# CANADA <br> DEPARTMENT OF TRADE AND COMMERCE <br> DOMINION BUREAU OF STATISTICS <br> INTERNAL. TRADE BRANCH 

# MONTHLY INDEXES OF RETAIL SALES 

1929-1935<br>(Method of Construction, Adjustments for Seasonal Variations, etc., together with summary of results and illustrative charts)

Published by Auihority of the HON. W.D. ELLER, M.P.,

Minister of Trade and Commerce.

## PREFACE

Changes in the value of retail sales as recorded from month to month are the resultant of many factors among which are variations due to seasonal influences and to differences in the number of business days. For several years the Bureau of Statistics has published monthly indexes of retail sales in which no adjustments have been made for the two factors just mentioned. The original series has now been computed for a sufficient time to permit the calculations of index numbers of sales in which allowances are made for changes in the number of business days in the month and for seasonal fluctuations in sales. This bulletin presents the results of such computetions extending back over the monthly series to January, 1929.

The construction of the indexes of monthly sales and the calculatimon of the correction factors for the number of business days and for seasonal variation have been carried out in the Internal Trade Branch under the dilecdion of Mu, Herbert Marshall, B.A., F.S.S., Chief, by Mr. A. C. Cteotmar, BA.

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Dominion Bureau of Statistics, November, 1935.

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MONTHLY INDEXES OF RETAIL SALES, 1929 - 1935

## INTRODUCTION

For the past four years the Internal Trade Branch of the Dominion Bureau of Statistics has published monthly indexes of the dollar value of retail sales based upon reports received from department stores and from chain organizations operating in thirteen different lines of business. Since the head office of each chain company submits monthly figures for the entire organization under its control, it is thus possible to secure returns covering a large number of retail units with a minimum amount of labour and expense. The contimous co-operation of the various firms and the promptness with which the monthly reports are sent in are indications of the insreasing usefulness of the indexes which are published.

Untfl the present time no adjustments have been made to the index numbers published in order to make corrections for any of the various factors which cause variations to appear in the monthly sales figures of an identical group of stores. It is a well known fact that the monthly variation in the retail sales of any kind of business, as reflected by the index numbers published, is the net resultant of a number of concurrent influenses and, in order to reveal the extent of one of these influences, the effects of the others mast be eliminated. This study has been undertaken in order to reveal the underlying trends in retail trade during the past six years and also to sompute a set of correction factors which may be applied to the unadjusted index numbers to remove the effects of seasonal variations.

These parious factors which cause variations in retail trade from month to month, as revealed by the monthly indexes of retail sales, may be briefly described. First of all, there is the long-term or secular trend. In the sales of any comodity, due to growth in population or to the development of the industry producing the product. When tariations over a relatively short period only are bejng studied, and when the industries providing the products sold are well established, the effects of the secular trend are relatively unimportant, Superimposed upon this trend, and of much more interest at the present time, are the effects of cyclical changes or alternate periods of prosperity and depression. The fundamental difference between these two types of variation is that the cyclical changes tend to repeat themselves at regular or irreguiar interwals, whitle the long-term seoular trends are not periodic in character.

Seasonal partations also are found in the sales of most commodities for which monthly flgures cas be obtained. That is to say, even if there were neither any long-term trends in business nor cyclical changes as between prosperity and depresaion, retail seles for some months of any year are noxmally greater or less than those of others. For moat comoditien saies in $\bar{n}$ aomber are greater than in any other month of the year because of the Christmas trada, while gales of cloching
are abnormally high in the spring months due to the established custom that many people have of buying a new wardrobe at that season. The variations in sales for other months of the year, due to seasonal influences, are of less magnitude, but they are sufficiently definite in occurrence and important in extent as to be easily recognized and as to warrant the use of some corrections for their removal.

Not all months have an equal number of working days. February usually has but twenty-four, while March may have twenty-seven. This fact of itself is sufficient to make the sales during March twelve and one-half per cent greater than those of the preceding month.

