	3.97	3.89	3.20
April	4.02	4.01	3.57	2½	6.71	7.57	6.64	4.18	3.93	3.29
May	3.97	3.95	3.58	2½	6.66	7.80	7.00	4.27	4.17	3.32
June	3.82	3.80	3.26	2½	6.69	8.08	6.37	4.18	4.11	3.40
July	3.99	3.97	3.27	2½	6.74	8.18	7.74	4.10	3.84	3.44
August	4.27	4.26	3.50	2½	6.68	8.19	6.12	4.13	3.90	3.41
September	4.23	4.19	3.55	2½	6.65	8.58	6.65	4.39	4.35	3.38
October	4.35	4.37	3.80	2½	6.57	8.26	6.70	4.40	4.42	3.38
November	4.38	4.30	3.64	2½	6.28	8.15	6.70	4.44	4.74	3.35
December	4.37	4.37	3.22	2½	6.28	8.77	7.30	4.46	4.68	3.32
1929										
January	4.32	4.29	3.41	2½	5.80	7.51	5.13	4.20	4.46	3.28
February	5.05	4.96	4.33	2½-3½	5.80	7.07	6.33	4.39	4.78	3.31
March	5.33	5.30	4.51	3½	6.31	7.30	6.97	4.64	5.05	3.39
April	5.21	5.18	4.43	3½	6.63	7.57	6.85	5.36	5.81	3.45
May	5.21	5.21	4.67	3½	7.49	9.65	9.32	5.37	5.88	3.34
June	5.32	5.35	4.23	3½	7.50	9.89	7.90	5.30	5.30	3.26
July	5.38	5.39	4.54	3½	7.39	9.35	8.21	5.20	4.90	3.19
August	5.47	5.48	4.35	3½	7.18	9.43	7.42	5.06	4.68	3.33
September	5.59	5.63	4.39	3½-4½	7.18	9.48	7.86	5.34	5.33	3.38

Month	Belgium (Brussels)	France (Paris)	Italy (Milan)	Austria (Vienna)		Hungary		Sweden (Stockholm)	Japan (Tokyo)	
	Private discount rate	Private discount rate	Private discount rate	Private discount rate	Money for 1 month	Prime commercial paper	Day-to-day money	Loans up to 3 months	Discounted bills ²	Call money overnight
1927										
September	3.75	2.01	6.81	6¼-6½	7-8½	7¼-8½	6-7½	4-6		2.19-4.38
October	3.87	1.82	6.50	6¼-6½	7½-8¾	7½-8½	6-7¾	4-6		2.19-4.38
November	4.09	2.75	6.27	6¼-6½	7½-8½	7-8½	5½-7¾	4-6		2.74-4.02
December	4.15	2.95	6.00	6½	6¾-8¾	7¼-8½	5½-7¾	4-6		2.19-5.84
1928										
January	4.08	2.81	6.00	5¾-6¼	6¾-8	7¼-8½	5½-7¾	4-6		1.64-5.10
February	3.90	2.75	5.89	5¾-6¼	6¾-7½	7¾-8½	5½-7¾	4-6		1.46-4.20
March	4.10	2.72	5.75	5¾-6¼	6¾-7½	7¼-8½	5-7¾	4-6	6.57-6.94	2.92-4.20
April	4.25	2.62	5.49	5¼-5¾	6¾-7½	7¼-8½	5¼-7¾	4-6	6.57-6.75	2.56-4.12
May	4.25	2.62	5.25	5¼-5¾	6¾-7½	7¼-8½	5¼-7¾	4-6½	6.39-6.75	1.46-4.02
June	4.27	2.90	5.25	5¼-5¾	6¾-8¼	7¼-8½	5¼-7¾	4-6½	6.39-6.57	1.46-4.02
July	4.02	3.12	5.25	5¼-6¼	6¾-8¼	7¼-8½	5¼-7¾	4-6½	6.21-6.57	1.46-4.02
August	4.00	3.23	5.25	6¼-6¾	7¼-8½	7¼-8½	5¼-7¾	4½-6½	6.21-6.39	2.92-4.02
September	3.95	3.26	5.25	6¼-6¾	7¼-8½	7¼-8½	5¼-7¾	4½-6½	6.02-6.39	2.37-4.02
October	3.94	3.37	5.25	6¼	7¼-8½	7¼-9	6½-8¾	4½-6½	6.21-6.39	2.92-4.02
November	3.94	3.37	5.45	6¼	7¼-8½	7¼-9	6½-8¾	4½-6½	6.02-6.21	2.01-4.02
December	3.94	3.41	5.50	6¼-6¾	7¼-8¾	7¼-8¾	6½-8¼	4½-6½	5.84-6.21	1.83-6.57
1929										
January	3.94	3.50	5.83	6¼-6¾	7¼-8¾	7¾-8¾	6¼-8¼	4½-6½	5.84-6.21	1.46-5.84
February	3.94	3.39	6.00	6¼-6¾	7¼-8¾	7¾-8¾	6¼-8¼	4½-6½	5.66-5.84	2.01-4.02
March	3.94	3.37	6.31	6¼-6¾	7¼-8¾	7¾-8¾	6¼-8¼	4½-6½	5.66-5.84	2.19-4.02
April	3.94	3.44	6.75	6¼-6¾	7¾-8¾	8½-9	7-9	4½-6½	5.48-5.66	3.47-4.02
May	3.94	3.49	6.83	7½-7¾	8-9	8½-9½	7-9	4½-6½	5.48-5.66	2.56-4.02
June	3.94	3.50	6.75	7½-7¾	8¼-9	8¾-9¾	7-9	4½-6½	5.48-5.66	2.56-4.02
July	4.00	3.50	6.75	7¼-7¾	8¼-9	8¾-10	* 7-8¼	4½-6½	5.48-5.66	2.74-4.02
August	4.93	3.50	6.85	7¼-7¾	8¼-9	8¾-10¼	7-8	4½-6½	5.48	2.56-4.02
September	4.94	3.50	7.01	7½	8¼-9¼			5½-7		

* Revised.

* Preliminary.

¹ The private discount rate in Amsterdam formerly derived from quotations published in the Frankfurter Zeitung is now derived from quotations published in the Rotterdamsche Bankvereeniging. Preliminary figures, however, for both the private discount rate and money at one month in Amsterdam are derived from quotations published in the Frankfurter Zeitung.

² Revised series; see BULLETIN for July, 1929.

NOTE.—For sources used, methods of quotation, and back figures, see BULLETIN for November, 1926, April, 1927, and July, 1929.

FOREIGN EXCHANGE RATES

[Monthly averages of daily quotations.¹ In cents per unit of foreign currency]

	EUROPE										
	Austria (schilling)	Belgium (belga)	Bulgaria (lev)	Czechoslovakia (crown)	Denmark (krone)	England (pound)	Finland (markka)	France (franc)	Germany (reichsmark)	Greece (drachma)	Hungary (pengő)
Par value.....	14. 07	13. 90	0. 72	(²)	26. 80	486. 65	2. 52	3. 92	23. 82	1. 30	17. 49
1928—October.....	14. 0679	13. 8959	. 7203	2. 9627	26. 6578	484. 9500	2. 5167	3. 9061	23. 8143	1. 2868	17. 4256
1929—March.....	14. 0522	13. 8836	. 7206	2. 9610	26. 6493	485. 2226	2. 5185	3. 9058	23. 7218	1. 2920	17. 4255
April.....	14. 0467	13. 8847	. 7212	2. 9600	26. 6527	485. 3225	2. 5160	3. 9070	23. 7039	1. 2924	17. 4239
May.....	14. 0468	13. 8826	. 7210	2. 9599	26. 6473	485. 0785	2. 5155	3. 9071	23. 7570	1. 2924	17. 4269
June.....	14. 0465	13. 8832	. 7218	2. 9602	26. 6332	484. 8230	2. 5144	3. 9088	23. 8403	1. 2921	17. 4280
July.....	14. 0519	13. 8917	. 7213	2. 9595	26. 6387	485. 1018	2. 5147	3. 9158	23. 8255	1. 2922	17. 4300
August.....	14. 0745	13. 8995	. 7217	2. 9593	26. 6243	484. 8515	2. 5148	3. 9134	23. 8140	1. 2918	17. 4369
September.....	14. 0734	13. 8967	. 7220	2. 9601	26. 6237	484. 8206	2. 5155	3. 9135	23. 8085	1. 2917	17. 4403
October.....	14. 0666	13. 9579	. 7236	2. 9611	26. 7426	486. 9944	2. 5174	3. 9307	23. 8733	1. 2957	17. 4508
	Italy (lira)	Netherlands (florin)	Norway (krone)	Poland (zloty)	Portugal (escudo)	Rumania (leu)	Russia ³ (chervonetz)	Spain (peseta)	Sweden (krona)	Switzerland (franc)	Yugoslavia (dinar)
Par value.....	5. 26	40. 20	26. 80	11. 22	108. 05	0. 60	514. 60	19. 30	26. 80	19. 30	19. 30
1928—October.....	5. 2365	40. 0908	26. 6543	11. 2012	4. 4993	. 6072	⁴ 515. 0000	16. 1798	26. 7378	19. 2447	1. 7585
1929—March.....	5. 2351	40. 0535	26. 6609	11. 1923	4. 4495	. 5964	⁴ 515. 0000	15. 0656	26. 7101	19. 2333	1. 7563
April.....	5. 2355	40. 1409	26. 6644	11. 1910	4. 4645	. 5955	⁴ 515. 0000	14. 7495	26. 7054	19. 2468	1. 7563
May.....	5. 2357	40. 1984	26. 6550	11. 1859	4. 4738	. 5946	⁴ 515. 0000	14. 2245	26. 7181	19. 2572	1. 7570
June.....	5. 2313	40. 1512	26. 6993	11. 1858	4. 4854	. 5935	⁴ 515. 0000	14. 1315	26. 7623	19. 2409	1. 7568
July.....	5. 2302	40. 1362	26. 6471	11. 1866	4. 4822	. 5937	⁴ 515. 0000	14. 5070	26. 8020	19. 2347	1. 7559
August.....	5. 2286	40. 0597	26. 6325	11. 2039	4. 4668	. 5940	⁴ 515. 0000	14. 6664	26. 7865	19. 2379	1. 7558
September.....	5. 2300	40. 0897	26. 6299	11. 2011	4. 4809	. 5937	⁴ 515. 0000	14. 7559	26. 7831	19. 2641	1. 7563
October.....	5. 2357	40. 2511	26. 7433	11. 1986	4. 4929	. 5955	⁴ 515. 0000	14. 5046	26. 8412	19. 3402	1. 7617
	NORTH AMERICA				SOUTH AMERICA						
	Canada (dollar)	Cuba (peso)	Mexico (peso)	Argentina (peso-gold)	Bolivia ⁴ (boliviano)	Brazil (milreis)	Chile (peso)	Colombia ⁴ (peso)	Ecuador ⁴ (sucre)	Peru ⁴ (lira)	Uruguay (peso)
Par value.....	100. 00	100. 00	49. 85	96. 48	36. 50	11. 96	12. 17	97. 33	20. 00	486. 65	103. 42
1928—October.....	99. 9667	99. 9270	47. 5742	95. 5933	36. 4900	11. 9477	12. 0843	97. 5146	20. 0000	399. 0385	101. 8431
1929—March.....	99. 4030	100. 0261	48. 0515	95. 5624	36. 5000	11. 8235	12. 0645	96. 7669	20. 0000	400. 0000	101. 6177
April.....	99. 2394	99. 9721	48. 2419	95. 5563	36. 5000	11. 8348	12. 0644	96. 3900	20. 0000	400. 0000	99. 1120
May.....	99. 3012	100. 0101	47. 9715	95. 5184	36. 5000	11. 8634	12. 0423	96. 3900	20. 0000	400. 0000	97. 7018
June.....	99. 1632	99. 9522	47. 8536	95. 2760	36. 5000	11. 8553	12. 0362	96. 4320	20. 0000	400. 0000	96. 6934
July.....	99. 4760	99. 9083	48. 0883	95. 3678	36. 5000	11. 8579	12. 0448	96. 5712	20. 0000	400. 0000	97. 5731
August.....	99. 4390	99. 9655	48. 5676	95. 3901	36. 0000	11. 8598	12. 0539	96. 3900	20. 0000	400. 0000	98. 5723
September.....	99. 2420	99. 9301	48. 4325	95. 3409	36. 0000	11. 8577	12. 0642	96. 3900	20. 0000	400. 0000	97. 8166
October.....	98. 8341	99. 9396	48. 1571	95. 0015	36. 0000	11. 8715	12. 0631	96. 3900	20. 0000	400. 0000	97. 6941
	SOUTH AMERICA—continued	ASIA									AFRICA
	Venezuela ⁴ (bolivar)	China (Mexican dollar) ⁴	China (Shanghai tael) ⁴	China (Yuan dollar) ⁴	Hong Kong (dollar) ⁴	India (rupee)	Japan (yen)	Java ⁴ (florin)	Straits Settlements (Singapore dollar)	Turkey (Turkish pound)	Egypt (Egyptian pound)
Par value.....	19. 30	39. 46	54. 82	39. 03	39. 18	36. 50	49. 85	40. 20	56. 78	439. 65	494. 31
1928—October.....	19. 2500	46. 5591	64. 0374	46. 1963	49. 9471	36. 4541	46. 2019	40. 1161	56. 3404	50. 8354	497. 4003
1929—March.....	19. 2500	44. 8856	62. 2304	44. 6205	48. 8437	36. 3623	44. 5203	39. 9396	56. 0752	48. 9973	497. 6292
April.....	19. 2550	44. 2260	61. 2516	43. 9839	48. 6963	36. 3107	44. 6176	39. 9896	55. 9615	49. 0731	497. 6630
May.....	19. 3300	43. 2824	59. 6191	42. 8005	48. 3424	36. 1817	44. 6460	40. 1000	55. 9824	49. 5304	497. 4362
June.....	19. 3800	42. 1116	57. 7650	41. 4866	47. 8613	36. 0292	43. 8830	40. 0500	55. 9284	47. 8000	497. 1490
July.....	19. 3800	41. 6354	57. 8368	41. 5521	48. 1230	35. 9742	45. 5571	40. 0346	55. 8775	47. 9673	497. 4293
August.....	19. 3100	41. 4362	57. 6873	41. 3649	47. 9432	35. 9714	46. 6928	39. 9600	55. 8666	47. 6685	497. 2178
September.....	19. 2600	40. 2639	56. 0436	40. 0963	47. 7035	36. 0324	47. 2731	40. 0000	55. 9884	-----	-----
October.....	19. 2500	39. 3666	54. 7721	39. 1055	44. 1532	36. 1646	47. 7599	40. 1377	56. 2211	-----	-----

¹ Based on noon buying rates for cable transfers in New York as certified to the Treasury by the Federal Reserve Bank of New York, in pursuance of the provisions of sec. 522 of the tariff act of 1922. For back figures see BULLETIN for January, 1928, and January, 1929.
² The National Bank of Czechoslovakia opened Apr. 1, 1928, under the obligation "to maintain the relation of the Czechoslovak crown to the undepreciated foreign gold currencies at the level of the last two years." During the period April, 1924, to March, 1928, inclusive, the range of the Czechoslovak crown was between 2.9193 cents and 3.0312 cents; the quotation on Mar. 31, 1928, was 2.9616 cents.
³ Averages based on daily quotations of closing rates as published by New York Journal of Commerce.
⁴ Nominal.
⁵ Silver currency. The figure given for parity represents gold value of unit in October, 1929, computed by multiplying silver content of unit by New York average price of silver for October, 1929, which was \$0.50226 per fine ounce. On the same basis, parity in October, 1928, for the Chinese-Mexican dollar was 45.88 cents; for the Shanghai tael, 63.74 cents; for the Yuan dollar, 45.38 cents; and for the Hong Kong dollar, 45.55 cents.

