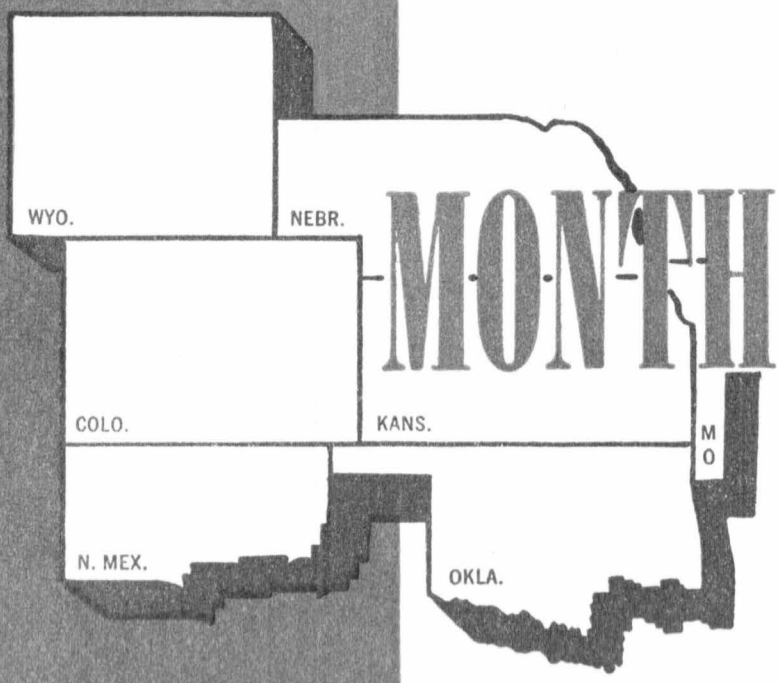
January 1955



MONTHLY REVIEW

In This Issue

FEDERAL RESERVE BANK
OF KANSAS CITY

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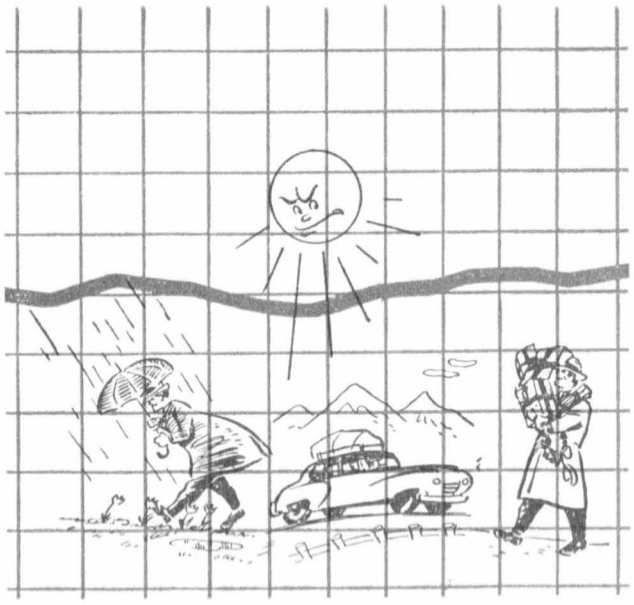
Seasonal Adjustments



SEASONAL VARIATIONS characterized much of the movement in business activity during the year just ended. A similar description is conveyed by observing that a number of indexes of economic activity were generally stable, after correction for seasonal influences. This is illustrated by the Federal Reserve index of industrial production; the unadjusted series fluctuated 14 index points, while the adjusted index moved within a narrow range of 3 points throughout most of the year. In view of the need to recognize seasonal movements in describing and analyzing economic activity, the primary features of seasonal adjustments together with seasonal patterns in selected economic series are presented in this article.

Seasonal variation is a type of periodic movement with a rather definite pattern of fluctuation throughout the year. Two factors give rise to most seasonal variations, directly or indirectly. Patterns of the weather produce seasons in agriculture, construction, fuel consumption, travel, and many other activities. Social customs associated with particular dates and seasons, such as Christmas, Easter, and vacation periods, give rise to seasonal patterns in other economic data.

It is desirable to remove seasonal fluctuations from economic time series, which consist of data classified chronologically, since they are of limited assistance in analyzing current economic developments. In a series which has been properly adjusted for seasonal variation, the value for a particular month does not tend to be different from the values of adjacent months because of the time of the year, nor does a pattern of movement repeat itself in successive years. Seasonal correction aids in observing the influence of more significant economic forces, as revealed by cyclical and trend movements, and reduces the likelihood of assigning incorrect explanations to observed variations. For example, in an unadjusted series, a seasonal increase may be mistaken for a fundamental improvement in business conditions or a normal seasonal downturn may generate undue pessimism.

Estimating Seasonal Factors

The logic underlying the determination of seasonal factors is easily understood. For a time series characterized by regularly recurring seasonal fluctuations, it is reasonable to portray an average pattern of seasonal variation. Simple as the concept appears, it does result in numerous technical problems. It is often difficult to isolate the influence of a seasonal force because of the variety of forces playing upon economic data. Nor are seasonal patterns constant. They tend to change over time—sometimes abruptly, as may occur at the outbreak of war, but more often gradually, reflecting changes in consumer buying or