It has also been found that for most kinds of business sales upon certain days of the week are normally greater than upon others. For example, in the variety-store trade returns from a representative sample of firms indicate that approximately 38 per cent of the weekly business is transacted on Saturday. The occurrence of five Saturdays in any one month would, therefore, have an appreciable effect in increasing the business during that period. The occurrence of legal or civic holidays during certain months is another factor which should be considered.

In addition to the various influences affecting monthly sales already mentioned, there are, of course, other random factors constantly in operation. The opening or closing of a competing firm in close proximity to a reporting establishment, a special sale conducted by a large firm during a certain month, fluctuations in sales volume preceding and following the reorganization of a firm, and many other such factors have a considerable effect upon the monthly sales figures reported. The importance of these factors is readily recognized when it is remembered that the index numbers published are not computed from returns received from all stores but from chain and department stores only. Therefore, the decrease in sales of one reporting firm is not offset necessarily by a corresponding increase in the sales of another.

If one is interested in trends in the physical volume of merchandise sold during a given period rather than in the dollar value, then price changes during that interval form an important factor. When allowances are made for these price changes an entirely different trend in the volume of merchandise sold is obtained from that observed when the actual sales figures only are examined.

As already stated, the index numbers which have been published are based upon the total monthly sales figures as given by the reporting firms and no corrections have been made to account for differences in the number of business days nor seasonal influences. This does not mean that the figures which have been published are of no value. It must be remembered that the sales of every business firm are subject to these same influences. Therefore, the index numbers which have been published furnish every business firm. With a standard by which it can compare its monthly varlations in business

For this bulletin supplementary indexes have been constructed in which corrections to allow for differences in the number of business days and for seasonal variations have been made. No corrections to allow for long-term or secular trends have been attempted, nor have adjustments been made to compensate for changes in prioe levels. A brief reference to the price element is made, however, in the last section of this report. The method employed in constructing the unadjusted indexes of retail sales is first outined and then a description is given of the steps taken to derive indexes adjusted to allow for variations in the number of business days in the different months. Finally, the procedure followed in obtaining correction factors for the removal of seasonal variations is described. The explanations of
the construction of the indexes of retail sales are accompanied by references to the actual calculations made in obtaining the indexes for variety stores. A similar procedure was followed for each of the kinds of business for which data have been secured and tables and charta are included to show the three sets of indexes: (1) Unadjusted, (2) Adjusted to allow for number of working days, (3) Further corrected for seasonal variations.

## DESCRIPTION OF METHOD

## Number and Sales of Reporting Firms

For most kinds of business the number of reporting firms has been increased recently in order to secure a more complete coverage of chain and department. store sales. As far as possible, monthly sales figures dating back to January, 1929, have been secured from those companies whose sales were not included in the earlier series, and, whenever necessary, all indexes have been revised to make provision for this factor. The following table shows, for each kind-of-business group, the mambers of chain or department store companies included in the old and new series of indexes. The aggregate sales of these companies for 1934 are also shown.

Table 1.-Number and Total Sales for 1934 of Companies Included in 0ld and Revised Indexes of Retail Sales