PRICE MOVEMENTS IN PRINCIPAL COUNTRIES

WHOLESALE PRICES

ALL COMMODITIES

Month	United States (Bureau of Labor Statistics) ¹	EUROPE													
		Austria (gold basis)	Belgium	Bulgaria	Czechoslovakia	Denmark	England (Board of Trade)	Finland (gold basis) ¹	France		Germany (Federal Statistical Bureau)	Hungary (gold basis)	Italy (Bachi)	Netherlands	Norway (Oslo)
									Statistical Bureau ²	Federal Reserve Board					
1928															
January.....	96	129	851	2,782	982	153	141	102	628	569	139	135	463	154	157
February.....	96	128	848	2,820	985	152	140	102	633	569	138	134	461	151	157
March.....	96	129	848	2,839	978	153	141	103	645	587	139	135	464	153	157
April.....	97	131	847	2,891	984	154	143	103	650	601	140	136	464	153	156
May.....	99	131	844	2,906	987	155	144	103	660	617	141	135	465	152	156
June.....	98	133	844	2,866	986	155	143	103	649	621	141	135	462	152	158
July.....	98	133	841	2,911	979	155	141	103	646	613	142	133	453	148	160
August.....	99	133	831	2,790	996	154	139	103	645	607	142	134	456	145	153
September.....	100	131	830	2,805	986	151	138	101	637	598	140	137	458	146	153
October.....	98	129	835	2,844	971	150	138	101	640	585	140	138	463	146	151
November.....	97	128	847	2,875	957	151	138	101	652	580	140	137	466	148	150
December.....	97	127	855	2,865	955	151	138	101	651	588	140	135	464	148	150
1929															
January.....	97	128	867	2,889	953	151	138	100	657	591	139	³ 132	461	146	149
February.....	97	130	865	2,945	950	159	138	100	660	599	139	³ 136	463	146	150
March.....	98	133	869	2,974	964	154	140	100	654	616	140	³ 136	461	147	150
April.....	97	134	862	2,991	963	150	139	99	648	621	137	³ 135	455	144	148
May.....	96	135	851	3,034	940	148	136	98	643	606	136	³ 123	454	142	146
June.....	96	134	848	4,101	917	146	136	98	629	598	135	³ 122	447	141	147
July.....	98	132	858	3,061	922	149	137	97	624	593	138	³ 119	440	141	149
August.....	98	132	850	2,917	916	150	136	97	598	581	138	³ 114	437	142	148
September.....	98	128	846	.....	902	150	136	96	607	571	138	.....	437	142	148
October.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Month	EUROPE—continued					Canada ¹	Peru	ASIA AND OCEANIA					AFRICA		
	Poland ⁴	Russia ⁵	Spain	Sweden	Switzerland ¹			Australia	China (Shanghai)	Dutch East Indies	India (Calcutta)	Japan (Tokyo)	New Zealand	Egypt (Cairo)	South Africa
1928															
January.....	100	171	166	148	145	97	199	163	163	150	145	169	150	114	120
February.....	99	171	166	147	144	97	195	160	164	149	144	169	147	114	.....
March.....	102	171	165	149	145	98	193	160	163	149	144	169	147	116	.....
April.....	105	171	166	151	146	98	197	162	163	150	146	170	147	126	121
May.....	103	171	164	152	145	98	195	159	165	151	147	171	148	117	.....
June.....	103	172	164	151	145	97	195	158	160	150	145	169	148	117	.....
July.....	102	172	164	150	144	96	193	157	159	150	148	169	148	117	119
August.....	100	173	166	149	144	95	190	154	157	148	143	170	147	119	.....
September.....	100	173	168	146	145	96	188	153	156	149	142	174	148	120	.....
October.....	100	176	174	145	145	95	187	152	159	149	143	174	149	126	120
November.....	100	176	176	145	145	95	186	152	159	149	146	173	150	129	.....
December.....	100	177	175	145	144	95	185	154	160	149	145	174	149	126	.....
1929															
January.....	98	177	171	144	143	95	186	157	160	150	145	172	147	125	120
February.....	99	177	175	145	143	96	186	156	162	150	144	171	146	122	.....
March.....	99	178	174	144	142	96	189	157	164	151	143	171	146	123	.....
April.....	98	179	174	141	140	94	185	158	161	149	140	170	146	120	117
May.....	99	180	171	140	139	92	186	156	162	150	139	169	147	114	.....
June.....	99	181	170	139	139	93	186	158	163	149	138	168	147	108	.....
July.....	96	180	169	140	143	96	187	159	163	149	142	166	148	109	115
August.....	.....	180	170	141	143	98	187	160	165	.....	143	165	.....	112	.....
September.....	.....	.....	.....	140	142	97	186	163	167	.....	143	.....	.....	113	.....
October.....	.....	.....	.....	.....	.....	.....	186	.....	.....	.....	.....	.....	.....	.....	.....

¹ New index—1926=100.² New official index.⁴ 1927=100.⁵ First of month figures.

³ New official index. Full description is given in the Bulletin de la Statistique Générale de la France for January-March, 1923; brief description and back figures to January, 1926, are given in the issue for July-September, 1929. The index covers 128 commodities and is computed on a 1913 base.

NOTE.—These indexes are in most cases published here on their original bases, usually 1913 or 1914, as determined by the various foreign statistical offices which compile the index numbers and furnish them to the Federal Reserve Board. In several cases, however, viz, Netherlands, Japan, New Zealand, and South Africa, they have been recomputed from original bases (1901-1910; October, 1900; 1909-1913, 1910) to a 1913 base. Index numbers of commodity groups for most of the countries are also available in the office of the Division of Research and Statistics and may be had upon request. Further information as to base periods, sources, numbers of commodities, and the period of the month to which the figures refer may be found on pages 769-770 of the BULLETIN for November, 1927.

WHOLESALE PRICES—Continued

GROUPS OF COMMODITIES

ENGLAND—BOARD OF TRADE

	1929					1928
	Sept.	Aug.	July	June	May	Sept.
All commodities.....	136	136	137	136	136	138
Total food.....	143	144	149	143	144	148
Cereals.....	141	146	143	132	133	141
Meat and fish.....	143	145	144	144	146	141
Other foods.....	145	144	158	155	152	160
Industrial products.....	132	131	131	131	132	132
Iron and steel.....	115	115	115	115	115	112
Other minerals and metals.....	121	119	119	119	119	112
Cotton.....	154	154	153	154	155	158
Other textiles.....	147	149	150	151	154	162
Miscellaneous.....	138	134	136	134	134	141

FRANCE—STATISTICAL BUREAU¹

All commodities.....	607	598	624	629	643	637
Farm and food products.....	552	524	578	584	607	581
Animal products.....	572	532	522	516	521	533
Vegetable products.....	499	484	563	565	614	586
All industrial products.....	656	664	664	668	675	685
Minerals and metals.....	561	562	561	560	560	531
Textiles.....	724	745	748	758	771	804
Hides and leather.....	452	442	445	450	453	616
Chemical products.....	603	593	579	586	598	577
Rubber.....	117	129	133	126	129	115
Paper.....	677	677	677	677	677	674
Lumber.....	969	969	969	969	968	862
Cement and brick, etc.....	636	636	636	606	606	565

¹ New official index. Full description is given in the Bulletin de la Statistique Générale de la France for January–March, 1928; brief description and back figures to January, 1926, are given in the issue for July–September, 1929. The index covers 126 commodities and is computed on a 1913 base.

GERMANY—FEDERAL STATISTICAL BUREAU

All commodities.....	138	138	138	135	136	140
Total agricultural products.....	133	133	132	125	126	134
Vegetable foods.....	125	130	131	120	125	134
Cattle.....	134	134	134	127	120	119
Animal products.....	149	140	136	130	130	149
Fodder.....	120	123	127	122	133	139
Provisions.....	131	130	128	124	125	131
Total industrial raw materials and semifinished products.....	132	132	131	132	131	134
Coal.....	137	137	137	136	136	133
Iron.....	131	131	131	130	128	128
Nonferrous metals.....	118	118	118	118	118	105
Textiles.....	136	137	139	141	144	155
Hides and leather.....	122	122	124	123	120	149
Chemicals.....	127	127	126	127	126	127
Artificial fertilizers.....	82	82	81	87	87	81
Technical oils and fats.....	134	129	127	125	126	125
Rubber.....	28	29	31	30	30	25
Paper materials and paper.....	151	152	152	151	151	151
Building material.....	162	161	159	158	157	160
Total industrial finished products.....	157	158	157	158	158	160
Producers' goods.....	140	140	139	138	138	138
Consumers' goods.....	170	171	171	172	172	176

ITALY—CHAMBER OF COMMERCE OF MILAN

All commodities.....	472	474	477	480	485	488
Total food.....	516	527	538	550	555	549
Vegetable foods.....	504	524	535	544	554	577
Animal foods.....	532	532	541	558	555	515
All industrial products.....	455	453	454	454	458	464
Textiles.....	413	412	411	412	420	446
Chemicals.....	438	438	438	437	441	435
Minerals and metals.....	447	446	445	446	447	428
Building materials.....	543	544	543	543	541	516
Other vegetable products.....	464	466	467	469	488	519
Sundries.....	509	505	506	502	501	550

SWEDEN—BOARD OF TRADE

	1929					1928
	Sept.	Aug.	July	June	May	Sept.
All commodities.....	140	141	140	139	140	146
Vegetable products.....	126	130	129	125	126	134
Animal products.....	140	137	138	137	137	145
Fuels and oils.....	122	121	120	120	118	112
Raw materials for manufacture in iron and metal industry.....	119	118	118	118	118	115
Paper pulp and paper.....	163	163	163	163	163	161
Raw materials for manufacture in leather industry.....	124	125	124	128	126	145
Raw and manufactured chemicals.....	162	156	154	152	153	164
Raw materials.....	132	136	136	134	134	139
Semifinished materials.....	142	144	143	139	140	147
Finished materials.....	143	141	141	142	143	149
Producers' goods.....	133	134	134	133	133	137
Consumers' goods.....	146	146	145	144	145	154

CANADA—DOMINION BUREAU OF STATISTICS¹

All commodities.....	97	98	96	93	92	96
Vegetable products.....	98	99	96	82	82	87
Animal products.....	107	*108	108	108	109	114
Textiles.....	91	91	92	92	92	94
Wood and paper products.....	94	94	94	94	94	99
Iron and its products.....	94	94	94	94	94	93
Nonferrous metals.....	98	99	99	99	99	*92
Nonmetallic minerals.....	93	94	93	93	92	*92
Chemicals.....	96	96	96	96	95	95

¹ New index—1926=100.

* Revised.

AUSTRALIA—BUREAU OF CENSUS AND STATISTICS

All commodities.....	164	160	159	158	156	153
Metals and coal.....	174	174	174	174	174	174
Textiles.....	144	139	138	143	145	152
Agricultural products.....	181	158	176	158	154	157
Dairy products.....	153	153	156	160	159	147
Groceries and tobacco.....	164	163	163	164	164	165
Meat.....	153	139	135	150	145	116
Building materials.....	161	160	160	161	161	161
Chemicals.....	189	189	189	189	189	186

INDIA (CALCUTTA)—DEPARTMENT OF STATISTICS

	1929					1928
	Aug.	July	June	May	Apr.	Aug.
All commodities.....	143	142	138	139	140	143
Cereals.....	128	126	122	120	119	133
Pulses.....	149	150	143	141	147	154
Tea.....	132	159	122	157	157	143
Other foods.....	172	170	158	161	154	143
Oil seeds.....	164	152	140	142	148	143
Raw jute.....	99	95	94	95	97	111
Jute manufactures.....	130	122	120	124	125	160
Raw cotton.....	146	141	144	148	152	154
Cotton manufactures.....	162	160	160	160	161	161
Other textiles.....	133	133	134	134	136	139
Hides and skins.....	105	102	111	109	120	115
Metals.....	130	130	130	129	130	124
Other articles.....	146	140	141	141	143	140

RETAIL FOOD PRICES AND COST OF LIVING

RETAIL FOOD PRICES

[Pre-war=100]

Month	United States (51 cities)	EUROPEAN COUNTRIES														OTHER COUNTRIES				
		Austria (Vienna)	Belgium	Bulgaria	Czechoslovakia	England	Estonia	France (Paris)	Germany	Greece (Athens)	Italy (Milan)	Netherlands	Norway	Russia	Switzerland	Canada	Australia	India (Bombay)	New Zealand	South Africa
1927																				
September	151	119	206	2,615	910	157	111	532	151	2,070	509	163	174	198	158	147	157	151	143	117
October	153	120	210	2,626	907	161	112	520	152	2,071	509	-----	173	198	158	148	159	148	143	119
November	153	119	211	2,587	905	163	113	500	152	2,086	510	-----	171	199	159	149	157	147	144	119
December	153	118	212	2,618	913	163	113	523	153	2,101	513	167	171	200	159	151	155	149	146	119
1928																				
January	152	118	211	2,660	913	162	118	530	152	2,146	2,140	-----	170	201	158	151	154	151	147	119
February	149	117	207	2,701	910	159	118	522	151	2,144	2,141	-----	170	202	157	149	152	146	145	118
March	148	116	201	2,713	902	155	122	524	151	2,143	2,141	166	171	203	156	147	153	142	145	118
April	149	117	202	2,766	905	155	126	532	152	2,144	2,141	-----	171	203	156	146	154	140	144	119
May	151	117	197	2,778	908	156	126	546	151	2,145	2,140	-----	172	205	156	146	154	140	146	120
June	150	122	200	2,740	928	157	126	513	152	2,144	2,142	169	170	206	157	145	154	142	147	114
July	150	119	202	2,783	943	156	130	511	154	2,138	2,140	-----	173	211	157	146	152	143	147	116
August	151	120	205	2,667	943	156	129	511	156	2,134	2,138	-----	170	211	156	149	150	142	146	115
September	155	120	210	2,682	928	156	124	510	153	2,132	2,140	166	164	210	157	150	150	141	147	115
October	153	120	215	2,719	907	157	125	515	152	2,137	2,141	-----	163	211	158	152	149	142	149	115
November	154	120	223	2,749	900	159	126	519	152	2,137	2,144	-----	161	213	158	152	150	144	150	118
December	153	119	222	2,739	905	160	125	521	153	2,133	2,145	164	161	215	158	152	152	145	152	118
1929																				
January	151	120	221	2,742	900	159	133	522	153	2,133	2,147	-----	158	216	157	152	161	146	149	115
February	151	123	221	2,816	911	156	138	522	156	2,135	2,148	-----	157	218	157	150	161	146	148	115
March	150	121	215	2,843	913	157	142	523	159	2,135	2,155	163	158	223	156	151	160	146	146	117
April	149	119	212	2,860	901	150	137	525	154	2,136	2,151	-----	156	230	155	148	162	145	147	115
May	150	120	211	2,900	906	149	136	527	154	2,147	-----	-----	156	-----	154	147	160	143	147	115
June	152	124	210	3,759	907	147	139	527	154	2,148	-----	-----	156	-----	156	147	161	133	147	115
July	156	123	215	2,926	925	149	132	523	156	2,144	-----	-----	157	-----	155	148	160	145	146	116
August	157	124	227	2,789	900	153	-----	523	155	2,144	-----	-----	161	-----	156	157	161	146	146	114
September	158	122	-----	-----	-----	154	-----	522	154	2,146	-----	-----	160	-----	-----	157	162	146	147	114