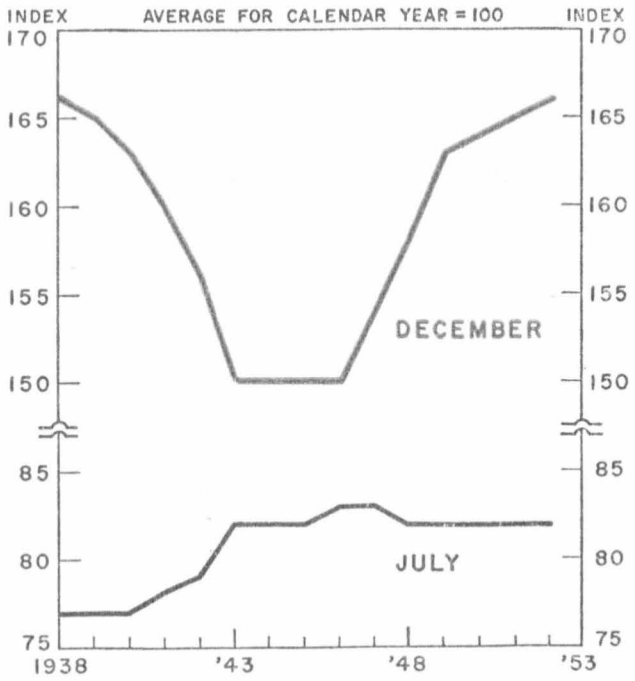
business practices. In making current corrections, it is frequently difficult to determine whether a particular departure from the previous pattern represents a random fluctuation or marks the beginning of a shift in the pattern. It is accepted procedure, therefore, to review seasonal factors periodically in the light of accumulated data.

Since the purpose of seasonal adjustment is to eliminate the typical seasonal pattern, the various methods of adjustment are based on averaging principles. In the first major step, an estimate of the combined trend and cyclical movements in a time series is obtained by an averaging procedure. Seasonal factors then are derived from the ratios of the original unadjusted monthly data to the estimate of trend and cyclical movements. The curves in Figure 1 portray seasonal factors in Tenth District department store sales for the months of July and December over a period of years. Similar series exist for the other 10 months of the year. Reading from the lower curve, the seasonal factor for July 1950 is 82, meaning that department store sales were expected to be 18 per cent below the average for the year in the absence of nonseasonal movements.

Each of the series of seasonal factors exhibits changes in its pattern. July sales have become larger relative to other months, as is shown by the upward shift in the adjustment factor. The series for December indicates the effect of a temporary change in consumer spending habits. During World War II, consumers shopped earlier in order to obtain merchandise that might become scarce nearer Christmas and in order to prepare packages for overseas mailing. December sales became smaller relative to the November volume. Since the war, consumers have shifted back to prewar habits and December sales have regained their former position.

The final major step in adjusting for seasonal variation consists of dividing the original unadjusted series by the seasonal factors. Continuing with the example, the unadjusted index of department store sales in the Tenth District for July 1950 is 112. Dividing this index by the seasonal factor, 82, yields the adjusted index of 137. The seasonal factor for December 1950 is 164, which may be read from the upper curve. Using this as the divisor of the unadjusted index, 183, gives an adjusted value of 112.

Figure 1. CHANGES IN SEASONAL FACTORS
Department Store Sales in the Tenth District



SOURCE: Federal Reserve Bank of Kansas City.

Patterns in Selected Series

Industrial Production and Employment

The Federal Reserve monthly index of industrial production is adjusted for patterns of variation which tend to reappear in successive years. An averaging technique is employed to determine directly the seasonal factors for each of 26 major industry group indexes. In making current adjustments to these series, the seasonal pattern of the most

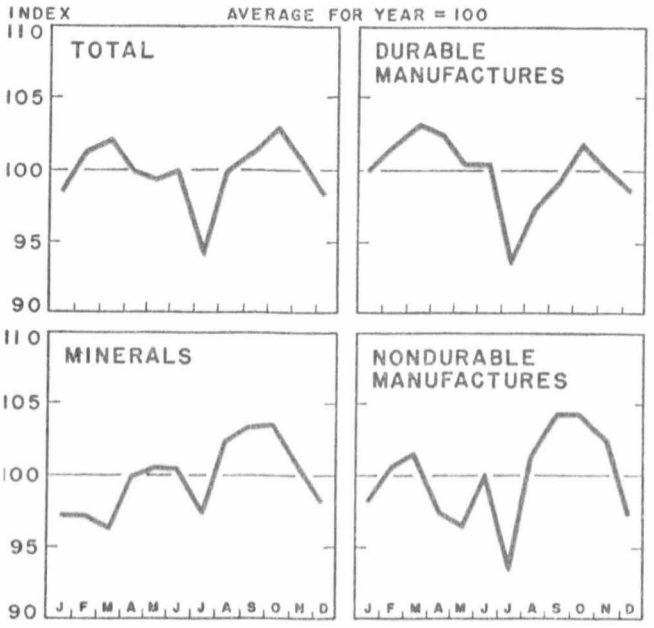
recent complete year is used unless special conditions dictate modification. Adjusted indexes for the major divisions—durable manufactures, nondurable manufactures, and minerals—as well as the total are obtained by aggregating the adjusted group indexes.

Since the total index and its major divisions are not adjusted directly, implied seasonal factors are derived by dividing the unadjusted monthly indexes by the corresponding adjusted indexes. Implied seasonal factors in industrial production for 1953 are shown in Figure 2. The pattern reveals that total production is seasonally high in February and March and in September, October, and November. The adjustment factor for July is 94, indicating that insofar as seasonal influences are concerned the unadjusted index of production is expected to be 6 per cent below the average for the year. This summer decline in production reflects the importance of industry-wide vacations since World War II.

The amount of seasonal fluctuation in industrial production has been about 10 per cent during recent years. This is considerably smaller than in some sales and construction series. For the individual industry groups, the amplitudes of seasonal variation differ widely. Recently, for example, the separation between maximum and minimum seasonal production was only 5 points in the output of petroleum and coal products and 7 points in the production of fabricated metal products. On the other hand, the seasonal indexes for the production of electrical machinery varied from a low of 84 in July to 106 in March and in October. The variation in the mining industries was even larger, with spreads of 42 points in the production of anthracite and 49 points in metal mining.