| Kind of Business | 01d Indexes |  |  | Revised Indexes |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of Companies | Number of Stores | $\begin{gathered} \text { Total Sales } \\ \quad 1934 \\ \hline \end{gathered}$ | Number of Companies | Number of Stores | $\begin{gathered} \text { Total Sales } \\ 1934 \\ \hline \end{gathered}$ |
|  |  |  | \$ |  |  | \$ |
| Boots and shoes | 5 | 113 | 3,110,800 | 16 | 203 | 6,634,400 |
| Candy | 6 | 148 | 2,728,900 | 6 | 148 | 2,728,900 |
| Clothing (men's) .....) | (1) 6 | 88 | $(1)_{3,842,600}$ | 15 | 126 | 5,225,500 |
| Clothing (momen's) ....) |  | 88 | 3,842,600 | 13 | 133 | 3,990,400 |
| Department stores ....) | (2) 41 |  | (2) $281,742,100$ | 36 | 97 | 252,372,000 |
| Variety stores ........) |  | 368 | 281,742,100 | 9 | 331 | 34,567,000 |
| Drugs ................. | 7 | 143 | 6,770,300 | 24 | 271 | 10,656,400 |
| Dyers and cleaners .... | 3 | 14 | 945,000 | 8 | 40 | 1,253,800 |
| Furniture .......... | 4 | 18 | 2,313,000 | 7 | 35 | 3,536,700 |
| Groceries and meats ... | 23 | 1,635 | 77,781,700 | 35 | 1,817 | 87,983,400 |
| Hardware ....0.0.....0. | 5 | 25 | 1,559,900 | 15 | 76 | 4,373,100 |
| Music and radio...... |  | 21 | 1,290,000 | 5 | 23 | 1,407,000 |
| Restaurants | 11 | 128 | 7,077,400 | 14 | 144 | 7,430,100 |
| Total | 115 | 2,701 | 389,161,700 | 203 | 3,444 | 422,158,700 |

(1) Includes men's and women's clothing.
(2) Includes both department stores and variety chain stores.

For the various reports published by the Bureau a chain has been taken to mean a group of four or more stores under the same uwiership or management and carrying on the same or similar kinds of business. In a fem instences firms reporting monthly sales data and which formerly operated a sufficient number of stores to be classified as chains have reduced the number of their units below the four-store limit. In order to secure a greater coverage of sales, however, reports for these
companies are still used in the monthly indexes, and their figures are included in the above table.

## Indexes of Monthly Sales

(Unadjusted for Mumber of Business Days or Seasonal Infiuences)
Uncorrected indexes are used largely as a standard by means of which each individual reporting firm can compard its variations in trade with those of the entire group from whose sales the indexes are computed. Before constructing the indexes from the sales figures reported, it is freģuently necessary to make some adjustments to these basic data. In order that a valld comparison may be made between the variations in sales of a partisular firm and those of the group, as reflected in the published indexes, each firm mast make corresponding alterations to its own figures. For this reason a somewht detailed explanation of the methods followed in preparing the monthly indexes of retail sales for variety stores is given in this report.

Selection of Base Period, When monthly indexes of retail sales were first published some four years ago, January, 1929, was the earliest month for which data could be obtained and that month was taken as the base period. The revised figuras given in this report have been computed using as base the average of the twelve monthly figures for 1930 . This change has been made for two reasons. In the first place, the monthly indexes of retail sales for the various lines of trade may be related more directly to the results of the Census of Merchandising and Service Establishments taken in 1931 and..covering all retail trade in 1930. It should be mentianed, however, that the indexes published each month are based on reports received from chain and department stores only and may not reflect completely the changes in the value of all retail trade. The second reason for the change of base is that, for most Ines of retail trade, Jamary sales are always low due to seasonal influences. Indexes for all other months, when based upon the Jamuary figure, will, therefore, be exceptionally high. Using the average of the twelve monthly figures for 1930 completely removes this effect. It should be stated, however, that for several lines of trade this change of base has made little difference in the indexes, since the sales in Jamary, 1929, while low due to seasonal influences, were about on a par with the average monthly sales for 1930. But when seasonal influences affect a monthly serles, there is a distinct advantage in having a base which is independent of these effects and the average of the twelve monthly figures for 1930 is, therefore, preferable to the figure for January, 1929.

For each kind of business in the old seiles, the index for Jamary, 1929, was exactly 100,0 . In the new series, this value will not necessarily occur for any one month, but if the twelve figures shown for 1930 are totalled the sum will be found to be 1,200 and the average of the twelve figures will be 100,0 .

Link Relative Method of Constructing Index Numbers --For reasons which will be evident in the next sootion, the link relative method has been followed in constructing monthiy indexes of retail sales. Using this method, the ink for any one month is obtained by multiplying the index for the preceding month by the ratio that the sales in the current month bear to the sales of the preceding month.