COST OF LIVING

Month	Massachusetts	EUROPEAN COUNTRIES														OTHER COUNTRIES				
		Belgium	Czechoslovakia	England	Finland	France (Paris)	Germany	Greece (Athens)	Hungary	Italy (Milan)	Netherlands	Norway	Poland	Spain	Sweden	Switzerland	Canada	Australia	India (Bombay)	South Africa
1927																				
September	155	202	736	165	1,230	507	147	1,955	119	537	167	197	99	187	-----	161	149	157	154	131
October	155	207	734	167	1,237	-----	150	1,956	120	536	-----	-----	101	189	172	161	150	-----	151	132
November	157	208	735	169	1,251	-----	151	1,964	120	536	-----	-----	103	188	-----	162	150	-----	150	132
December	157	208	740	169	1,243	498	151	1,978	120	531	170	195	103	186	-----	162	151	159	151	132
1928																				
January	157	210	741	168	1,216	-----	151	1,955	121	545	-----	-----	102	178	171	161	151	-----	154	132
February	156	207	739	166	1,206	-----	151	1,954	120	545	-----	-----	100	175	-----	161	150	-----	148	131
March	155	204	737	164	1,214	507	151	1,953	119	545	169	193	101	176	-----	160	149	157	145	132
April	155	205	741	164	1,212	-----	151	1,953	121	545	-----	-----	102	175	171	160	149	-----	144	133
May	156	202	743	164	1,207	-----	151	1,953	121	544	-----	-----	103	171	-----	160	149	-----	147	133
June	155	204	741	165	1,219	105	151	1,952	121	545	170	193	103	172	-----	161	148	160	146	132
July	157	205	753	165	1,236	-----	153	1,948	121	543	-----	-----	104	173	173	161	148	-----	146	131
August	157	207	761	165	1,258	-----	154	1,946	126	542	-----	-----	104	174	-----	161	150	-----	146	131
September	158	211	756	165	1,249	105	152	1,945	127	543	169	185	104	178	-----	161	151	157	145	131
October	157	215	735	166	1,254	-----	152	1,948	126	544	-----	-----	104	179	172	162	152	-----	146	131
November	157	220	730	167	1,262	-----	152	1,948	125	546	-----	-----	106	181	-----	162	152	-----	147	132
December	157	219	734	168	1,260	108	153	1,946	126	547	168	183	106	187	-----	162	152	157	148	131
1929																				
January	157	219	737	167	1,242	-----	153	1,948	126	548	-----	-----	106	184	170	161	152	-----	149	131
February	156	220	745	165	1,232	-----	154	1,950	127	548	-----	-----	108	183	-----	161	151	-----	149	131
March	157	217	754	166	1,229	111	157	1,949	127	553	169	180	106	184	-----	161	152	164	149	132
April	157	215	746	162	1,219	-----	154	1,948	125	550	-----	-----	106	184	171	159	150	-----	148	131
May	157	215	744	161	1,210	-----	154	1,948	126	548	-----	-----	106	182	-----	160	151	-----	147	136
June	156	215	744	160	1,215	113	153	1,948	126	549	169	179	104	179	-----	161	149	-----	147	135
July	157	218	761	161	1,223	-----	154	1,948	124	548	-----	-----	105	177	169	161	150	-----	148	131
August	159	226	751	163	1,232	-----	154	1,946	121	546	-----	-----	105	178	-----	162	155	-----	149	131
September	158	-----	-----	164	1,230	113	154	-----	-----	547	-----	-----	105	-----	-----	155	-----	-----	149	131

¹ 1921=100. ² First of month figures. ³ Revised on a gold basis. ⁴ Amsterdam only; 1911-1913=100. ⁵ 1927=100.

NOTE.—Information as to the number of foods and items included, the original base periods, and sources may be found on page 276 of the April, 1925, issue of the BULLETIN.

LAW DEPARTMENT

Philippine Government funds as time or demand deposits.

The Federal Reserve Board has recently been requested to rule on the question whether a deposit consisting of Philippine Government funds made in a member bank of the Federal reserve system under the following circumstances is a time deposit or a demand deposit: The deposit was made by the Bureau of Insular Affairs of the War Department in an account entitled "Treasurer of the Philippine Islands Treasury Certificate Fund Account Time Deposit." In the preliminary correspondence with the depository member bank with reference to this deposit, a letter from the Acting Chief of the Bureau of Insular Affairs states, "You will note that the regulations state that the deposits are subject to 30 days' notice of withdrawal," and the "regulations" referred to contain a provision that "deposits are subject to withdrawal only after 30 days' notice." The contract between the bank and the War Department, however, contains no reference to preliminary correspondence or the regulations referred to and states that the Government of the Philippine Islands reserves the right to terminate the agreement at any time without notice or liability. The contract also states that the bank agrees "to promptly honor and pay such checks or drafts as the said Government or its duly authorized agent may draw against said deposits; and to pay over all balances * * * when called upon to do so."

After a careful consideration of this question, the Federal Reserve Board is of the opinion that deposits made under the circumstances related can not be considered time deposits, but are demand deposits and subject to a corresponding reserve. The board's Regulation D, in defining a time deposit open account, requires a written contract by the terms of which neither the whole nor any part of such deposit may be withdrawn except on a given date not less than 30 days after the deposit or on not less than 30 days' written notice. In the case under consideration, the contract itself contains no such provisions and neither the preliminary correspondence nor the "regulations" are incorporated into the contract so as to be made a part thereof. It is a general rule in the interpretation of contracts that where preliminary negotiations are consummated by a written agreement, the writing supersedes all previous understandings and the intention of the parties must be ascertained therefrom.

The contract itself seems clearly to contemplate a deposit withdrawable on demand. Furthermore, attention is called to the fact that even the "regulations" referred to do not state that *written* notice is to be given 30 days or more before withdrawals. Under the board's Regulation D such written notice must not only be required by the contract but must actually be given before each withdrawal.

Right of a national bank to borrow securities from its trust department.

An inquiry has recently been received by the Federal Reserve Board as to whether it would be illegal or unethical for a national bank to borrow Government securities from its trust department for the purpose of obtaining loans thereon at a Federal reserve bank.

In the opinion of the Federal Reserve Board, such a practice would be both illegal and unethical. It would be illegal because it would violate that provision of section 11(k) of the Federal reserve act requiring national banks to segregate all assets held in any fiduciary capacity from the general assets of the bank, and because it would violate the well-established rules of equity jurisprudence, forbidding a trustee to use trust funds or assets for his own benefit. It would be unethical for obvious reasons.

It was suggested that bonds in the trust department might be loaned to the bank if other securities are pledged with the trust department, in view of the following provision of section 11(k) of the Federal reserve act:

Funds deposited or held in trust by the bank *awaiting investment* shall be carried in a separate account and shall not be used by the bank in the conduct of its business unless it shall first set aside in the trust department United States bonds or other securities approved by the Federal Reserve Board.

That provision, however, applies only to trust funds awaiting investment and clearly does not apply to securities in which trust funds have actually been invested.

Discretion of Federal Reserve Board in approving organization of foreign banking corporations.

There was published in the July, 1929, number of the FEDERAL RESERVE BULLETIN, at page 508, a copy of the opinion of the Court of Appeals of the District of Columbia in the case of *United States ex rel. Apfel et al. v.*

Andrew W. Mellon et al. upholding the authority of the Federal Reserve Board to exercise its discretion in the matter of approving or disapproving the organization of corporations pursuant to the provisions of section 25(a) of the Federal reserve act, to engage in international or foreign banking or international or foreign financial operations. Following the decision of the Court of Appeals of the District of Columbia a petition for a writ of certiorari was filed in the Supreme Court of the United States by the complainants in the case. The Supreme Court on October 21 denied this petition. This refusal of the Supreme Court of the United States to review the decision of the court of appeals concludes the case, and leaves as the final expression of the courts on the subject the decision of the Court of Appeals of the District of Columbia upholding the board's authority in the matter.

CHANGES IN MEMBERSHIP

STATE BANK MEMBERSHIP

The following list shows the changes affecting State bank membership during the month ended October 21, 1929, on which date 1,151 State institutions were members of the system:

Date	Federal reserve district	Capital
ADMISSIONS		
No. 1—BOSTON		
1929 Sept. 24	Day Trust Co., Boston, Mass.....	\$2,500,000
No. 2—NEW YORK		
Oct. 16	Caleb Heathcote Trust Co., Scarsdale, N. Y.	200,000
No. 4—CLEVELAND		
Sept. 27	Farmers Bank and Savings Co., Pomeroy, Ohio..	50,000
CHANGES		
No. 1—BOSTON		
Oct. 3	Hadley Falls Trust Co., Holyoke, Mass., voluntary withdrawal.....	750,000
No. 2—NEW YORK		
Oct. 14	Ridgewood Trust Co., Ridgewood, N. J., consolidated with the First National Bank of Ridgewood under title of the First National Bank & Trust Co.....	150,000
Oct. 11	The International Union Bank, New York, N. Y., title changed to International Union Bank & Trust Co.....	
No. 3—PHILADELPHIA		
Oct. 19	Milford Trust Co., Milford, Del., voluntary withdrawal.....	100,000
No. 5—RICHMOND		
Sept. 23	Farmers Bank & Trust Co., Forest City, N. C., voluntary withdrawal.....	250,000
No. 7—CHICAGO		
Oct. 2	Farmers Savings Bank, Barnes City, Iowa, closed.....	50,000
Oct. 10	Sibley State Bank, Sibley, Iowa, voluntary withdrawal.....	50,000
No. 11—DALLAS		
Oct. 15	First State Bank, Celina, Tex., voluntary withdrawal.....	25,000

NATIONAL BANK MEMBERSHIP

The following list shows reported changes (except suspensions and insolvencies) affecting national bank membership, concerning which information became available between September 24 and October 21, 1929:

Date	Federal reserve district	Capital
No. 1—BOSTON		
1929 Oct. 1	First National Bank, Greenfield, Mass., title changed to First National Bank & Trust Co. of Greenfield.....	
Oct. 11	Springfield National Bank, Springfield, Mass. And Chapin National Bank of Springfield Consolidated under charter of Springfield National Bank and Title of Springfield Chapin National Bank & Trust Co.....	\$1,000,000 500,000
Oct. 18	Second National Bank, Barre, Mass., primary organization.....	1,500,000
Oct. 18	North Brookfield National Bank, North Brookfield, Mass., primary organization.....	50,000 25,000
No. 2—NEW YORK		
Sept. 30	First National Bank of Yonkers, N. Y. And Bryn Mawr-Nepperhan National Bank. And Yonkers Trust Co., Yonkers, a nonmember bank..... Consolidated under charter of First National Bank & Trust Co. of Yonkers.....	600,000 100,000 500,000 1,000,000
Sept. 30	Southside National Bank of Elmira, N. Y., primary organization.....	100,000
Sept. 20	City National Bank & Trust Co., Bridgeport, Conn. Succeeded by Bridgeport City Bank, Bridgeport, Conn., a nonmember bank.....	1,000,000
Oct. 2	Newton National Bank, New York, N. Y., primary organization.....	200,000
Oct. 15	Second National Bank & Trust Co., Oswego, N. Y. And First National Bank, Oswego, N. Y. Consolidated under charter of First National Bank and under title of First and Second National Bank & Trust Co.....	150,000 200,000 400,000
Oct. 14	First National Bank, Ridgewood, N. J. And Ridgewood Trust Co., Ridgewood, N. J., a member bank..... Consolidated under title of First National Bank & Trust Co. of Ridgewood.....	100,000 150,000 400,000
No. 3—PHILADELPHIA		
Oct. 4	Citizens National Bank & Trust Co., Blossburg, Pa., primary organization.....	125,000
Oct. 11	Drovers & Merchants National Bank, Philadelphia, Pa. Absorbed by Bankers Trust Co., Philadelphia, Pa., a nonmember bank.....	1,000,000
No. 5—RICHMOND		
Sept. 21	Citizens National Bank, Raleigh, N. C. Succeeded by Citizens Bank, Raleigh, N. C., a nonmember bank.....	750,000
Sept. 21	Murchison National Bank, Wilmington, N. C. Succeeded by Murchison Bank, Wilmington, N. C., a nonmember bank.....	1,000,000
Sept. 21	American National Bank & Trust Co., Greensboro, N. C. Succeeded by American Bank & Trust Co., a nonmember bank.....	1,000,000
Sept. 21	First National Bank, Rocky Mount, N. C. Succeeded by Bank of Rocky Mount, a nonmember bank.....	262,500
Aug. 30	First National Bank of Roanoke Rapids, N. C. Absorbed by Roanoke Bank & Trust Co., Rosemary, N. C., a nonmember bank.....	100,000
No. 6—ATLANTA		
Oct. 11	American National Bank in Winter Haven, Fla., primary organization.....	100,000
Oct. 16	First National Bank of Brooksville, Fla. Succeeded by First National Bank in Brooksville, Fla.....	50,000
No. 7—CHICAGO		
Sept. 23	First National Bank, Chesaning, Mich. Absorbed by Chesaning State Bank, a nonmember bank.....	50,000

Date	Federal reserve district	Capital
No. 7—CHICAGO—Continued		
Sept. 27	First National Bank of Racine, Wis. And Manufacturers National Bank & Trust Co., Racine, Wis. Consolidated under charter of First National Bank and title of First National Bank & Trust Co. of Racine.	\$500,000 300,000
Sept. 28	First National Bank, Charles City, Iowa. Absorbed by Security Trust & Savings Bank, Charles City, Iowa, a nonmember bank.	1,000,000 100,000
Sept. 26	First National Bank, Rockwell City, Iowa. Absorbed by Union State Bank, Rockwell City, Iowa, a nonmember bank.	50,000
Sept. 30	Franklin National Bank, Franklin, Ind., primary organization.	50,000
Oct. 5	Terminal National Bank, Chicago, Ill., primary organization.	750,000
No. 8—ST. LOUIS		
Sept. 27	Plaza National Bank, St. Louis, Mo., primary organization.	300,000
July 13	First National Bank, Logosotee, Ind. Succeeded by Union Bank, a nonmember bank.	25,000
Oct. 7	First National Bank, Versailles, Mo. Succeeded by First National Bank in Versailles, Mo.	30,000
Sept. 12	First National Bank, Kenton, Tenn. Succeeded by Kenton Banking Co., Kenton, Tenn., a nonmember bank.	30,000 25,000
May 28	First National Bank, Helena, Ark. Absorbed by Interstate National Bank, Helena, Ark.	200,000
No. 9—MINNEAPOLIS		
Aug. 5	First National Bank of Amboy, Minn. Succeeded by First National Bank in Amboy, Minn.	50,000
Oct. 1	First National Bank of Savage, Mont. Absorbed by Sidney National Bank, Sidney, Mont.	25,000
Sept. 19	Brookings National Bank, Brookings, S. Dak. Succeeded by Brookings County Bank, Brookings, S. Dak., a nonmember bank.	50,000
Oct. 9	First National Bank, Lake Benton, Minn. Absorbed by National Citizens Bank, Lake Benton, Minn.	25,000
Oct. 14	National Park Bank in Livingston, Mont. Succession to National Bank of Livingston.	100,000 100,000
Oct. 15	American National Bank & Trust Co., Valley City, N. Dak. Succession to Middle West Trust Co. and American Exchange Bank, nonmember banks.	100,000
Aug. 1	American National Bank, Little Falls, Minn. Succeeded by American National Bank in Little Falls.	100,000
No. 10—KANSAS CITY		
Sept. 30	First National Bank of Muskogee, Okla., title changed to First National Bank & Trust Co. of Muskogee.	
Aug. 12	First National Bank, Taloga, Okla. Absorbed by Dewey County State Bank, a nonmember bank.	25,000
Oct. 1	South Oklahoma National Bank of Oklahoma City, Okla., title changed to Oklahoma National Bank of Oklahoma City.	
No. 12—SAN FRANCISCO		
Oct. 4	Salinas National Bank, Salinas, Calif., primary organization.	250,000

The Comptroller of the Currency presents the following summary of increases and reductions in the number and capital of national banks during the period from September 21 to October 25, 1929, inclusive.