Production of nondurable goods is normally highest in the fall of the year. Among nondurable manufactures, several important industry groups—foods and beverages, chemicals (equally high in February and March),

Figure 2. SEASONAL FACTORS IN INDUSTRIAL PRODUCTION, 1953



SOURCE: Board of Governors of the Federal Reserve System.

printing and publishing, paper products, and rubber products—reach their seasonal production peaks in the autumn. Production of textiles, apparel, and leather and leather products is normally highest early in the year. In the minerals division as well, output usually is high in the autumn, with production of anthracite and of bituminous coal reaching peak levels. An exception to this characterization of mineral production occurs in the crude oil and natural gas industry, for which no seasonal adjustment is made.

Durable manufactures reach their seasonal peak in the spring. Primary metals, nonelectrical machinery, electrical machinery (equally high in October), and transportation equipment normally build up to peak production in March. In the fall, manufacturing of fabricated metal products and of stone, clay, and glass products usually is at its highest level. Output of lumber and products is seasonally high from April through October, except for July, while furniture production normally is highest at year end.

SEASONAL VARIATION IN TOTAL PRODUCTION, 1952

Month	Current Index	Old Index
January	98.9	98.0
February	101.0	98.2
March	101.8	99.0
April	100.1	99.5
May	99.1	100.2
June	100.4	101.0
July	94.2	100.1
August	100.0	102.1
September	101.7	101.7
October	103.0	101.9
November	101.0	100.0
December	98.5	98.9

SOURCE: Board of Governors of the Federal Reserve System.

When the index of industrial production was revised in 1953, new seasonal adjustment factors were developed. The implied 1952 patterns for the current and the old indexes are compared in the accompanying table. The adjustment made in the current index for the July production drop is the most noticeable difference between the two patterns. As indicated earlier, this is associated with the increased importance of industry-wide summer vacations. Production in 15 of the 24 major industry groups requiring seasonal adjustment normally is low in July. The table also indicates that the current index makes adjustment for higher seasonal production in the first quarter and in October and November.

In general, seasonal patterns of employment are associated with those of production in the various industry groups. Seasonal variations in manufacturing production worker employment, however, tend to be much less than in output. Changes in output within certain ranges may be accomplished readily by varying the workweek, leaving employment constant. In addition, vacationing employees are considered employed, although production schedules reflect their absence.

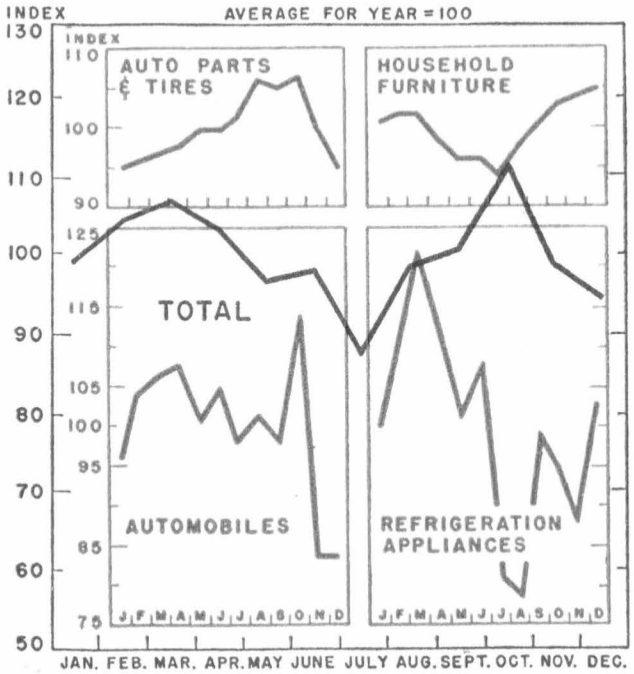
The relative amounts of fluctuation in factory production and employment may be illustrated by the durable and nondurable goods divisions. The over-all seasonal fluctuation in durable goods production was about 10 per cent, while the seasonal factor for production employment in these industries varied 2 per cent in 1953. Similarly, in the nondurable goods sector, the seasonal fluctuation in output was 11 per cent; in employment, 7 per cent. Variations in production worker employment are largest in the food canning and tobacco industries.

Output of Consumer Durable Goods

In analyzing current business conditions, attention is commonly centered not only on movements in the broad categories of industrial production but also on those in particular industries. The auto industry and others making consumer durable goods receive rather intensive study. Accordingly, knowledge of their seasonal patterns is essential.

The Federal Reserve Board's monthly index of output of consumer durable goods indicates production is normally high in the autumn and the spring. As in over-all industrial produc-

Figure 3. SEASONAL FACTORS IN THE OUTPUT OF CONSUMER DURABLE GOODS, 1953



SOURCE: Board of Governors of the Federal Reserve System.

tion, activity in this sector of the economy is seasonally low in the summer—in July, output normally is more than a tenth below the average for the year. Of the 11 seasonally adjusted subgroups, all but 3 are at seasonal low points of production during July or August. Autos, auto parts and tires, and heating apparatus constitute the exceptions.

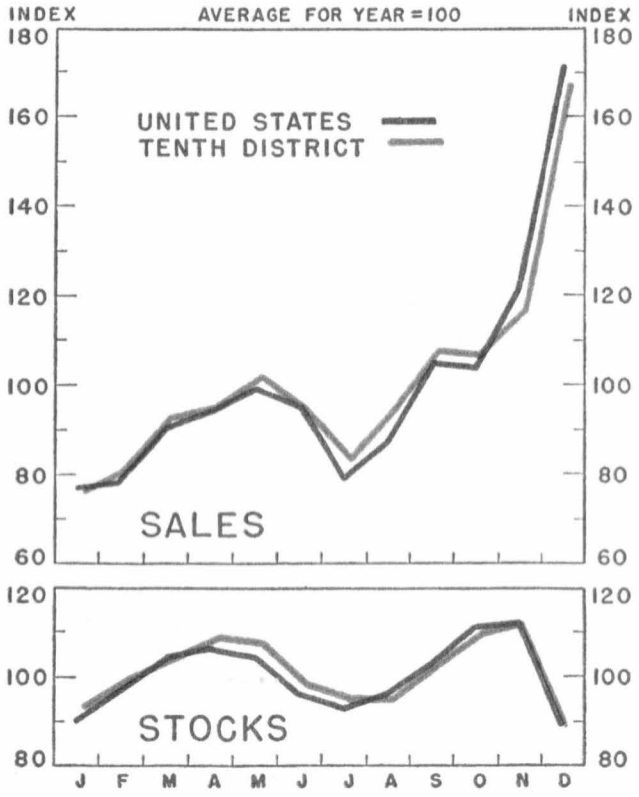
Seasonal adjustments are made directly to subgroups of the total index, as in the index of industrial production. The implied 1953 seasonal factors for the total output of consumer durable goods and the factors used to adjust several more important subgroups are shown in Figure 3. In adjusting the monthly production of autos, the timing and duration of model change-over periods are treated separately from other seasonal variations. The adjustment factors shown represent the combination of these influences. Since 1949, auto production apparently has been characterized by higher spring and lower winter output rates, with the range of seasonal variation smaller than prior to World War II. In 1954, however, the relatively early model change-over may tend to alter this pattern.