For example, the uncorrected index for grocertes and meats for the month of January, 1955 (base, $1950=100$ ), is 71.7 . From the reports recelved, it was found that sales in February were 94.3 per cent of those in Jenuary. The Febmary sndex is, therefore, $71.7 \frac{x}{104} 34$ or 6 r 6 . Similarly, sales in March were found to be 111,2 per cent of those in February. The March index is, therefore,
$676 x \cdot 111 \cdot 2=75,2$. The percentage that the business of each month bears to that 100
of the preceding month is termed a "relative" and the way in which these relatives are connected to make a continuous series gives rilse to the name "Link relative method".

Corrections for Variations in Number of Stores.-As already stated, the retail sales indexes are based upon returns recelved from department stores and from the head offices of chain organizations. Total moathly sales for each organization are given but monthly figures for each unit are not supplied.. The number of chain units in a given organization may vary considerably from month to month and, if no allowance were made for this factor, the computed indexes would reflect this growth or decrease in chain store business rather than the variations in sales of an identical group of units.

In order to overcome this difficulty, each firm is asked ta make its monthly report in such a way that it is possible to derive the sales of an identioal group of stores for the current period and also for the praceding period. Sales of units which have been newly opened or which are in their last month of operation are not representative of average operating results and figures for these units are not included in the monthly calculations. The two following hypothetical monthly reports will $111 u s t r a t e$ the type of sohedule used and the method of obtaining the sales of an identical group of stores for two consecutive periods. Provision is also made on the schedule for securing data by provinces, but in the example taken here total figures only are shown.

## I. Report for Month of May <br> CONPTDENTIAL REPORT

## RETATL SALES OF CHATN AND DEPARTMENT STORES IN CANADA

Please state below the total mumber of stores which you operated in Canada and the total sales of these stores for the pariod specified. In the headings shown below, the expression "this period" means the interval for which you are now reporting. The expression "last period" means the period immediately preceding.

Date of comencement _May_1_, 1935. Date of termination May $31,1935$.


## II. Report of Same Firm for Month of June

## CONFIDENTIAL REPORT

## RETAIL SALES OF CHAIN AND DEPARTMENT STORES IN CANADA

Please state below the total number of stores which you operated in Canada and the total sales of these stores for the period specified. In the headings shown below, the expression "this period" means the interval for which you are now reporting. The expression "last period" means the period imnediately preceding.

Date of commencement June 1 , 1935. Date of termination June 30, 1935.

|  |  | 1 | 2 |  |  | 3 |  | 4 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Total, all stores this period |  | Stores closed this period |  |  | Stores opened this period |  | Stores opened last period |  |
|  | No. | Sales | No. | Sales in this period | Sales in last period | No. | Sales in this period | NO. | Sales in this period |
| Total .... | 123 | 335,020 | - | $620$ | $2,044$ | 3 | $6,030$ | 9 | $21,360$ |

From these two reports it is required to compute the sales of an identical group of stores for May and June.

It will be noted that the schedule is divided into four main sections. In Section 1 the maximum number of stores and the total sales for the month are to be reported. Section 2 has to do with stores closed during the period. The number of such stores is shown, together with the sales of these stores only, during the current and preceding periods. In Section 3. the number and sales of newly-opened stores are given. The last part, Section. 4 , shows the number of stores opened in the preceding period and the sales of these stores during the current period. It will be recognized that the interval "this period" in the May report is identical with the interval "last period" in the June report. If all firms reported calendar month figures the actual months might be inserted upon the printed forms. Since a considerable number do not report upon a calendar month basis, it is not possible to do this.