	Number of banks	Amount of capital
New charters issued.....	15	\$2,400,000
Restored to solvency.....	9	0
Increase of capital approved ¹	37	8,045,000
Aggregate of new charters, banks restored to solvency, and banks increasing capital.....	52	10,445,000
Liquidations.....	32	6,707,500
Reducing capital ²	2	89,350
Total liquidations and reductions of capital.....	34	6,796,850
Consolidation of national banks under act of Nov. 7, 1918 ³	5	5,435,650
Consolidation of national banks and State banks under act of Feb. 25, 1927.....	1	400,000
Total consolidations.....	6	5,835,650
Aggregate increased capital for period.....		10,445,000
Reduction of capital owing to liquidations, etc.....		6,796,850
Net increase.....		3,648,150

¹ Includes two increases in capital aggregating \$250,000 incident to consolidations under act of Nov. 7, 1918, and one increase of \$300,000 incident to a consolidation of two national banks and one State bank under act of Nov. 7, 1918, as amended Feb. 25, 1927; also one of \$300,000 under act of Feb. 25, 1927.
² Includes one reduction in capital of \$39,350 incident to a consolidation under act of Nov. 7, 1918.
³ One of which also includes a State bank under act of Feb. 25, 1927.

Fiduciary Powers Granted to National Banks

During the month ended October 21, 1929, the Federal Reserve Board approved applications of the national banks listed below for permission to exercise one or more of the fiduciary powers named in section 11 (k) of the Federal reserve act as amended, as follows: (1) Trustee; (2) executor; (3) administrator; (4) registrar of stocks and bonds; (5) guardian of estates; (6) assignee; (7) receiver; (8) committee of estates of lunatics; (9) in any other fiduciary capacity in which State banks, trust companies, or other corporations which come into competition with national banks are permitted to act under the laws of the State in which the national bank is located.

Location	District No.	Name of bank	Powers granted
New Milford, Conn.....	1	First National Bank.....	1 to 9.
Haverhill, Mass.....	1	Essex National Bank.....	1 to 3, 5 to 7 and 9. ¹
St. Johnsbury, Vt.....	1	Merchants National Bank.....	1 to 8.
Walden, N. Y.....	2	Third National Bank.....	1 to 9.
Blossburg, Pa.....	3	Citizens National Bank & Trust Co.	1 to 9.
Easton, Pa.....	3	Easton National Bank.....	1 to 9.
Philadelphia, Pa.....	3	Sixth National Bank.....	1 to 9.
Andalusia, Ala.....	6	Andalusia National Bank.....	1.
Tell City, Ind.....	8	Citizens National Bank.....	5 to 7 and 9. ¹
St. Louis, Mo.....	8	Plaza National Bank.....	1 to 9.
St. Paul, Minn.....	9	First National Bank.....	1 to 9.
Valley City, N. Dak.....	9	American National Bank & Trust Co.	1 to 9.
Omaha, Nebr.....	10	United States National Bank.	1 to 3, 5 to 9. ²

¹ Supplementary.

² Correction.

DETAILED BANKING STATISTICS FOR THE UNITED STATES

FEDERAL RESERVE BANKS

BILLS DISCOUNTED, AND DEPOSITS BY CLASS OF DEPOSIT

(Monthly averages of daily figures. In millions of dollars)

	Total	Federal Reserve Bank											
		Boston	New York	Phila- delphia	Cleve- land	Rich- mond	At- lanta	Chicago	St. Louis	Minne- apolis	Kansas City	Dallas	San Fran- cisco
Bills discounted:													
1928—October	975.2	45.9	300.7	93.7	75.5	47.8	79.4	134.1	49.8	18.1	31.3	25.3	73.5
November	897.3	50.6	238.1	79.3	85.6	42.5	68.7	138.8	43.9	16.0	43.1	21.3	69.6
December	1,013.0	65.0	298.7	91.3	108.0	40.8	57.8	178.9	39.6	10.4	44.2	17.9	60.3
1929—January	859.2	60.4	245.9	73.1	79.7	40.7	58.5	142.7	37.4	12.0	33.3	20.6	55.0
February	889.2	61.9	216.3	85.5	84.7	41.0	55.8	165.9	37.8	12.8	32.5	19.2	75.8
March	968.6	58.6	231.5	101.6	76.0	43.4	51.7	210.6	48.1	15.6	31.8	14.8	85.0
April	1,004.4	75.8	264.6	110.0	96.6	52.6	63.6	133.4	51.8	19.3	38.8	18.6	79.3
May	956.3	96.5	234.5	86.7	93.8	58.1	73.4	109.8	48.7	18.1	49.1	23.1	64.4
June	978.0	99.4	251.2	84.7	90.9	56.6	65.9	135.9	49.9	15.2	48.3	22.3	57.7
July	1,095.6	78.4	408.6	77.3	84.0	57.5	69.0	122.1	55.8	17.4	35.3	30.2	60.1
August	1,043.5	79.5	303.3	92.8	79.7	59.6	75.1	120.0	67.2	24.3	33.7	43.4	64.9
September	969.0	71.3	230.9	90.6	78.8	60.1	69.6	103.9	72.7	34.4	38.8	41.3	76.4
October	884.5	60.7	160.0	78.7	95.2	53.1	57.6	120.2	54.7	41.2	44.6	31.6	86.9
Total deposits:													
1928—October	2,380.6	155.0	902.9	137.0	190.9	71.3	65.8	357.7	83.6	57.0	95.7	70.8	193.1
November	2,401.6	154.7	920.9	136.4	188.9	71.5	67.1	357.7	83.8	57.5	94.8	73.1	195.1
December	2,415.1	150.7	939.1	136.8	186.2	71.7	69.6	357.2	85.3	56.4	94.4	73.7	194.0
1929—January	2,436.3	152.4	953.2	139.4	190.1	71.9	69.1	358.2	85.9	55.3	95.6	73.3	191.8
February	2,406.7	149.2	943.2	135.4	188.7	71.1	69.1	357.0	85.0	54.0	93.8	72.8	187.3
March	2,384.7	145.5	944.5	134.9	188.2	69.5	68.9	349.8	81.8	54.1	93.0	70.9	183.6
April	2,367.5	146.4	937.1	135.9	186.4	70.2	67.9	346.8	81.6	52.9	91.0	68.6	182.7
May	2,350.9	143.5	932.6	136.7	187.0	68.3	66.1	346.9	80.3	51.5	89.0	66.5	182.6
June	2,374.4	146.0	949.6	136.9	188.3	69.5	65.6	347.6	79.6	52.7	90.3	65.4	183.0
July	2,385.0	149.5	948.0	137.4	190.2	68.3	64.0	352.0	79.1	54.0	93.7	64.2	184.6
August	2,368.4	147.8	932.5	136.2	191.7	68.4	62.0	357.4	78.4	53.9	95.2	62.3	182.6
September	2,395.4	149.6	953.5	137.0	190.5	69.0	64.6	356.3	78.3	55.0	92.9	64.9	183.8
October	2,438.0	153.3	982.4	137.0	188.2	69.4	65.6	361.6	80.5	55.0	92.3	67.4	185.1
Member bank reserve balances:													
1928—October	2,332.2	152.5	889.7	134.8	187.8	68.3	63.4	353.3	80.5	55.1	92.5	68.9	185.2
November	2,352.3	152.0	903.4	134.4	185.4	69.1	64.8	354.0	81.5	56.1	93.0	71.4	187.8
December	2,366.8	148.6	923.4	134.5	183.4	69.6	67.5	353.0	83.4	55.1	93.0	72.2	183.2
1929—January	2,386.7	150.5	936.3	137.2	187.0	69.7	67.2	354.3	84.2	53.9	93.9	71.8	180.7
February	2,357.3	146.7	928.5	133.5	185.7	68.6	67.6	352.8	82.9	52.5	91.9	70.7	176.0
March	2,356.5	144.3	924.6	133.4	185.6	67.6	67.7	346.5	78.7	53.1	91.8	70.0	173.1
April	2,307.9	144.1	915.2	133.2	183.4	67.2	66.2	341.6	77.8	51.6	89.2	66.8	171.7
May	2,296.4	141.9	914.7	133.8	184.1	65.6	64.5	340.8	76.6	50.2	87.5	65.1	171.6
June	2,314.3	142.4	931.9	134.7	184.2	65.5	63.4	341.0	75.9	51.3	88.6	63.3	172.0
July	2,333.5	147.6	930.9	135.3	187.2	65.7	61.9	347.2	77.0	52.4	92.0	62.5	173.9
August	2,322.4	146.2	919.9	134.2	188.5	65.4	60.2	352.7	76.7	52.5	92.8	61.2	172.1
September	2,334.5	147.5	930.5	134.6	187.1	64.5	61.1	351.2	76.7	53.3	91.2	62.8	174.1
October	2,385.6	151.1	968.4	134.7	185.5	64.9	62.4	356.6	78.1	53.2	90.2	65.8	174.7
Government deposits:													
1928—October	18.7	1.7	3.3	1.2	.9	2.2	1.6	1.4	1.2	.9	1.1	1.6	1.6
November	17.5	1.4	2.9	1.3	.9	1.9	1.8	1.4	1.2	.9	.9	1.4	1.3
December	18.8	1.4	4.6	1.6	1.2	1.7	1.7	1.5	.9	.8	.8	1.2	1.4
1929—January	18.2	1.2	3.7	1.3	.9	1.7	1.5	1.6	1.1	1.0	1.2	1.3	1.8
February	20.9	1.3	4.7	1.1	1.3	2.1	1.1	2.3	1.3	1.1	1.3	1.1	2.0
March	16.8	.6	6.3	.8	1.1	1.5	.8	1.3	.7	.6	.6	.7	1.9
April	24.8	1.6	6.5	1.9	1.2	2.6	1.3	3.2	1.1	.9	1.1	1.6	1.9
May	22.5	.9	4.6	2.1	1.4	2.3	1.1	3.9	1.2	.9	1.2	1.1	1.7
June	30.4	2.9	7.6	1.4	2.2	3.6	1.7	4.2	1.1	.9	1.2	1.8	1.6
July	20.4	1.3	3.4	1.4	1.2	2.3	1.7	1.6	1.1	1.2	1.4	1.5	2.4
August	19.0	1.1	3.0	1.4	1.4	2.6	1.4	2.0	1.1	1.0	1.3	.9	1.6
September	33.3	1.7	12.1	1.6	1.6	4.2	3.0	2.3	1.2	1.3	1.0	1.9	1.4
October	24.2	1.7	3.9	1.6	1.3	4.1	2.8	2.2	1.1	1.1	1.1	1.5	1.8
All other deposits:													
1928—October	29.7	.7	9.9	1.0	2.1	.8	.8	3.0	1.7	1.0	2.1	.3	6.3
November	31.8	1.3	14.6	.8	2.4	.5	.5	2.3	1.1	.5	.9	.3	6.6
December	29.4	.6	11.1	.8	1.6	.5	.4	2.7	1.0	.5	.6	.3	9.4
1929—January	31.3	.6	13.2	.8	2.2	.5	.4	2.3	.7	.5	.5	.3	9.3
February	28.5	1.2	10.0	.7	1.8	.4	.4	1.9	.8	.4	.6	1.0	9.3
March	31.3	.6	13.7	.7	1.5	.4	.4	1.9	2.4	.4	.5	.2	8.6
April	34.8	.7	15.4	.9	1.8	.5	.4	2.1	2.5	.5	.7	.3	9.1
May	32.0	.6	13.3	.8	1.5	.4	.5	2.1	2.5	.4	.4	.3	9.2
June 30	29.7	.7	10.1	.8	1.8	.5	.4	2.4	2.5	.4	.4	.3	9.4
July	31.0	.6	13.7	.7	1.8	.4	.4	3.2	1.0	.4	.4	.2	8.3
August	27.1	.5	9.6	.6	1.7	.4	.4	2.6	.5	.4	1.1	.2	8.9
September	27.5	.5	10.9	.7	1.8	.4	.4	2.8	.5	.4	.7	.2	8.3
October	28.1	.5	10.1	.7	1.4	.3	.4	2.9	1.3	.7	1.0	.2	8.6

FEDERAL RESERVE BANKS—RESOURCES AND LIABILITIES AT END OF MONTH

[In thousands of dollars]

	1929		1928
	Oct. 31	Sept. 30	Oct. 31
RESOURCES			
Total gold reserves.....	3, 003, 954	* 2, 970, 911	2, 641, 096
Reserves other than gold.....	152, 402	154, 789	131, 900
Total reserves.....	3, 156, 356	3, 125, 700	2, 772, 996
Nonreserve cash.....	77, 454	61, 170	56, 874
Bills discounted.....	999, 704	958, 290	932, 271
Bills bought:			
Outright.....	320, 485	214, 017	356, 479
Under resale agreement.....	34, 502	78, 722	83, 897
Total bills bought.....	354, 987	292, 739	440, 376
United States securities:			
Bought outright.....	271, 032	127, 428	200, 470
Under resale agreement.....	50, 050	* 34, 810	26, 629
Total United States securities.....	321, 082	162, 238	227, 099
Other securities.....	25, 131	15, 425	3, 730
Total bills and securities.....	1, 700, 904	1, 428, 692	1, 603, 476
Due from foreign banks.....	721	787	732
Reserve bank float ¹	40, 588	28, 462	19, 387
Total reserve bank credit outstanding.....	1, 742, 213	1, 457, 941	1, 623, 595
Federal reserve notes of other reserve banks.....	28, 711	22, 739	19, 584
Other uncollected items not included in float.....	713, 359	600, 387	655, 508
Bank premises.....	59, 037	* 58, 936	60, 548
All other resources.....	10, 539	* 9, 793	8, 933
Total resources.....	5, 787, 609	5, 336, 666	5, 198, 038
LIABILITIES			
Federal reserve notes:			
Held by other Federal reserve banks.....	28, 711	22, 739	19, 584
Outside Federal reserve banks.....	1, 870, 673	1, 840, 383	1, 690, 232
Total notes in circulation.....	1, 899, 384	1, 863, 122	1, 709, 816
Deposits:			
Member bank—reserve account.....	2, 665, 578	2, 326, 125	2, 370, 988
Government.....	15, 227	61, 050	20, 498
Foreign bank.....	5, 835	5, 670	6, 099
Other deposits.....	24, 957	21, 988	21, 437
Total deposits.....	2, 711, 597	2, 414, 833	2, 419, 022
Deferred availability items.....	713, 359	* 600, 387	655, 508
Capital paid in.....	167, 026	167, 017	145, 878
Surplus.....	254, 398	254, 398	233, 319
All other liabilities.....	41, 905	36, 909	34, 495
Total liabilities.....	5, 787, 609	5, 336, 666	5, 198, 038
Contingent liability on bills purchased for foreign correspondents.....	502, 538	449, 217	250, 941

¹ Uncollected items (exclusive of Federal reserve notes of other Federal reserve banks) in excess of deferred availability items. * Revised.