The magnitude of seasonal fluctuations in a number of consumer durable goods industries is greater than in most other types of industrial production. The output of refrigeration appliances, floor coverings, heating apparatus, radio sets, ranges, and laundry appliances is normally more than 50 per cent greater in the peak month than in the seasonally low month. In the case of television sets, production averages about three times as high in October and November as in July. Seasonal fluctuations are smallest in the production of household furniture and in auto parts and tires; yet, their seasonal factors varied about 11 points in recent years.

Department Store Sales and Stocks

With the memory of Christmas fresh in mind, it requires little imagination to visualize

Figure 4. SEASONAL FACTORS IN DEPARTMENT STORE SALES AND STOCKS, 1953



SOURCE: Federal Reserve Bank of Kansas City and Board of Governors of the Federal Reserve System.

the predominant seasonal movement in department store sales. December sales are traditionally about two-thirds higher than the average for the year and have more than doubled January sales in recent years. This is illustrated by Figure 4 which depicts the seasonal pattern in sales at department stores in the United States and the Tenth District.

A more limited peak in department store sales normally occurs in the spring, reflecting the higher sales of apparel and other items at Easter. Because of variation in the date of Easter, special adjustments are required for the months of March and April. While the adjustment factor for each of the two months varies, the total of the March and April adjustment factors is not changed by the Easter adjustment. For example, seasonal factors for March and April sales were 88 and 97, respectively, in the Tenth District in 1954

when Easter occurred on April 18. In 1953, an earlier Easter, on April 5, resulted in adjustment factors of 91 for March and 94 for April.

One of the most interesting changes in the seasonal pattern of sales during the past decade—other than the temporary shifts of the war period—has occurred in July, as pointed out earlier. Department store sales in the Nation, as in the District, during July have become larger relative to other months, although they continue to be at a reduced level. The increase reflects primarily promotional activity by store management to expand sales during this summer month and the greater variety of seasonal summer goods.

Adjusted department store sales figures are compiled by each Reserve bank for the stores in its district. Seasonal factors, computed by means of uniform procedures, are applied to the index of daily average sales in making the adjustment. By using daily average sales, most fluctuations in sales resulting from calendar irregularities are eliminated. The national sales index is a weighted average of the 12 district indexes; thus, the seasonal factors for the U. S. index are derived by dividing the unadjusted index for each month by the corresponding seasonally adjusted index.

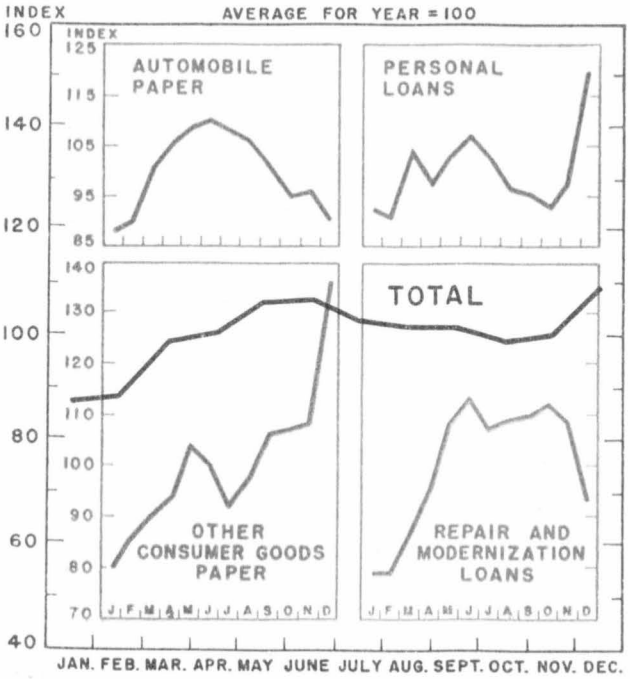
Seasonal movements in department store stocks reflect the variation in sales throughout the year, as well as the purchasing practices of store management. The range of seasonal fluctuation in stocks is more limited than that in sales. Normally, stocks reach a peak in November, preceding the peak in sales; and, as is apparent in Figure 4, December sales usually deplete stocks considerably.

Consumer Instalment Credit

The amounts of instalment credit extended and repaid each month exhibit different seasonal variations. This follows from the fact that credit extensions are closely associated with consumer buying patterns, while repayments are governed by past extensions and contract terms. Since credit extensions reflect consumer decisions, they are a useful indicator of current market conditions.

Seasonal factors for the various types of instalment credit extended are shown in Figure 5. They are computed by the Board of Governors, using the same basic technique employed in adjusting the other series. The seasonal pattern for total credit extended was derived by adding the weighted factors for the four types of credit. Seasonal factors for the different types of credit are associated with the sales patterns of the commodities which generate the requirements for the credit. Auto loans, which account for about 40 to 45 per cent of all instalment credit extended, reach a peak in June after rising steadily during the spring months. These loans normally decline during the autumn to a low level in the winter months. Repair and modernization loans also are low in the winter and rise rapidly in the spring. The volume of this type of lending remains at a

Figure 5. SEASONAL FACTORS IN CONSUMER INSTALMENT CREDIT EXTENDED, 1953



SOURCE: Board of Governors of the Federal Reserve System.

high level from June through October, although it dips slightly in midsummer.