From the May report it is seen that there were altogether 121 stores operated in that period and total sales were $\$ 337,680$, But included in the 121 stores is one unit with sales of $\$ 2,420$ which was closed sometime during the month of May. Included also are 9 stores $w$ th sales of $\$ 14,671$ which were opened during May. Deducting these figures from the totals, it is found that there were 121$(1+9)$ or 111 stores operated continuously throughout May and these had sales of $\$ 337,680-(\$ 2,420+\$ 14,671)$ or $\$ 320,589$ 。

But the following report shows that during the month of June one of these 111 stores was closed and from the third column of Section 2 it is seen that the sales for May of that store were $\$ 2,044$. Deducting this unit and these sales from the previous figures, it is seen that there were 110 stores which operated continuously throughout May and June and the May sales of these stores amounted to $\$ 318,545$. These calculations may be summarized as follows:


The sales for June of the same 110 stores are now found from the June report. In that month there were 123 stores open and these had total sales of $\$ 335,020$. The total number of stores includes one unit closed in June, 3 units opened during the same interval, and also the 9 stores opened during Hay. On deducting the June sales of these units from the total amount for the month the June sales of the 110 stores are obtained. These calculations may also be summarized thus:


The June sales of $\$ 307,010$ may now be compared directly with the $\$ 318,545$ reported for the same establishments in the preceding month.

It may be noted that no use has been made of the sales figures $\$ 2,394$ and $\$ 6,741$ mentioned in Sections 2 and 4 of the May report. It will be recognized, of course, that these would be used in comparing May sales with those of April.

Calendar Month Totals. - While most of the contributing firms still report monthly sales figures, an increasing number report the business of four- or fiveweek periods. After making the necessary corrections for the opening or closing of units, the next step is to compute calendar month sales for those firms reporting by four-or five-week periods.. That is to say, it is necessary to estimate the sales that would be actually reported were thase firms to report monthly figures rather than those for periods of four or five weeks. A number of examples will most readily explain the methods used.

Example 1.--The February sales figures of a firm are included in the particulars for two four-waek accounting periods, the first covering the period from January 7 to February 2 and the second from February 4 to March 2. The intervening day between the two accounting periods is a Sunday and need not be considered.

The sales for the first four-week accounting period, January 7 to February 2, are $\$ 277,560$ and represent the business done on 24 business days, of which 2 fall within the calendar month of February. The sales for this portion of February are thus derived by the following calculation: $\frac{2}{24} \mathbb{\pi} \$ 277,560$, or $\$ 23,130$.

The sales for the second four-week accounting period, February 4 to March 2 , are $\$ 271,740$ and represent the business done on 24 business days, of which 22
days fall within the calendar month of February. The sales for this portion of February are thus derived by the following calculation: $22 \times \$ 271,740$, or $\$ 249,106$ 24
The total sales for February in this example are thus $\$ 23,130+\$ 249,106$, or $\$ 272,236$ 。

Example 2.-The second example illustrates the infrequent case where the calendar month lies in three different four-week periods. The three four-week perlods are from November 5 to December 1 inclusive, December 3 to December 29 inclusive, and from December 31 to Jaruary 26 inclusive. It is required to compute the sales for the calendar month of December.

The sales for the first four week accounting period, November 5 to December $I$, are $\$ 270,210$ and represent the business done on 24 business days, of which one falls within the calendar month of December. The sales for this one day are, therefore, taken as $\frac{1}{24} \times \$ 270,210$, or $\$ 11,259$,

The sales for the second four week accounting period, December 3 to December 29, are $\$ 275,740$ and represent the sales of 23 business days when allowance is made for the Christmas Hollday, However, since this four-week period lies wholly within the month of December, the total sales figure of $\$ 275,740$ is attributed to that month.

The sales for the third four week accounting period, December 31 to January 26 , are $\$ 24.5,315$ and represent the business done on 24 business days, of which one day falls withtn the calendar month of December. The sales for this one day are, therefore, taken as $\frac{1}{24} \times \$ 245,315$, or $\$ 10,666$.

The total sales for December in this example are, therefore, $\$ 11,259+$ $\$ 275,740+\$ 10,221$, or $\$ 297,665$.

The method outlined above for computing sales for the one day, December 31, would delay the publication of the December report until ofter the returns for the pertod December 31 to January 26 had been received. The usual procedure in-* volves the calculation of a preliminary figure for the one day, December 31 . In calculating a preliminary figure the average daily sales for the period December 3 to December 29 are considered, but allowance is also made for the abnormally high average daily sales during this interval due to the Christmas trade. The preliminary figure thus derived is revised, if necessary, upon receipt of the report for the following period.