KINDS OF MONEY IN CIRCULATION, BY MONTHS

[End of month figures. In thousands of dollars]

Date	Total	Gold coin	Gold certificates	Standard silver dollars	Silver certificates	Treasury notes of 1890	Subsidiary silver	Minor coin	United States notes	Federal reserve notes	Federal reserve bank notes	National bank notes
1928—Oct. 31.....	4, 806, 230	373, 202	959, 652	46, 298	394, 328	1, 296	235, 350	113, 427	300, 659	1, 689, 171	3, 880	638, 965
Nov. 30.....	4, 990, 114	374, 306	1, 030, 546	46, 342	404, 860	1, 295	238, 002	114, 641	306, 015	1, 770, 184	3, 848	650, 077
Dec. 31.....	4, 973, 163	395, 810	990, 996	46, 475	410, 334	1, 294	291, 314	115, 613	294, 199	1, 808, 053	3, 820	615, 761
1929—Jan. 31.....	4, 656, 617	380, 952	923, 193	44, 456	381, 672	1, 292	280, 751	114, 007	282, 172	1, 631, 432	3, 775	612, 915
Feb. 28.....	4, 698, 362	377, 612	935, 448	44, 075	385, 389	1, 291	280, 736	113, 692	283, 608	1, 646, 523	3, 747	626, 344
Mar. 31.....	4, 747, 683	374, 255	937, 247	43, 921	390, 583	1, 290	280, 655	113, 536	283, 100	1, 673, 480	3, 709	645, 908
Apr. 30.....	4, 675, 647	371, 623	905, 513	43, 727	386, 241	1, 288	281, 229	114, 085	276, 227	1, 648, 392	3, 680	645, 639
May 31.....	4, 737, 636	369, 997	944, 058	43, 651	392, 411	1, 286	282, 936	114, 454	288, 216	1, 654, 757	3, 650	642, 221
June 30.....	4, 746, 297	368, 488	934, 994	43, 684	387, 073	1, 283	284, 226	115, 210	262, 188	1, 692, 721	3, 616	652, 812
July 31.....	4, 716, 863	366, 199	887, 897	43, 401	403, 964	1, 282	284, 363	115, 534	242, 338	1, 748, 442	3, 587	619, 855
Aug. 31.....	4, 839, 859	364, 603	887, 102	43, 055	411, 293	1, 280	286, 270	115, 985	248, 670	1, 842, 547	3, 539	635, 515
Sept. 30.....	4, 819, 275	363, 701	849, 551	42, 960	417, 556	1, 277	289, 344	116, 816	264, 930	1, 839, 143	3, 500	630, 497
Oct. 31 ²	4, 837, 987	363, 206	845, 937	42, 624	414, 950	1, 276	290, 627	117, 719	266, 502	1, 869, 154	3, 466	622, 527

² Preliminary.

FEDERAL RESERVE BANKS—AVERAGE DAILY RESERVES AND DEMAND LIABILITIES IN OCTOBER AND SEPTEMBER, 1929

[In thousands of dollars]

Federal reserve bank	Total cash reserves		Total deposits		Federal reserve notes in circulation		Reserve percentages	
	October	September	October	September	October	September	October	September
Boston.....	284,096	262,192	153,337	149,637	204,451	193,114	79.4	76.5
New York.....	1,088,030	973,749	982,447	953,484	341,006	327,126	82.2	76.0
Philadelphia.....	196,120	201,112	137,010	136,950	140,639	152,339	70.6	69.5
Cleveland.....	235,101	286,112	188,188	190,498	178,388	188,406	64.1	75.5
Richmond.....	89,847	90,903	69,367	69,630	84,811	81,631	58.3	60.3
Atlanta.....	141,543	138,606	65,596	64,551	154,908	157,490	64.2	62.4
Chicago.....	511,615	558,848	361,646	356,303	306,142	321,571	76.6	82.4
St. Louis.....	111,738	82,913	80,539	78,329	82,321	68,414	68.6	56.5
Minneapolis.....	68,447	76,607	55,004	55,000	67,685	67,482	55.8	62.5
Kansas City.....	112,727	126,676	92,329	92,919	82,700	79,836	64.4	73.3
Dallas.....	71,806	66,685	67,443	64,879	52,521	50,530	59.9	57.8
San Francisco.....	246,815	271,491	185,081	183,803	177,020	181,847	68.2	74.2
Total.....	2,157,885	3,135,894	2,437,937	2,395,383	1,872,592	1,869,776	73.3	73.5

FEDERAL RESERVE BANKS—RESOURCES AND LIABILITIES, BY WEEKS

RESOURCES

[In thousands of dollars]

	Total	Federal Reserve Bank											
		Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Gold with Federal reserve agents:													
Oct. 2.....	1,541,345	169,917	324,330	117,000	128,900	46,656	101,500	329,564	23,800	42,157	70,000	25,758	161,763
Oct. 9.....	1,506,735	174,917	324,330	117,000	110,300	46,656	103,500	299,564	45,800	37,157	65,000	25,748	156,763
Oct. 16.....	1,547,526	184,917	321,641	117,000	107,780	46,656	109,500	299,564	53,800	37,157	60,000	27,748	181,763
Oct. 23.....	1,546,526	184,917	371,641	117,000	107,780	41,656	103,500	279,564	53,800	37,157	60,000	27,748	161,763
Oct. 30.....	1,543,841	194,917	371,641	100,000	95,620	41,656	105,000	279,564	53,800	37,157	60,000	27,723	176,763
Gold redemption fund with U. S. Treasury:													
Oct. 2.....	67,146	7,684	14,862	5,398	4,295	4,577	4,162	6,264	5,716	3,128	2,044	3,758	5,258
Oct. 9.....	61,994	7,483	14,124	4,310	4,886	3,515	4,100	4,886	6,863	2,833	1,518	2,917	4,559
Oct. 16.....	66,810	7,268	13,343	6,252	5,573	4,603	3,780	3,817	6,185	4,629	3,073	3,091	5,196
Oct. 23.....	68,069	7,115	12,631	5,363	5,232	3,927	4,322	7,888	6,434	4,317	2,673	3,291	4,876
Oct. 30.....	65,939	6,943	12,023	4,512	6,551	4,620	4,238	6,829	5,856	4,037	2,293	2,512	5,525
Gold held exclusively against Federal reserve notes:													
Oct. 2.....	1,608,491	177,601	339,192	122,398	133,195	51,233	105,662	335,828	29,516	45,285	72,044	29,516	167,021
Oct. 9.....	1,568,729	182,400	338,454	121,310	115,186	50,171	107,600	304,450	52,663	39,990	66,518	28,665	161,322
Oct. 16.....	1,614,336	192,185	334,984	123,252	113,353	51,259	113,280	303,381	59,985	41,786	63,073	30,839	186,959
Oct. 23.....	1,614,595	192,632	384,272	122,363	113,012	45,583	107,822	287,452	60,234	41,474	62,673	31,039	166,639
Oct. 30.....	1,609,780	201,860	383,664	104,512	102,171	46,276	109,238	286,393	59,656	41,194	62,293	30,235	182,288
Gold settlement fund with Federal reserve board:													
Oct. 2.....	754,211	53,389	299,958	44,469	86,255	30,442	18,512	60,908	48,455	17,201	33,600	27,480	33,542
Oct. 9.....	811,642	48,131	302,384	49,293	85,544	23,720	18,148	102,513	42,687	20,931	42,441	35,468	40,382
Oct. 16.....	758,685	45,596	307,884	39,809	79,708	21,021	16,595	72,073	47,115	19,352	44,014	32,965	32,553
Oct. 23.....	779,661	55,534	260,326	38,068	71,728	22,428	17,813	156,243	46,005	16,337	39,964	26,820	28,395
Oct. 30.....	791,887	62,719	290,218	32,974	50,605	29,239	11,761	153,629	41,106	26,095	36,623	26,355	30,563
Gold and gold certificates held by banks:													
Oct. 2.....	620,090	31,479	382,098	29,783	35,039	8,238	3,667	78,747	5,656	3,904	4,691	8,852	27,936
Oct. 9.....	631,856	33,299	390,579	28,256	35,455	8,430	3,948	80,047	5,822	4,330	4,831	8,885	27,944
Oct. 16.....	631,815	31,562	391,967	23,773	38,025	8,771	4,195	80,116	5,864	4,742	5,540	8,868	28,392
Oct. 23.....	640,757	28,420	408,157	22,332	38,043	9,204	3,747	77,261	5,966	5,038	5,177	8,988	28,424
Oct. 30.....	619,284	27,303	388,824	18,969	36,148	9,386	3,588	81,660	5,818	5,827	5,710	9,060	26,991
Total gold reserves:													
Oct. 2.....	2,982,792	262,469	1,021,248	196,650	254,489	89,913	127,841	475,483	83,627	66,390	110,335	65,848	228,499
Oct. 9.....	3,012,227	263,830	1,031,417	188,859	236,215	82,321	129,696	487,010	101,172	65,251	113,790	73,018	229,648
Oct. 16.....	3,004,836	269,343	1,034,835	186,834	231,086	81,051	134,070	455,570	112,964	65,880	112,627	72,672	247,904
Oct. 23.....	3,035,013	275,986	1,052,755	182,763	222,783	77,215	129,382	520,956	112,205	62,849	107,814	66,847	223,458
Oct. 30.....	3,020,951	291,882	1,062,706	156,455	188,924	84,901	124,587	521,682	106,580	73,116	104,626	65,650	239,842
Reserves other than gold:													
Oct. 2.....	158,018	11,960	63,672	9,764	8,034	8,692	10,225	16,068	7,095	1,847	4,166	4,187	12,308
Oct. 9.....	149,448	10,380	62,920	9,161	6,694	7,376	11,105	16,234	2,287	3,771	3,497	12,074	
Oct. 16.....	153,523	10,178	61,324	9,367	8,410	7,246	12,423	14,397	6,498	2,567	4,205	4,527	12,381
Oct. 23.....	154,833	10,807	64,454	9,224	7,562	6,853	13,663	12,972	6,590	2,474	3,831	4,613	11,790
Oct. 30.....	156,057	11,292	62,437	8,771	8,356	6,972	14,241	13,092	7,074	2,543	4,502	4,684	12,093

FEDERAL RESERVE BANKS—RESOURCES AND LIABILITIES, BY WEEKS—Continued

RESOURCES—Continued

[In thousands of dollars]