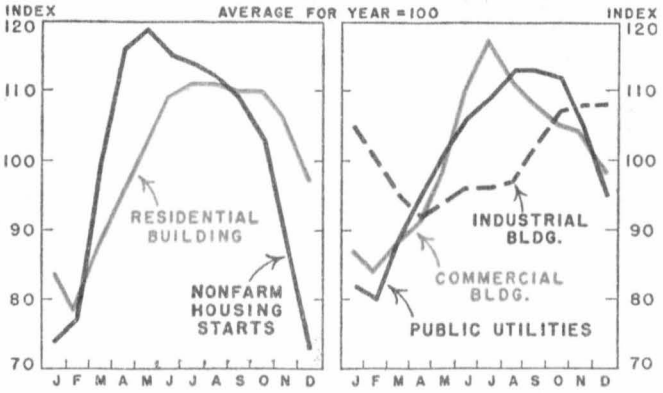
Seasonal variations in the extension of credit for other consumer goods display pronounced fluctuations. A relatively high level is reached in May, followed by a decline during the summer months. The peak normally is reached in December, under the stimulus of Christmas sales. Over a quarter of the instalment credit extended during recent years was on paper of this type. The seasonal pattern in personal loans fluctuates from a relatively low level in January and February to a moderately high level in June. The temporary expansion in March is associated with the volume of loans made for income tax payments. After June, personal loan extensions normally decline until November, when they begin to increase toward the seasonal peak in December.

Construction

A discussion of seasonal variation would not be complete without considering the patterns which weather forces upon construction activity. In keeping pace with the large volume of construction during recent years, some progress has been made in modifying seasonal variations by the more widespread adoption of modern equipment and improved work scheduling. The influence of the weather, however, remains evident. Seasonal adjustments for nonfarm housing starts are prepared by the U.S. Bureau of Labor Statistics, while the U.S. Department of Commerce adjusts other construction activity series. Seasonal factors for several important construction series and housing starts are shown in Figure 6.

Seasonal variation in private nonfarm housing starts is quite pronounced. The low point usually occurs from November through February, when outdoor activity is curtailed in much of the country. Starts pick up in March and normally reach a peak in May which is about 19 per cent above the average for the year. Throughout the summer and early fall, housing starts gradually fall off.

Figure 6. SEASONAL FACTORS IN PRIVATE CONSTRUCTION



NOTE: Since the individual components of commercial building are adjusted directly, the seasonal index for commercial building is implied.

SOURCE: U. S. Bureau of Labor Statistics and U. S. Department of Commerce.

The seasonal pattern in residential building, measuring work put in place, lags behind and exhibits less over-all fluctuation than housing starts. While the range of the seasonal indexes in commercial building and public utility construction is similar to that in residential building, the patterns of the three exhibit individual variations. The most distinctly different pattern is that of industrial building. April marks the seasonal low point and November and December the seasonal high in the value of construction put in place. Moreover, the amplitude of seasonal variation is only about half that in the other series shown. Although not illustrated in Figure 6, highway construction is influenced by the weather more than other types of construction. In an average year, four times as much highway building occurs in August as in February.

Accelerated Payment of Corporation Income Taxes

Prior to the effective date of certain features of the Revenue Act of 1950, corporations paid their income tax on a given year's income in four quarterly instalments in the year following the close of the corporation's fiscal year. For corporations whose fiscal years coincided with the calendar year, this meant payment of one fourth of the tax liability on the 15th of March, June, September, and December. But a provision of the Revenue Act of 1950, usually referred to as the Mills Amendment, required that corporations pay 30 per cent of their tax liability on income earned in 1950 in each of the first two quarters of 1951 and the remainder in the second two quarters. The Act further provided that payments would be stepped up to 35 per cent in the first two quarters of 1952, to 40 per cent in the first two quarters of 1953, to 45 per cent in the first two quarters of 1954, and finally to 50 per cent in the first two quarters of 1955. The shortening of the lag in payments was designed to aid in financing the Government during the period when defense outlays were expected to be heavy.

This system has concentrated Treasury tax receipts from corporations in the first two quarters of the calendar year, making it necessary for the Treasury to borrow to cover a deficit in the last half. In order to bring the flow of Treasury receipts in the year more nearly into balance with the rate of its expenditures, a further acceleration of tax payments is required under the Internal Revenue Code of 1954. Under the provisions of the new code, corporations having an estimated tax liability exceeding $100,000 on 1955 income will pay 5 per cent of the liability in excess of $100,000 in each of the last two quarters of 1955. In succeeding years, the rate required to be paid in these two quarters on liability in excess of $100,000 will increase by steps of 5 per cent until, in the last half of 1959 and succeeding years, payments will be made in four quarterly instalments of 25 per cent each. Restriction of the application of accelerated payments under the new tax code to larger corporations is expected to confine its effect to about 20,000 companies which pay an estimated 85 per cent of corporate tax liability. The transition in the timing of tax payments has had and will have effects upon U. S. Treasury tax receipts and the working capital position of corporations. It is of interest to note how these effects are produced.

The effect of accelerated tax payments on the tax receipts of the Treasury is quite significant. In the period 1951 through 1960 as a whole, the Treasury will receive approximately an extra half year's taxes from corporations through advancement of the dates of tax payment. So far as the Treasury's fiscal years are concerned, the increase in revenues is concentrated in the second half of the fiscal years 1951 through 1955. Under the Mills Amendment, the shift of corporate tax payments from September and December to March and June moved tax receipts from a later to an earlier fiscal year, since the Government's fiscal year ends on June 30. Such a transfer of payments will not occur in the case of calendar year corporations under the new tax code, since it provides for payments to be shifted from March and June of a given year to September and December of the preceding year, or a shift within the Government's fiscal year. Therefore, Treasury receipts from corporate taxes will not be supported by accelerated payments after the current fiscal year, ended June 30, 1955, except as the new code

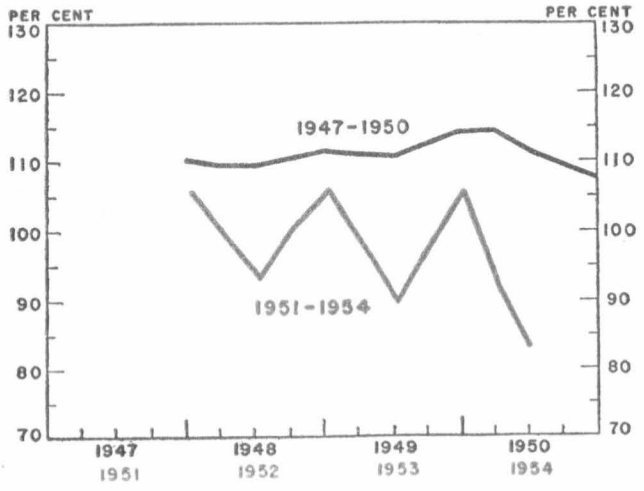
affects companies whose fiscal years differ from the calendar year. The Committee on Finance, United States Senate, estimated that companies whose fiscal years coincide with that of the Treasury would pay an additional $150 million each year in the fiscal years 1956 through 1960.

The effect of the Mills Amendment on corporations whose fiscal year coincides with the calendar year has been to shift payments from the latter half to the earlier half of the calendar year. The acceleration of payments that begins in the latter half of 1955 will shift payments from 1956 into the 1955 corporate fiscal year. Both laws, of course, shorten the period a company may use as working capital the funds corresponding to accrued taxes and, therefore, both require that alternative sources of capital be found.

The acceleration of tax payments has been in progress since 1950 and it is of some interest to note the manner in which corporate accrued tax liabilities have been affected. The accompanying chart shows the movements of accrued tax liability before and after 1951 for manufacturing corporations; the sample for the years 1947-1950 is less representative of all manufacturing corporations than that for the later period, but the data will serve to illustrate the differences in the two systems. Each point on the lines represents the deduction from income for federal income and excess profits taxes during the year preceding the date plotted, divided by total accrued liability for these taxes on the date indicated. This procedure is used to minimize the effect of seasonal and other changes in corporate income and changes in tax rates on the fluctuations of the two sets of ratios.

MANUFACTURING CORPORATIONS

Accrued Tax Liability as a Percentage of Four Quarters of Provision for Federal Income and Excess Profits Taxes



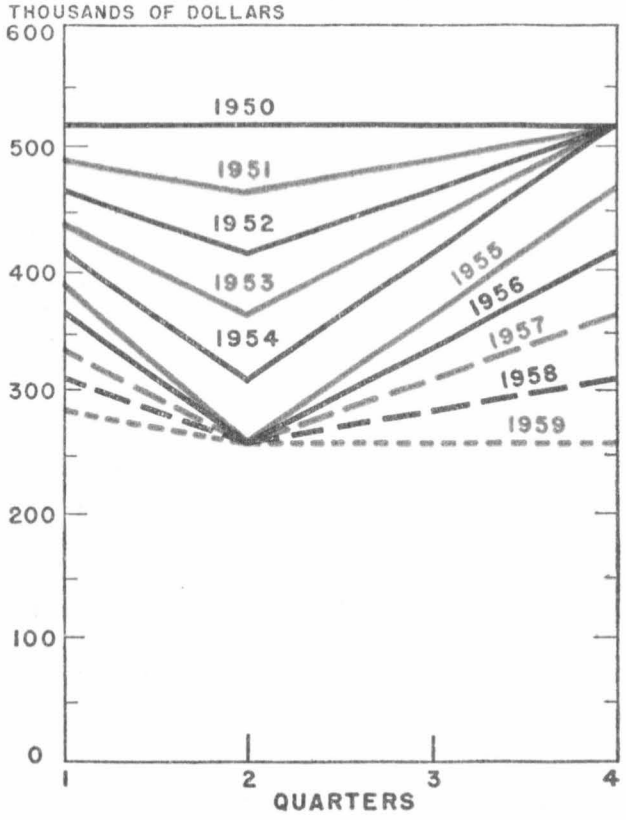
SOURCE: Federal Trade Commission and Securities and Exchange Commission.

The upper line indicates that in the years until 1950 accruals ranged between 108 per cent and 114 per cent of the provision for taxes in the preceding 12 months. The lower line, covering the period from the fourth quarter of 1951 to the second quarter of 1954, denotes the irregular downward movement of accrued taxes in relation to provision for taxes. The influence of the Mills Amendment is particularly noticeable at the low points in 1952, 1953, and 1954. Expiration of the excess profits tax on December 31, 1953, markedly reduced the provision for income tax in the first half of 1954.

Looking at the period 1951-1954 as a whole, it appears that the impact of accelerated tax payments on corporate working capital positions was eased by relatively high corporate profits and large holdings of liquid assets. The level of profits permitted required tax payments to be made, dividend disbursements to be increased, and substantial sums to be added to earned surplus accounts. The latter two of these facilitated the procurement of new capital through sales of securities. If the acceleration had not occurred and accrued tax liability had remained high, corporations would not have needed to retain earnings as additions to surplus to replace the declining level of accruals. Thus, larger dividend disbursements would have been possible, or alternatively, other capital requirements could have been satisfied by retained earnings.