	Total	Federal Reserve Bank											
		Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Total reserves:													
Oct. 2.....	3,140,810	274,429	1,084,920	206,414	262,523	98,605	138,066	491,551	90,722	68,237	114,501	70,035	240,807
Oct. 9.....	3,161,675	274,210	1,094,337	208,020	242,909	89,697	140,801	500,959	107,406	67,538	117,561	76,515	241,722
Oct. 16.....	3,158,359	279,521	1,096,159	196,201	239,496	88,297	146,493	469,967	119,462	68,447	116,832	77,199	260,285
Oct. 23.....	3,189,846	286,793	1,117,209	191,987	230,345	84,068	143,045	533,928	118,795	65,323	111,645	71,460	235,248
Oct. 30.....	3,177,008	303,174	1,125,143	165,226	197,280	91,873	138,828	534,774	113,654	75,659	109,128	70,334	251,935
Nonreserve cash:													
Oct. 2.....	66,019	10,124	20,027	1,610	4,012	4,995	6,326	7,030	2,824	1,335	1,679	2,160	3,897
Oct. 9.....	66,856	11,667	21,401	1,627	2,950	4,655	5,994	6,829	2,906	1,237	2,005	2,356	3,229
Oct. 16.....	70,746	14,200	20,130	1,623	4,794	4,580	5,655	7,461	2,877	1,374	1,759	2,655	3,638
Oct. 23.....	79,945	17,583	23,420	1,784	4,081	4,806	6,415	7,706	2,883	2,007	2,249	2,972	4,039
Oct. 30.....	85,276	21,694	22,698	1,952	5,015	4,694	5,827	9,157	2,817	2,314	2,347	2,953	3,808
Bills discounted:													
Secured by U. S. Government obligations—													
Oct. 2.....	432,115	33,810	84,705	42,376	37,518	20,079	6,198	91,838	24,517	14,454	14,025	11,797	50,798
Oct. 9.....	383,341	33,173	66,833	40,739	50,257	18,310	7,145	69,316	19,724	12,019	13,113	10,165	42,547
Oct. 16.....	401,458	31,122	62,486	45,734	43,227	19,576	6,720	104,267	20,335	10,578	16,440	9,531	31,442
Oct. 23.....	372,352	27,449	58,970	42,233	48,877	23,468	9,224	51,678	25,420	11,121	16,911	8,775	48,226
Oct. 30.....	532,388	22,978	186,606	49,616	69,015	21,146	9,498	60,787	28,186	3,826	19,696	9,307	51,727
Other bills discounted—													
Oct. 2.....	498,518	37,379	67,113	32,862	42,195	31,597	58,169	59,274	48,089	26,959	28,843	22,313	43,725
Oct. 9.....	473,965	35,603	64,365	31,536	41,566	31,652	50,165	54,602	31,688	30,016	28,679	20,835	53,258
Oct. 16.....	447,477	31,235	67,212	31,999	41,411	32,456	45,627	45,971	27,771	32,569	24,808	19,813	46,605
Oct. 23.....	424,006	27,802	48,181	31,395	42,068	31,673	44,363	42,238	25,905	32,165	20,222	23,027	45,967
Oct. 30.....	458,650	22,862	59,516	50,114	53,957	32,795	49,489	45,495	26,169	32,678	32,052	21,822	31,701
Total bills discounted:													
Oct. 2.....	930,633	71,189	151,818	75,238	79,713	51,676	64,367	151,112	72,606	41,413	42,868	34,110	94,523
Oct. 9.....	857,306	68,776	131,198	72,275	91,823	49,962	57,310	123,918	51,412	42,035	41,792	31,000	95,805
Oct. 16.....	848,935	62,357	129,698	77,733	84,638	52,032	52,347	150,238	48,106	43,147	41,248	29,344	78,047
Oct. 23.....	796,358	55,251	107,151	73,628	90,945	55,141	53,587	93,916	51,325	43,286	46,133	31,802	94,193
Oct. 30.....	991,038	45,840	246,122	99,730	122,972	53,941	58,987	106,282	54,355	36,504	51,748	31,129	83,428
Bills bought in open market:													
Oct. 2.....	322,818	21,588	126,650	16,106	25,820	12,493	18,943	36,287	42	7,572	13,704	12,036	31,577
Oct. 9.....	333,151	22,823	102,412	16,770	33,371	16,541	22,037	46,068	42	6,610	17,942	12,623	35,912
Oct. 16.....	360,119	23,072	112,271	17,552	37,866	17,214	23,082	53,042	42	5,482	19,789	13,565	37,133
Oct. 23.....	379,383	19,116	124,105	17,405	41,698	19,353	25,960	50,240	42	4,557	21,123	15,635	40,149
Oct. 30.....	339,885	13,986	101,318	15,768	40,461	20,064	25,074	46,007	42	4,091	20,168	14,903	38,003
U. S. Government securities:													
Bonds—													
Oct. 2.....	37,648	875	853	786	818	1,152	20	20,231	-----	4,646	152	7,813	302
Oct. 9.....	37,650	689	155	585	548	1,152	22	19,937	2,125	4,557	-----	7,813	67
Oct. 16.....	37,967	689	155	585	548	1,152	34	19,937	2,125	4,862	-----	7,813	67
Oct. 23.....	37,955	689	155	585	548	1,152	89	19,937	2,125	4,795	-----	7,813	67
Oct. 30.....	81,261	689	43,655	585	548	1,152	26	19,937	2,125	4,564	-----	7,913	67
Treasury notes—													
Oct. 2.....	19,080	1,445	17,605	8,832	26,929	375	2,817	2,731	-----	3,775	468	2,774	11,329
Oct. 9.....	75,538	874	11,965	8,219	26,106	375	2,818	1,792	6,500	3,501	3	2,774	10,611
Oct. 16.....	72,066	874	8,495	8,219	26,106	375	2,818	1,791	6,500	3,500	3	2,774	10,611
Oct. 23.....	71,376	874	7,325	8,219	26,106	375	2,817	2,271	6,500	3,500	3	2,774	10,611
Oct. 30.....	120,294	873	56,756	8,219	26,105	375	2,820	1,757	6,500	3,501	3	2,774	10,611
Certificates of indebtedness—													
Oct. 2.....	29,024	1,082	12,944	8,061	1,260	282	573	2,107	-----	525	310	675	1,205
Oct. 9.....	27,570	1,082	11,584	8,061	1,260	282	532	2,027	-----	552	310	675	1,205
Oct. 16.....	27,595	1,081	11,334	8,061	1,260	282	564	2,148	-----	661	310	689	1,205
Oct. 23.....	26,374	1,081	9,954	8,061	1,260	282	560	2,458	-----	528	310	675	1,205
Oct. 30.....	91,133	3,138	57,702	10,271	4,234	282	2,207	6,140	1,829	545	1,685	1,895	1,205
Total U. S. Government securities:													
Oct. 2.....	145,752	3,402	31,402	17,670	29,007	1,809	3,410	25,069	-----	8,946	930	11,262	12,836
Oct. 9.....	140,788	2,645	23,704	16,865	27,914	1,809	3,372	23,756	8,625	8,610	313	11,262	11,883
Oct. 16.....	137,628	2,644	19,984	16,865	27,914	1,809	3,416	23,876	8,625	9,023	313	11,276	11,883
Oct. 23.....	135,704	2,644	17,434	16,865	27,914	1,809	3,466	24,666	8,625	8,823	313	11,262	11,883
Oct. 30.....	292,688	4,700	158,113	19,075	30,887	1,809	5,053	27,834	10,454	8,610	1,688	12,582	11,883
Other securities:													
Oct. 2.....	15,025	-----	10,850	425	-----	-----	-----	500	-----	3,250	-----	-----	-----
Oct. 9.....	14,755	-----	10,850	125	-----	-----	-----	500	-----	3,280	-----	-----	-----
Oct. 16.....	23,755	1,000	14,850	1,125	1,500	-----	-----	2,000	-----	3,280	-----	-----	-----
Oct. 23.....	25,211	1,000	15,300	1,125	1,500	-----	-----	2,000	-----	4,286	-----	-----	-----
Oct. 30.....	25,131	1,000	15,250	1,125	1,500	-----	-----	2,000	-----	4,256	-----	-----	-----
Total bills and securities:													
Oct. 2.....	1,414,228	96,179	320,720	109,448	134,540	65,978	86,720	212,968	72,648	61,181	57,502	57,408	138,933
Oct. 9.....	1,345,970	94,244	268,164	106,035	153,108	68,312	82,719	194,242	60,079	60,535	60,047	54,885	143,600
Oct. 16.....	1,370,428	89,073	276,803	113,275	151,918	71,055	78,845	229,156	56,773	60,932	61,350	54,185	127,606
Oct. 23.....	1,336,656	78,011	263,990	109,023	162,057	76,303	83,013	170,822	59,992	60,952	67,569	58,699	146,225
Oct. 30.....	1,048,742	65,526	520,803	135,698	195,820	75,814	89,114	182,123	64,851	53,461	73,604	58,614	133,314

FEDERAL RESERVE BANKS—RESOURCES AND LIABILITIES, BY WEEKS—Continued

RESOURCES—Continued

[In thousands of dollars]

	Total	Federal Reserve Bank											
		Boston	New York	Phila- delphia	Cleve- land	Rich- mond	Atlanta	Chi- cago	St. Louis	Min- neap- olis	Kansas City	Dallas	San Fran- cisco
Due from foreign banks:													
Oct. 2.....	801	58	254	76	80	36	31	108	29	20	26	26	57
Oct. 9.....	808	58	262	75	80	36	31	108	29	20	26	26	57
Oct. 16.....	754	53	253	69	73	33	28	98	29	18	24	24	52
Oct. 23.....	727	54	221	70	74	33	28	100	29	18	24	24	52
Oct. 30.....	721	53	218	69	74	33	28	99	29	18	24	24	52
Uncollected items:													
Oct. 2.....	816,320	82,339	238,228	70,922	78,591	56,989	24,408	95,277	38,083	17,080	46,940	28,214	39,249
Oct. 9.....	733,640	73,875	198,232	59,968	65,710	53,501	22,961	90,243	38,635	17,048	44,768	29,314	39,385
Oct. 16.....	1,049,813	105,656	313,350	86,173	104,802	72,070	31,324	126,346	44,619	18,598	52,723	42,313	51,839
Oct. 23.....	776,614	80,494	213,618	62,574	73,194	58,363	23,855	94,859	36,148	17,754	45,154	29,371	41,230
Oct. 30.....	772,955	87,619	220,676	65,639	71,699	57,323	23,274	89,767	35,601	15,178	40,806	27,053	38,320
Bank premises:													
Oct. 2.....	58,935	3,702	16,087	1,762	6,535	3,395	2,744	8,529	3,997	2,110	4,140	1,922	4,012
Oct. 9.....	58,935	3,702	16,087	1,762	6,535	3,395	2,744	8,529	3,997	2,110	4,140	1,922	4,012
Oct. 16.....	58,944	3,702	16,087	1,762	6,535	3,395	2,744	8,529	3,997	2,110	4,140	1,922	4,021
Oct. 23.....	58,944	3,702	16,087	1,762	6,535	3,395	2,744	8,529	3,997	2,110	4,140	1,922	4,021
Oct. 30.....	59,036	3,702	16,087	1,762	6,535	3,395	2,744	8,529	3,996	2,110	4,140	1,922	4,114
All other resources:													
Oct. 2.....	9,814	116	740	132	1,239	549	4,109	836	309	609	232	474	469
Oct. 9.....	9,865	117	797	137	1,252	532	4,055	858	372	575	216	480	474
Oct. 16.....	9,077	117	690	147	1,267	523	4,009	457	362	500	204	324	477
Oct. 23.....	9,238	119	786	149	1,286	571	3,894	537	357	524	200	331	484
Oct. 30.....	10,625	106	2,185	164	1,305	563	3,850	559	344	512	205	342	490
Total resources:													
Oct. 2.....	5,506,927	466,947	1,680,976	390,364	487,520	230,547	262,404	816,299	208,612	150,572	225,020	160,239	427,427
Oct. 9.....	5,377,749	457,873	1,599,280	377,624	472,544	220,128	259,305	801,768	213,424	149,063	228,763	165,498	432,479
Oct. 16.....	5,718,121	492,322	1,723,472	399,250	508,885	239,953	269,098	842,014	228,119	151,979	237,032	178,622	447,375
Oct. 23.....	5,451,970	466,756	1,635,331	367,349	477,572	227,539	262,994	816,481	222,201	148,688	230,981	164,779	431,299
Oct. 30.....	5,754,363	481,874	1,907,810	370,510	477,728	233,695	263,665	825,008	221,292	149,252	230,254	161,242	432,033

LIABILITIES

Federal reserve notes in cir- culation:													
Oct. 2.....	1,851,167	199,786	329,753	145,296	179,994	80,964	153,834	309,679	74,277	68,200	80,614	51,815	176,955
Oct. 9.....	1,860,300	203,202	332,891	141,845	182,362	82,495	153,105	307,325	77,442	67,638	82,007	52,732	177,256
Oct. 16.....	1,859,621	205,044	333,969	139,250	177,601	84,410	153,393	303,805	82,688	67,529	82,934	52,479	176,519
Oct. 23.....	1,857,332	203,801	337,985	132,047	176,388	85,753	153,699	302,448	86,066	68,347	83,122	52,615	175,061
Oct. 30.....	1,880,192	208,369	354,854	132,624	174,528	86,556	157,135	300,808	88,219	66,837	83,447	51,007	175,808
Deposits:													
Member bank—Reserve account—													
Oct. 2.....	2,398,926	152,465	985,276	136,104	188,924	66,744	62,214	350,526	76,328	54,353	88,003	63,787	174,202
Oct. 9.....	2,338,979	147,218	937,456	136,466	181,570	63,856	63,344	346,464	78,785	53,704	90,723	66,562	172,831
Oct. 16.....	2,408,482	151,635	969,012	136,968	186,962	66,574	63,211	357,979	79,490	55,157	92,750	68,889	179,855
Oct. 23.....	2,378,997	150,323	952,818	135,737	184,526	64,303	63,732	360,692	79,919	53,843	92,506	66,139	173,559
Oct. 30.....	2,651,608	153,533	1,198,821	133,380	187,717	69,259	63,276	372,160	78,345	56,397	93,259	66,899	178,562
Government—													
Oct. 2.....	44,600	2,157	12,288	1,542	1,543	10,041	5,992	3,882	1,350	1,799	1,123	2,222	661
Oct. 9.....	22,711	1,941	2,550	1,894	899	2,639	2,289	2,099	522	875	990	1,851	4,162
Oct. 16.....	25,351	1,716	6,302	3,336	252	954	3,882	1,423	809	1,034	395	2,774	2,474
Oct. 23.....	15,837	1,113	2,556	538	187	1,420	2,692	2,216	163	938	1,243	1,390	1,381
Oct. 30.....	18,967	1,152	2,915	605	1,195	2,516	1,611	3,188	498	1,185	1,099	1,147	1,856
Foreign bank—													
Oct. 2.....	6,625	416	2,709	539	573	259	219	770	225	140	185	185	405
Oct. 9.....	7,775	416	3,859	539	573	259	219	770	225	140	185	185	405
Oct. 16.....	5,203	416	1,287	539	573	259	219	770	225	140	185	185	405
Oct. 23.....	5,920	385	2,293	499	531	239	203	713	208	130	172	172	375
Oct. 30.....	5,709	385	2,082	499	531	239	203	713	208	130	172	172	375
Other deposits—													
Oct. 2.....	20,558	188	8,647	127	1,009	161	194	1,631	251	241	275	23	7,811
Oct. 9.....	17,943	72	6,644	110	814	128	149	830	248	246	204	39	8,459
Oct. 16.....	21,591	90	9,371	310	837	94	317	1,356	273	281	213	60	8,384
Oct. 23.....	22,078	82	8,202	231	927	65	167	2,981	231	277	195	26	8,694
Oct. 30.....	20,187	24	8,119	126	639	81	183	3,070	206	240	237	48	7,214
Total deposits:													
Oct. 2.....	2,470,709	155,226	1,008,920	138,312	192,049	77,205	68,619	356,809	78,154	56,533	89,586	66,217	183,079
Oct. 9.....	2,387,408	149,647	950,509	139,009	183,856	66,882	66,001	350,163	79,780	54,965	92,102	68,637	185,857
Oct. 16.....	2,460,627	153,857	985,972	141,153	188,624	67,881	67,629	361,528	80,797	56,612	93,548	71,908	191,118
Oct. 23.....	2,421,932	151,903	965,869	137,005	186,171	66,027	66,794	366,602	80,521	55,188	94,116	67,727	184,009
Oct. 30.....	2,696,471	155,094	1,211,937	134,610	190,082	72,095	65,273	379,131	79,257	57,952	94,767	68,266	188,007

FEDERAL RESERVE BANKS—RESOURCES AND LIABILITIES, BY WEEKS—Continued

LIABILITIES—Continued

[In thousands of dollars]