The influence of accelerated tax payments on corporate accrued tax liabilities and hence on their resulting need for capital can best be examined through a hypothetical case that assumes corporate profits and tax rates to be stable from 1950 to 1960, since these two factors obscure the specific effects of the acceleration. In this example, the exemption of tax liability of $100,000 is ignored. It is assumed that a company earns income which accrues tax liability at a rate of $130,000 per quarter. At the end of 1950, accruals would total $520,000. In the first quarter of 1951, an additional $130,000 of liability would accrue and, since 30 per cent of the tax liability on 1950 income was required to be paid, $156,000 would be remitted to the Treasury, leaving accrued tax liability at the end of the quarter at $494,000 ($520,000 + $130,000 − $156,000). Continuing the computation through succeeding quarters gives a series of quarterly values for the accrued tax liability of the company through 1959. The second chart illustrates the variations in and the decline of accrued taxes as the acceleration of payments proceeds through the years 1951 to 1960. After the acceleration has been completed, accrued tax liability will have decreased from $520,000 to $260,000. Reference to the chart will show that the minimum level to which accrued liability declines is reached on June 30, 1955. The reduction thereafter occurs in the first, third, and fourth quarters of the year.

CHANGES IN CORPORATE ACCRUED TAX LIABILITY UNDER MILLS AMENDMENT AND NEW TAX CODE
(Hypothetical Data)



In considering the effects of further acceleration of tax payments on the financial position of corporations, it is necessary to distinguish between the reduction of working capital and the source of funds used to make the payment. Many companies have followed the practice of purchasing short-term Treasury securities in step with the accrual of taxes. Tax reserves, therefore, have not been employed in the operations of the firm, except to earn income on the securities, and further acceleration should not have any material effect on decisions to retain earnings to replace working capital. While corporations hold Treasury securities for other reasons as well, it is worthy of note that manufacturing companies held a larger volume of Government securities than the amount of their accrued tax liability in the first two quarters of 1954. In all other quarterly reports since the data became available at the beginning of 1951, accrued tax liability exceeded holdings of Treasury securities. Companies that have not funded their tax reserves but have used them for current operations, employing bank loans to aid in making payments, may find that further acceleration of payments requires that earnings be retained to furnish a more permanent form of working capital. This possibility is enhanced as tax payments are distributed more evenly over the year.

Changing Composition of Farm Production

THE COMPOSITION of farm production in the United States has been changing in recent years along with the pattern of food consumption. Higher incomes have encouraged greater consumption of livestock and livestock products and production of these products has increased more rapidly than crop production. The trend toward a change in composition of farm production, with livestock and livestock products becoming relatively more important, indicates that farmers tend to vary their production programs with the shifting demands of consumers. Furthermore, the production control programs that have been in effect for many crops in recent years have encouraged farmers to shift production. In subsequent sections of this article, an effort will be made to show how this changing composition of agricultural production is related to changing consumption patterns.

Changing Trends in Eating Habits

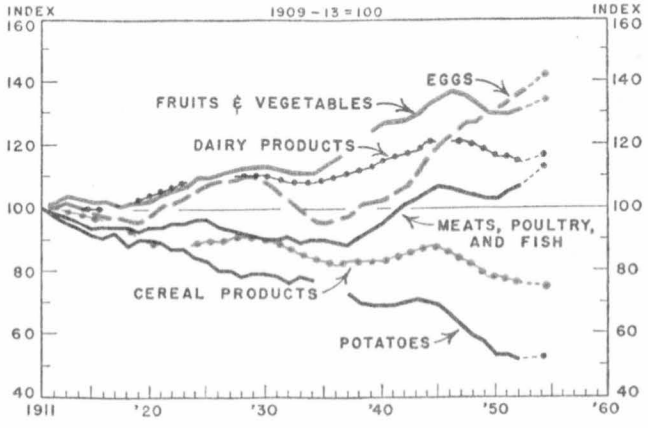
Farmers in the United States produce agricultural products primarily for sale in the domestic market. About 90 per cent of their production is consumed within the Nation. Therefore, in addition to population growth, the consumption habits of American consumers have a vital influence on the market for farm products.

In planning their production programs, farmers may find it profitable to consider trends both in total per capita consumption of foods and in the various individual commodities. The U. S. Department of Agriculture maintains statistical series which are useful in depicting the varying trends in per capita consumption for different agricultural products.

It is interesting to note on the accompanying chart that per capita consumption of all major livestock commodities was significantly higher in 1954 than it was in 1910, while being substantially lower for both cereal products and potatoes. Of particular significance to farmers in the Tenth Federal Reserve District is the rapid increase in per capita consumption of meats, fish, and poultry and eggs since the depression years of the mid-1930's. These data indicate that, with rising incomes, individuals tended to increase their consumption of the major livestock products while decreasing their consumption of cereal products and potatoes, both of which are crop products. Per capita consumption of fruits and vegetables (crop products) also has increased quite sharply.

These trends signify that producers of eggs; dairy products; meats, fish, and poultry; and

TRENDS IN OUR EATING HABITS



SOURCE: U. S. Department of Agriculture.

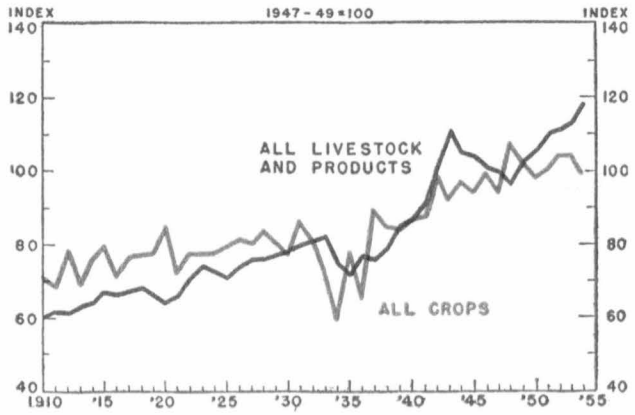
fruits and vegetables could have increased production more rapidly than population has increased and yet have sold their products in the domestic market. On the other hand, producers of cereal products and potatoes have been faced with the problem of expanding production less rapidly than population has increased, becoming more heavily dependent on the export market, or building up carryovers.