	Total	Federal Reserve Bank											
		Boston	New York	Phila- delphia	Cleve- land	Rich- mond	Atlanta	Chi- cago	St. Louis	Min- neapolis	Kansas City	Dallas	San Fran- cisco
Deferred availability items:													
Oct. 2	726,600	79,061	195,987	63,616	70,086	52,056	21,220	87,545	38,300	14,312	40,274	27,944	36,199
Oct. 9	670,376	72,095	169,565	53,529	60,738	50,378	21,418	81,844	38,113	14,838	40,039	29,803	38,016
Oct. 16	937,453	100,444	257,113	75,546	96,931	67,256	29,259	114,039	46,548	16,189	45,860	39,924	48,344
Oct. 23	711,073	78,037	184,558	54,937	69,151	55,268	23,638	84,799	37,471	13,482	38,970	30,070	40,692
Oct. 30	714,206	85,340	192,806	59,886	67,067	54,540	22,321	82,385	35,620	12,775	37,225	27,573	36,671
Capital paid in:													
Oct. 2	166,907	10,800	64,345	16,518	15,590	6,051	5,371	19,844	5,220	3,051	4,259	4,488	11,370
Oct. 9	166,934	10,768	64,375	16,535	15,591	6,021	5,371	19,873	5,220	3,054	4,259	4,488	11,379
Oct. 16	166,998	10,788	64,387	16,535	15,590	6,021	5,377	19,889	5,219	3,063	4,259	4,487	11,383
Oct. 23	107,025	10,791	64,389	16,526	15,597	6,021	5,385	19,896	5,223	3,063	4,264	4,487	11,383
Oct. 30	167,025	10,791	64,388	16,487	15,596	6,021	5,383	19,888	5,238	3,073	4,268	4,487	11,383
Surplus:													
Oct. 2	254,398	19,619	71,282	24,101	26,345	12,399	10,554	36,442	10,820	7,082	9,086	8,690	17,978
Oct. 9	254,398	19,619	71,282	24,101	26,345	12,399	10,554	36,442	10,820	7,082	9,086	8,690	17,978
Oct. 16	254,398	19,619	71,282	24,101	26,345	12,399	10,554	36,442	10,820	7,082	9,086	8,690	17,978
Oct. 23	254,398	19,619	71,282	24,101	26,345	12,399	10,554	36,442	10,820	7,082	9,086	8,690	17,978
Oct. 30	254,398	19,619	71,282	24,101	26,345	12,399	10,554	36,442	10,820	7,082	9,086	8,690	17,978
All other liabilities:													
Oct. 2	37,146	2,455	10,689	2,521	3,456	1,872	2,806	5,980	1,841	1,394	1,201	1,085	1,846
Oct. 9	38,333	2,542	10,658	2,605	3,652	1,953	2,856	6,121	2,049	1,486	1,270	1,148	1,993
Oct. 16	39,024	2,570	10,749	2,665	3,794	1,986	2,886	6,311	2,047	1,504	1,345	1,134	2,033
Oct. 23	40,210	2,605	11,248	2,733	3,920	2,071	2,924	6,294	2,100	1,526	1,423	1,190	2,176
Oct. 30	42,068	2,661	12,543	2,802	4,110	2,084	2,999	6,334	2,138	1,531	1,441	1,219	2,186
Total liabilities:													
Oct. 2	5,506,927	466,947	1,680,976	390,364	487,520	230,547	262,404	816,299	208,612	150,572	225,020	160,239	427,427
Oct. 9	5,377,749	457,873	1,599,280	377,624	472,544	220,128	259,305	801,768	213,424	149,063	228,763	165,498	432,479
Oct. 16	5,718,121	492,322	1,723,472	399,250	508,885	239,953	269,098	842,014	228,119	151,979	237,032	178,622	447,375
Oct. 23	5,451,970	466,756	1,635,331	367,349	477,572	227,539	262,994	816,461	222,201	148,688	230,981	164,779	431,299
Oct. 30	5,754,363	481,874	1,907,810	370,510	477,728	233,695	263,665	825,008	221,292	149,252	230,254	161,242	432,033
MEMORANDA													
Ratio of total reserves to Federal reserve note and deposit liabilities combined (per cent):													
Oct. 2	72.7	77.3	81.0	72.8	70.6	62.3	62.1	73.8	59.5	54.7	67.3	59.3	66.9
Oct. 9	74.4	77.7	85.3	74.1	66.3	60.0	64.3	76.2	63.3	55.1	67.5	63.0	66.6
Oct. 16	73.1	77.9	83.0	70.0	65.4	58.0	66.3	70.6	73.1	55.1	66.2	62.1	70.8
Oct. 23	74.5	80.6	85.7	71.4	63.5	55.4	64.9	79.8	71.3	52.9	63.0	59.4	65.5
Oct. 30	69.4	83.4	71.8	61.8	54.1	57.9	62.4	78.7	67.9	60.6	61.2	59.0	69.2
Contingent liability on bills purchased for foreign correspondents:													
Oct. 2	453,968	32,872	144,293	42,644	45,310	20,434	17,324	60,857	17,768	11,105	14,659	14,659	31,983
Oct. 9	456,505	33,343	142,449	43,256	45,959	20,727	17,573	61,730	18,023	11,265	14,869	14,869	32,442
Oct. 16	463,153	33,804	144,756	43,854	46,595	21,013	17,816	62,583	18,272	11,420	15,075	15,075	32,890
Oct. 23	486,956	34,273	164,138	44,463	47,242	21,305	18,063	63,452	18,526	11,579	15,284	15,284	33,347
Oct. 30	500,833	36,901	153,269	47,871	50,863	22,938	19,448	68,316	19,946	12,466	16,456	16,456	35,903
Own Federal reserve notes held by Federal reserve banks:													
Oct. 2	460,315	47,227	159,078	39,012	20,531	14,289	27,692	47,542	12,424	6,616	10,039	10,275	65,590
Oct. 9	452,923	56,649	155,372	34,470	17,962	13,425	28,477	43,633	15,580	6,711	8,750	9,609	62,285
Oct. 16	462,509	37,739	160,284	30,729	31,088	15,596	30,074	39,875	18,359	10,210	14,105	10,622	63,828
Oct. 23	454,029	39,253	161,035	31,995	22,598	15,822	28,092	44,110	15,611	8,573	8,795	10,787	67,058
Oct. 30	449,108	38,247	163,625	26,242	21,953	16,918	30,657	48,318	13,406	8,290	8,919	10,763	61,770

FEDERAL RESERVE NOTES—FEDERAL RESERVE AGENTS' ACCOUNTS, BY WEEKS

[In thousands of dollars]

	Total	Federal Reserve Bank											
		Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Federal reserve notes received from comptroller:													
Oct. 2	3,710,112	336,463	954,576	246,128	288,250	169,807	297,786	561,301	124,531	142,845	133,313	82,467	372,645
Oct. 9	3,648,718	330,701	937,013	234,855	293,149	168,634	295,722	538,538	127,612	141,278	130,977	81,398	368,841
Oct. 16	3,593,575	302,833	927,468	227,519	289,064	167,300	294,057	535,260	129,597	139,568	130,919	80,343	369,647
Oct. 23	3,524,381	298,704	917,250	224,982	271,506	166,369	287,801	526,678	126,787	132,414	124,837	78,034	369,019
Oct. 30	3,505,925	301,066	922,309	218,006	265,301	165,188	285,942	522,146	127,495	129,206	124,036	80,752	364,478
Federal reserve notes held by Federal reserve agent:													
Oct. 2	1,398,630	89,450	465,745	61,820	87,725	74,554	116,260	204,080	37,830	68,029	42,660	20,377	130,100
Oct. 9	1,335,495	70,850	448,750	58,540	92,825	72,714	114,140	187,580	34,590	66,929	40,220	19,057	129,300
Oct. 16	1,271,445	60,050	433,215	57,540	80,375	67,294	110,590	191,580	28,550	61,829	33,880	17,242	129,300
Oct. 23	1,213,020	55,650	418,230	60,940	72,520	64,794	106,010	180,120	25,110	55,194	32,920	14,632	126,900
Oct. 30	1,176,625	54,450	403,830	59,140	68,820	61,714	98,150	173,020	25,870	54,079	31,670	18,982	126,900
Federal reserve notes issued to Federal reserve bank:													
Oct. 2	2,311,482	247,013	488,831	184,308	200,525	95,253	181,526	357,221	86,701	74,816	90,653	62,090	242,545
Oct. 9	2,313,223	259,851	488,263	176,315	200,324	95,920	181,582	350,958	93,022	74,349	90,757	62,341	239,541
Oct. 16	2,322,130	242,783	494,253	169,979	208,689	100,006	183,467	343,680	101,047	77,739	97,039	63,101	240,347
Oct. 23	2,311,361	243,054	499,020	164,042	198,986	101,575	181,791	346,558	101,677	77,220	91,917	63,402	242,119
Oct. 30	2,329,300	246,616	518,479	158,866	196,481	103,474	187,792	349,126	101,625	75,127	92,366	61,770	237,578
Collateral held as security for Federal reserve notes issued to Federal reserve bank:													
Gold and gold certificates—													
Oct. 2	414,409	35,300	220,704	29,600	28,900	16,190	9,500	-----	7,800	14,157	-----	17,258	35,000
Oct. 9	410,799	35,300	220,704	29,600	28,300	16,190	9,500	-----	7,800	14,157	-----	17,248	35,000
Oct. 16	405,590	35,300	218,015	29,600	22,780	16,190	9,500	-----	7,800	14,157	-----	17,248	35,000
Oct. 23	405,590	35,300	218,015	29,600	22,780	16,190	9,500	-----	7,800	14,157	-----	17,248	35,000
Oct. 30	403,405	35,300	218,015	29,600	20,620	16,190	9,500	-----	7,800	14,157	-----	17,223	35,000
Gold fund, Federal Reserve Board—													
Oct. 2	1,126,936	134,617	103,626	87,400	100,000	30,466	92,000	329,564	16,000	28,000	70,000	8,500	126,763
Oct. 9	1,095,936	139,617	103,626	87,400	85,000	30,466	94,000	299,564	38,000	23,000	65,000	8,500	121,763
Oct. 16	1,141,936	149,617	103,626	87,400	85,000	30,466	100,000	299,564	46,000	23,000	60,000	10,500	146,763
Oct. 23	1,140,936	149,617	153,626	87,400	85,000	25,466	94,000	279,564	46,000	23,000	60,000	10,500	126,763
Oct. 30	1,140,436	159,617	153,626	70,400	75,000	25,466	95,500	279,564	46,000	23,000	60,000	10,500	141,763
Eligible paper—													
Oct. 2	1,178,936	91,521	237,232	78,078	98,689	59,195	82,459	184,977	72,475	48,291	55,904	45,536	124,579
Oct. 9	1,116,534	90,344	193,914	72,489	120,556	61,483	78,641	167,553	51,341	48,088	59,056	42,894	130,195
Oct. 16	1,143,047	84,169	212,489	76,066	119,381	63,011	74,557	200,844	48,033	48,066	60,348	42,155	113,928
Oct. 23	1,083,125	73,104	172,223	79,019	126,970	66,566	78,844	141,727	51,250	47,181	66,543	46,651	133,047
Oct. 30	1,275,869	58,563	334,023	88,825	161,026	68,954	83,357	149,656	54,284	40,036	71,149	45,270	120,126
Total collateral:													
Oct. 2	2,720,281	261,438	561,562	195,078	227,589	105,851	183,959	514,541	96,275	90,448	125,904	71,294	286,342
Oct. 9	2,623,269	265,261	518,244	189,489	230,856	108,139	182,141	467,097	97,141	85,245	124,056	68,642	286,958
Oct. 16	2,690,573	269,086	534,130	193,066	227,161	109,667	184,057	500,408	101,833	85,223	120,348	69,903	295,691
Oct. 23	2,629,651	258,021	543,864	196,019	234,750	108,222	182,344	421,291	105,050	84,338	126,543	74,399	294,810
Oct. 30	2,819,710	253,450	705,664	188,825	257,246	110,610	188,357	429,220	108,084	77,193	131,149	72,993	296,889

MATURITY DISTRIBUTION OF BILLS, CERTIFICATES OF INDEBTEDNESS, AND MUNICIPAL WARRANTS

[In thousands of dollars]

	Total	Within 15 days	16 to 30 days	31 to 60 days	61 to 90 days	91 days to 6 months	Over 6 months
Bills discounted:							
Oct. 2	930,633	695,164	66,416	98,649	63,969	5,997	438
Oct. 9	857,306	639,414	67,629	84,792	58,901	6,102	468
Oct. 16	848,935	648,638	59,738	82,640	50,939	6,754	226
Oct. 23	796,358	603,173	52,609	84,054	48,596	7,641	285
Oct. 30	991,038	784,594	51,616	94,601	49,726	10,170	331
Bills bought in open market:							
Oct. 2	322,818	124,265	37,089	61,388	97,441	2,635	
Oct. 9	333,151	85,797	41,777	84,964	118,464	2,149	
Oct. 16	360,110	94,021	37,627	96,796	130,028	1,638	
Oct. 23	379,383	95,715	37,294	111,603	131,233	3,538	
Oct. 30	339,885	70,998	46,503	133,870	86,755	1,789	
Certificates of indebtedness:							
Oct. 2	29,024	7,190			5,054	2,230	14,550
Oct. 9	27,570	5,530			6,594	917	14,529
Oct. 16	27,595	5,180		5,023		2,571	14,821
Oct. 23	26,374	3,800		5,217		2,616	14,741
Oct. 30	91,133	1,300		40,964		29,222	19,647
Municipal warrants:							
Oct. 2	425	300			125		
Oct. 9	155				125	30	
Oct. 16	155				125	30	
Oct. 23	1,161			600	436	125	
Oct. 30	1,131			725	406		

GOLD SETTLEMENT FUND—INTERBANK TRANSACTIONS FROM SEPTEMBER 18 TO OCTOBER 23, 1929, INCLUSIVE

[In thousands of dollars]

Federal reserve bank	Transfers for Government account		Transit clearing		Federal reserve note clearing		Changes in ownership of gold through transfers and clearings		Balance in fund at close of period
	Debits	Credits	Debits	Credits	Debits	Credits	Decrease	Increase	
Boston	9,000	500	1,390,583	1,397,598	5,901	8,477		1,091	53,535
New York	7,000	70,000	4,883,296	4,963,552	14,758	20,669		149,167	260,326
Philadelphia	9,500	1,500	1,161,341	1,170,087	10,258	6,539	2,973		38,067
Cleveland	11,000	3,000	1,164,658	1,128,138	11,651	5,973	50,198		71,728
Richmond	14,500		1,053,017	1,061,651	3,517	5,631	3,752		22,428
Atlanta	12,500	1,000	460,893	470,691	3,633	4,659	676		17,812
Chicago	21,000	6,000	2,022,579	2,028,057	15,210	11,253	13,479		156,243
St. Louis		4,500	808,263	825,229	3,585	5,698		23,579	46,005
Minneapolis	1,000	500	273,671	258,474	3,067	2,419	16,345		16,338
Kansas City	1,500	6,500	660,455	624,245	3,632	4,945	29,897		39,964
Dallas	5,000	1,500	540,652	542,109	2,375	2,167	2,251		26,821
San Francisco	5,500	2,500	616,039	565,616	4,634	3,791	54,266		28,304
Total, 5 weeks ending—									
Oct. 23, 1929	97,500	97,500	15,035,447	15,035,447	82,221	82,221	173,837	173,837	779,661
Sept. 18, 1929	129,200	129,200	12,976,316	12,976,316	85,322	85,322			730,013
Oct. 24, 1928	178,400	178,400	13,428,986	13,428,986	71,303	71,303			706,947
Sept. 19, 1928	207,700	207,700	11,420,986	11,420,986	72,170	72,170			720,345

WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

PRINCIPAL RESOURCES AND LIABILITIES, BY WEEKS

[In millions of dollars]

	Total	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Loans and investments:													
Oct. 2	22,829	1,553	8,825	1,242	2,200	683	652	3,397	700	414	696	494	1,973
Oct. 9	22,673	1,540	8,720	1,246	2,184	682	649	3,378	701	414	697	500	1,962
Oct. 16	22,794	1,549	8,786	1,247	2,179	680	638	3,430	702	415	704	495	1,968
Oct. 23	22,895	1,553	8,908	1,239	2,179	682	643	3,417	700	416	701	496	1,960
Oct. 30	24,431	1,566	10,288	1,261	2,218	674	643	3,482	709	416	706	504	1,964
Loans:													
Oct. 2	17,428	1,216	6,838	937	1,569	525	528	2,739	546	292	468	375	1,393
Oct. 9	17,269	1,205	6,714	942	1,558	524	526	2,726	545	290	469	384	1,387
Oct. 16	17,397	1,220	6,778	940	1,557	522	516	2,779	546	290	477	380	1,391
Oct. 23	17,500	1,224	6,889	934	1,561	525	522	2,765	546	292	474	381	1,388
Oct. 30	18,934	1,237	8,170	958	1,593	516	519	2,830	553	293	476	386	1,404

WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES—Continued

PRINCIPAL RESOURCES AND LIABILITIES, BY WEEKS—Continued

[In millions of dollars]