Production Trends

From 1910 to 1954, both total agricultural production and population growth increased at an average rate of about 1.7 per cent annually. Although the trend in agricultural production for the Nation has been relatively more stable than that for industrial production, the rate of increase has varied from period to period. From 1910 to 1931, farm production increased by an average of slightly more than 1 per cent annually. From 1931 to 1934, extreme depression and severe drought were influential in causing production to decline 24 per cent, or at an average rate of 8 per cent annually. Since 1934, improved demand for agricultural commodities, development of better techniques of production, and improved weather conditions have caused agricultural production to increase at an average annual rate of about 3.5 per cent.

Current output is higher than the requirements of a peacetime economy. Consequently, unless export demand should increase substantially, the average rate of expansion achieved during the last two decades probably cannot be maintained. Furthermore, it appears that changing trends in consumption have encouraged farmers to increase production of livestock and livestock products more rapidly than production of all crops.

GROSS PRODUCTION OF LIVESTOCK AND CROPS

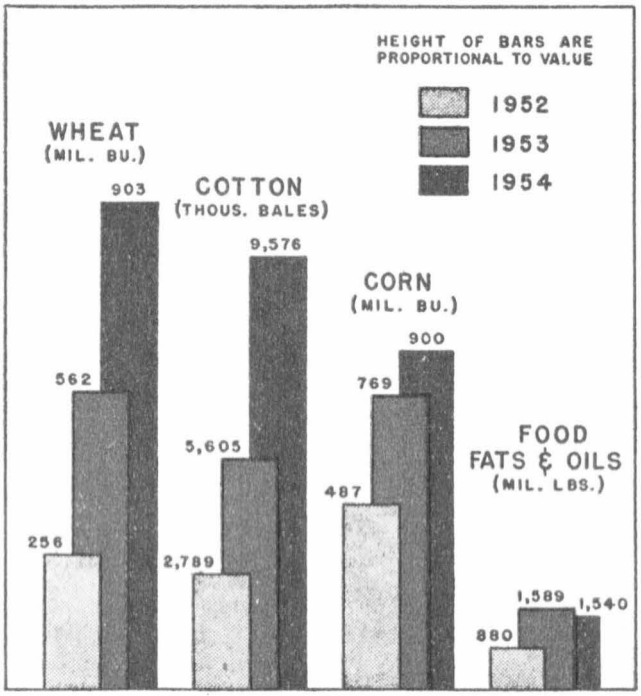


SOURCE: U. S. Department of Agriculture.

The accompanying chart indicates the rates of growth for production of livestock and livestock products and all crops. On an average, production of livestock and livestock products has increased about 2.5 per cent annually, while that of all crops has increased at an annual rate of only about 1 per cent. This indicates that farmers are responding to consumer demands for relatively more livestock and livestock products as compared with crop products.

In the Tenth Federal Reserve District, where meat and wheat production are important enterprises, the trends in per capita consumption of these commodities are useful in analyzing the probable longer-run adjustments that will be made. If individuals continue to consume relatively small quantities of cereal products and larger quantities of meat, farmers in this District will be encouraged to place more emphasis on the production of meat animals and less on that of wheat for use as a human food.

CARRYOVER OF MAJOR FARM COMMODITIES



U.S.D.A. CROP YEARS BEGINNING: WHEAT, JULY 1; COTTON, AUG. 1; CORN, OCT. 1; FATS AND OILS, OCT. 1.

PRODUCTION OF CARS AND TRUCKS

SOURCE: WARD'S AUTOMOTIVE REPORTS

BANKING IN THE TENTH DISTRICT

District and States	Loans				Deposits			
	Reserve City Member Banks		Country Member Banks		Reserve City Member Banks		Country Member Banks	
	November 1954 Percentage Change From							
	Oct. 1954	Nov. 1953	Oct. 1954	Nov. 1953	Oct. 1954	Nov. 1953	Oct. 1954	Nov. 1953
Tenth F. R. Dist.	+4	+14	+2	+6	+1	+6	+1	+5
Colorado	+4	+15	+1	−1	+2	+8	+3	+11
Kansas	+6	+20	+3	+10	+2	+9	0	+3
Missouri*	+5	+13	+1	+7	+1	+4	+2	+4
Nebraska	+6	+18	+3	+5	+1	+3	+2	+2
New Mexico*	**	**	+2	+10	**	**	0	+10
Oklahoma*	+3	+10	+2	+6	−1	+6	+1	+5
Wyoming	**	**	0	+4	**	**	+2	+7

*Tenth District portion only. **No reserve cities in this state.

PRICE INDEXES, UNITED STATES

Index	Nov. 1954	Oct. 1954	Nov. 1953
Consumer Price Index (1947-49 = 100)	114.6	114.5	115.0
Wholesale Price Index (1947-49 = 100)	109.8	109.7	109.8
Prices Rec'd by Farmers (1910-14 = 100)	244	242	249
Prices Paid by Farmers (1910-14 = 100)	279	279	277

TENTH DISTRICT BUSINESS INDICATORS

District and Principal Metropolitan Areas	Value of Check Payments		Value of Department Store Sales		*Value of Residential Bldg. Permits	
	Percentage change—1954 from 1953					
	Nov.	Year to date	Nov.	Year to date	Nov.	Year to date
Tenth F. R. Dist.	+12	+4	+7	+1	+132	+49
Denver	+20	+6	+7	+2	+74	+59
Wichita	+22	+7	+19	+2	+160	+58
Kansas City	+9	+1	+4†	−1†	+9‡	+8‡
Omaha	+7	+7	+3	+3	+145	+70
Okla. City	+10	+8	+23	+8	+139	+100
Tulsa	+14	+5	+8	0	+59	+51

*City only. †Kansas City, Mo., only. ‡Kansas City, Mo., and Kans.


FEDERAL RESERVE BANK OF KANSAS CITY
INCORPORATED MAY 18, 1914