	Total	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco
Loans—Continued													
On securities—													
Oct. 2	7,828	533	3,390	487	740	204	161	1,299	241	88	131	105	446
Oct. 9	7,687	529	3,276	491	729	201	163	1,292	242	87	130	105	443
Oct. 16	7,875	547	3,406	488	724	201	153	1,344	243	85	133	104	447
Oct. 23	7,920	546	3,471	487	729	204	157	1,330	243	86	128	102	438
Oct. 30	9,179	553	4,651	512	756	190	151	1,363	250	87	125	101	439
All other—													
Oct. 2	9,600	682	3,449	450	829	321	367	1,439	305	204	337	271	947
Oct. 9	9,582	675	3,437	451	830	323	362	1,434	303	203	339	279	945
Oct. 16	9,522	673	3,373	453	834	321	363	1,433	303	205	343	276	944
Oct. 23	9,580	677	3,419	447	832	321	365	1,435	303	206	346	279	951
Oct. 30	9,755	684	3,519	445	836	326	369	1,466	303	206	351	284	965
Investments:													
Oct. 2	5,401	338	1,986	305	630	157	124	658	154	122	228	119	580
Oct. 9	5,403	335	2,006	304	626	158	123	652	156	124	228	116	575
Oct. 16	5,397	329	2,008	307	622	158	122	651	156	125	227	115	577
Oct. 23	5,395	330	2,019	305	618	157	121	652	155	125	227	115	571
Oct. 30	5,496	329	2,118	303	626	157	123	652	156	124	231	118	559
U. S. Government securities—													
Oct. 2	2,660	172	1,022	94	305	73	57	305	47	67	103	77	337
Oct. 9	2,656	172	1,033	94	302	73	57	297	47	69	103	74	353
Oct. 16	2,652	165	1,040	94	300	73	56	300	47	69	102	74	353
Oct. 23	2,654	166	1,049	93	296	73	56	302	47	69	102	73	329
Oct. 30	2,682	165	1,090	92	297	73	57	298	47	168	104	74	317
All other—													
Oct. 2	2,741	165	964	210	325	84	66	353	107	55	125	42	242
Oct. 9	2,747	163	973	210	324	85	66	355	108	55	125	42	242
Oct. 16	2,745	165	968	213	322	85	66	352	109	56	125	41	245
Oct. 23	2,740	164	970	212	322	84	66	350	108	56	125	42	242
Oct. 30	2,814	164	1,028	211	329	84	66	354	109	56	127	44	242
Reserve with Federal reserve bank:													
Oct. 2	1,727	102	819	74	128	41	40	257	43	27	55	32	109
Oct. 9	1,686	98	790	76	123	39	40	254	44	27	57	34	104
Oct. 16	1,747	102	818	76	126	41	40	265	45	27	60	35	112
Oct. 23	1,725	101	805	75	126	38	40	268	45	27	58	34	106
Oct. 30	1,990	105	1,045	74	129	44	39	279	44	30	59	33	111
Cash in vault:													
Oct. 2	230	17	66	13	28	12	9	37	7	6	11	7	19
Oct. 9	248	18	71	15	30	13	10	38	7	6	12	8	20
Oct. 16	230	17	65	15	27	12	9	36	7	6	11	7	18
Oct. 23	238	17	68	14	29	12	10	37	7	6	11	8	19
Oct. 30	269	17	91	15	31	13	10	40	7	6	11	8	20
Net demand deposits:													
Oct. 2	13,295	943	5,888	693	1,041	354	325	1,903	356	234	495	287	771
Oct. 9	13,040	916	5,702	697	1,011	350	326	1,895	371	229	496	296	750
Oct. 16	13,496	951	5,885	698	1,033	354	326	1,950	380	233	505	303	790
Oct. 23	13,314	940	5,893	694	1,021	350	319	1,945	372	231	497	295	758
Oct. 30	15,110	992	7,458	709	1,056	348	317	2,025	377	247	496	298	788
Time deposits:													
Oct. 2	6,825	457	1,794	272	941	245	230	1,243	231	131	182	141	957
Oct. 9	6,803	458	1,790	269	935	245	230	1,234	234	131	182	140	955
Oct. 16	6,815	458	1,798	266	937	245	228	1,232	233	131	182	139	965
Oct. 23	6,883	455	1,843	265	936	245	229	1,269	233	131	181	139	957
Oct. 30	6,868	466	1,837	263	938	244	227	1,265	232	130	180	139	947
Government deposits:													
Oct. 2	227	13	70	23	27	8	16	22	4	1	3	17	23
Oct. 9	209	12	64	21	25	7	14	21	3	1	3	16	22
Oct. 16	159	9	49	16	19	5	11	16	3	1	2	12	16
Oct. 23	131	7	40	13	16	4	9	13	2	1	2	10	13
Oct. 30	127	7	39	13	15	4	9	13	2	1	2	10	13
Due from banks:													
Oct. 2	1,217	55	176	64	96	51	75	239	61	54	122	67	159
Oct. 9	1,126	57	158	54	87	50	78	196	62	52	120	61	150
Oct. 16	1,269	69	185	62	100	57	85	219	68	56	131	71	164
Oct. 23	1,144	55	174	59	87	50	77	201	65	54	120	56	146
Oct. 30	1,257	65	194	61	108	53	77	239	66	56	123	58	156
Due to banks:													
Oct. 2	2,888	123	1,027	167	211	100	104	447	121	83	207	105	195
Oct. 9	2,748	115	938	159	191	98	109	430	129	80	205	113	185
Oct. 16	2,967	129	1,062	170	209	105	118	443	123	79	212	114	198
Oct. 23	2,685	122	932	153	184	100	112	409	123	76	199	102	174
Oct. 30	3,290	153	1,444	161	191	101	112	432	126	80	199	104	187
Borrowings from Federal reserve banks:													
Oct. 2	672	44	103	39	59	25	46	121	53	38	32	24	88
Oct. 9	612	43	86	38	68	22	41	97	34	39	32	21	90
Oct. 16	605	37	85	44	61	25	37	120	31	40	31	22	73
Oct. 23	554	32	66	40	67	27	38	63	33	40	35	24	88
Oct. 30	729	24	197	61	97	28	41	70	38	33	39	25	77

LAND BANKS AND INTERMEDIATE CREDIT BANKS

LOANS OF FEDERAL AND JOINT-STOCK LAND BANKS

[In thousands of dollars]

Date	Net amount of loans outstanding		
	Total	Federal land banks (12 banks)	Joint-stock land banks ¹
1927			
Sept. 30.....	1,752,665	1,143,130	609,535
Oct. 31.....	1,757,185	1,147,135	610,050
Nov. 30.....	1,758,834	1,150,943	607,891
Dec. 31.....	1,765,121	1,155,644	609,477
1928			
Jan. 31.....	1,767,515	1,158,717	608,798
Feb. 29.....	1,778,338	1,168,354	609,984
Mar. 31.....	1,786,862	1,175,858	611,004
Apr. 30.....	1,791,341	1,180,420	610,921
May 31.....	1,793,035	1,183,672	609,363
June 30.....	1,794,236	1,184,656	609,580
July 31.....	1,793,610	1,185,714	607,896
Aug. 31.....	1,796,591	1,187,365	609,226
Sept. 30.....	1,797,796	1,189,345	608,451
Oct. 31.....	1,797,910	1,190,278	607,632
Nov. 30.....	1,797,319	1,191,724	605,595
Dec. 31.....	1,799,045	1,193,846	605,199
1929			
Jan. 31.....	1,799,464	1,195,089	604,375
Feb. 28.....	1,803,593	1,199,766	603,827
Mar. 30.....	1,803,691	1,202,570	601,121
Apr. 30.....	1,803,115	1,203,724	599,391
May 31.....	1,802,160	1,204,128	598,032
June 30.....	1,802,872	1,204,916	597,956
July 31.....	1,800,766	1,204,363	596,403
Aug. 31.....	1,798,682	1,203,806	594,876
Sept. 30.....	1,795,878	1,202,490	593,388

¹ Number of banks, 1927: September–November, 52; December, 51. 1928: January–April, 51; May–November, 50; December, 49. 1929: January to date, 49.

LOANS OF INTERMEDIATE CREDIT BANKS

[In thousands of dollars]

Class of loan	1929				1928
	Sept. 30	Aug. 31	July 31	June 30	Sept. 30
Direct loans outstanding on—					
Cotton.....	5,513	213	497	2,041	4,172
Tobacco.....	84	87	215	288	1,955
Wheat.....	2,311	694	97	184	2,123
Canned fruits and vegetables.....	1,546	968	584	570	2,983
Raisins.....	3,348	3,860	3,945	4,092	5,039
Wool.....	3,859	3,932	3,409	1,364	946
Rice.....	25	30	96	273	415
All other.....	174	155	173	219	108
Total.....	16,860	9,939	9,021	9,031	17,741
Rediscounts outstanding for—					
Agricultural credit corporations.....	29,268	32,074	32,513	31,563	30,461
National banks.....	90	100	102	102	3
State banks.....	1,982	1,821	1,627	1,460	305
Livestock loan companies.....	23,923	24,868	25,638	25,865	19,992
Other banks and trust companies.....	80	80	80	80	117
Total.....	55,343	58,943	59,960	59,070	50,878

BANK SUSPENSIONS¹ IN SEPTEMBER, 1929

[Amounts in thousands of dollars]

Federal reserve district	All banks		Member banks ²		Nonmember banks	
	Number	Total deposits ³	Number	Total deposits ³	Number	Total deposits ³
Boston.....						
New York.....						
Philadelphia.....						
Cleveland.....						
Richmond.....	5	1,307			5	1,307
Atlanta.....	3	481			3	481
Chicago.....	8	2,905	1	510	7	2,395
St. Louis.....	4	599	1	369	3	230
Minneapolis.....	4	1,947			4	1,947
Kansas City.....	14	2,981	1	447	13	2,534
Dallas.....	1	22			1	22
San Francisco.....						
Total.....	439	10,242	3	1,326	36	8,916

¹ Banks closed to the public on account of financial difficulties by order of supervisory authorities or directors of the bank.
² Subject to revision; figures given are for latest available date prior to suspension.
³ National banks.
⁴ Includes 1 private bank for which deposit figures are not available.

BANK DEBITS

[Debits to individual accounts. In thousands of dollars]

	Number of centers	September, 1929	August, 1929	September, 1928
New York City.....	1	50,342,300	49,033,562	38,725,290
Outside New York City.....	140	27,313,948	28,338,732	24,450,348
Federal reserve district:				
Boston.....	11	3,085,982	3,301,522	2,518,906
New York.....	7	51,503,486	50,175,946	39,609,970
Philadelphia.....	10	2,502,512	2,505,489	2,383,107
Cleveland.....	13	2,860,492	2,989,197	2,656,764
Richmond.....	7	729,353	817,549	672,403
Atlanta.....	15	1,089,642	1,126,481	1,061,090
Chicago.....	21	7,631,575	7,968,062	6,438,021
St. Louis.....	5	1,293,312	1,221,287	1,186,385
Minneapolis.....	9	974,084	990,318	869,135
Kansas City.....	15	1,437,236	1,576,588	1,362,914
Dallas.....	10	782,667	722,685	739,429
San Francisco.....	18	3,976,907	3,977,170	3,677,514
Total.....	141	77,656,248	77,372,294	63,175,638

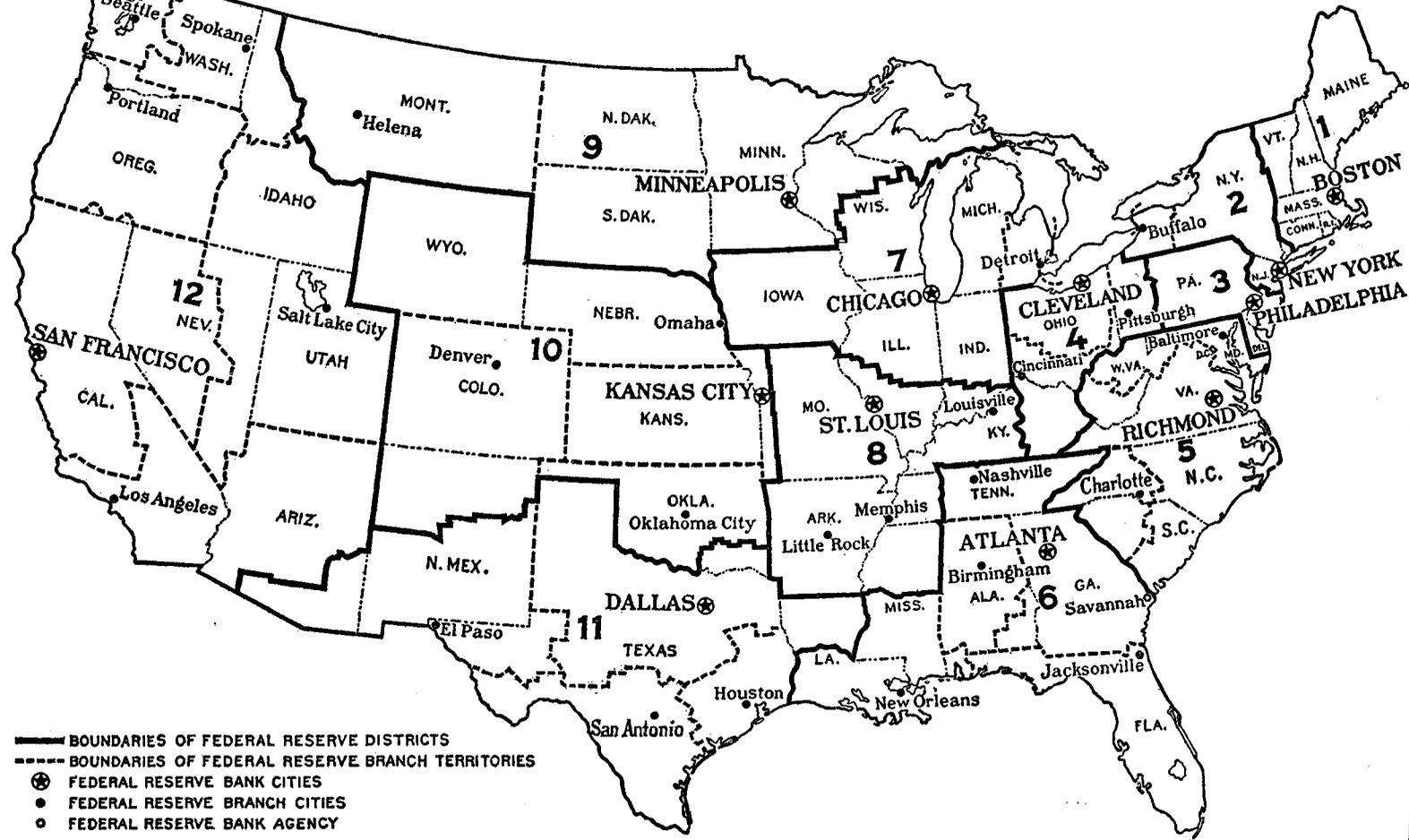
MEMBERSHIP IN PAR-COLLECTION SYSTEM

[Number of banks at end of September]

Federal reserve district	Member banks		Nonmember banks			
	1929	1928	On par list		Not on par list ¹	
			1929	1928	1929	1928
United States.....	8,629	8,901	12,221	12,800	3,777	3,954
Boston.....	408	408	271	251		
New York.....	934	935	407	411		
Philadelphia.....	771	784	479	496		
Cleveland.....	805	819	999	1,021	9	10
Richmond.....	524	554	589	635	553	581
Atlanta.....	432	455	257	305	933	1,003
Chicago.....	1,269	1,261	3,515	3,602	228	208
St. Louis.....	573	591	1,692	1,788	475	474
Minneapolis.....	691	724	600	700	1,112	1,132
Kansas City.....	904	940	2,161	2,255	196	286
Dallas.....	762	786	608	637	210	204
San Francisco.....	616	644	643	699	61	56

¹ Incorporated banks other than mutual savings banks.

FEDERAL RESERVE DISTRICTS



- BOUNDARIES OF FEDERAL RESERVE DISTRICTS
- - - BOUNDARIES OF FEDERAL RESERVE BRANCH TERRITORIES
- ⊛ FEDERAL RESERVE BANK CITIES
- FEDERAL RESERVE BRANCH CITIES
- FEDERAL RESERVE BANK AGENCY