Example 3...The third example illustrates the method followed when the calendar month falls within a five week period for which figures are supplied The sales for the five-week period, January h8 to March 2, are 8110,390 and represent the business done on 30 business days, of which 24 fall within the calendar month of February. Sales for February are, therefore, taken as $\frac{24}{30} \times \$ 410,390$, or $\$ 328,320$.

Whils the system described above for the calculation of monthly iovals provides a working method, special cases require special attention so that no rigid rules can be laid down. In particular, where wide variations occur in the average daily sales for consecutive periodss special care is aecessary in order to secure the most probable monthly total.

Relatives and Indexes of Monthiy Sales.-.The basic data supplied by each 2Lx have now been corrected to aliwn for the opening or closing of units and all Bales have been expreszed tu ailandar month totals. For each firm the value of
aales of an identical group of stores for a given month and for the preceding month are now available. Figures for all organizations in the same line of business are now brought together and the total sales of all establishments for the given month are expressed as a percentage of the sales of the same group of stores for the month preceding. This percentage or "relative" is now anultiplied by the index for the preceding month in order to give the required current index.

In order to illustrate as completely as possible the methods followed in computing the indexes of retail sales, the calculations involved in constructing the uncorrected indexes for variety stores are shown below:

## Table 2.-Indexes of Retail Sales of Variety Stores (Unoorrected for Bhmber of Buainess Days or Seasonal Variations)

| Col. 1 | Col. 2 | Col. 3 | Col. 4 | Col. 5 |
| :---: | :---: | :---: | :---: | :---: |
| Year and Month | Total <br> Sales | Relatives of Monthly Sales | Indexes of Sales (Jan. 1930-100) | Indexes (Average Monthly Sales, $1930=100$ ) |
| 1929 |  |  |  |  |
| January .0.0000000000000 | 1,530,946 | 88.64 |  | 73.99 |
| February ..............0. | 1,727,197 | 80.40 |  | 83.47 |
| March 0.0000000000000 | $\begin{aligned} & 2,148,183 \\ & 2,164,117 \end{aligned}$ | 104,06 |  | 103,82 |
| Apr11 ...0.0.0.0.0.0.0. | 2,079,744 | 76.30 |  | 99.77 |
| May 000000000000000000 | $\begin{aligned} & 2,725,824 \\ & 2,800,299 \end{aligned}$ | 104.71 |  | 130.76 |
| June .o.o.n..............o. | $\left.\begin{array}{l} 2,674,319 \\ 2,684,685 \end{array}\right)$ | 102. 24 |  | 124.88 |
| July 000000000000000 | $\begin{aligned} & 2,625,915 \\ & 2,649,823 \end{aligned}$ | 93.49 |  | 122.14 |
| August .0.0.0.0.0.:.0.0.0 | $\begin{aligned} & 2,834,296 \\ & 3,145,217 \end{aligned}$ | 120.63 |  | 130.64 |
| September 3: 000000000 | $\begin{aligned} & 2,607,385 \\ & 2,692,150 \end{aligned}$ | 86.38 |  | 108.80 |
| October $00000 \cdot 0 \cdot 0000000$ | $\begin{aligned} & 3,116,485 \\ & 3,220,533 \end{aligned}$ | 105.47 |  | 125.38 |
| November | $\begin{aligned} & 3,053,584 \\ & 3,242,375) \end{aligned}$ | 61.22 |  | 118,88 |
| December 00000000000000 | $\begin{aligned} & 5,296,591 \\ & 5,316,042 \end{aligned}$ | 283,02 |  | 194.18 |
| 1950 |  |  |  |  |
| January 0,00000060000000 | $\begin{aligned} & 1,878,322 \\ & 1_{8}, 885,651 \end{aligned}$ |  | 100,00 | 68.61 |
| February 00000000000000 | 2,020,621 | 107.64 | 107.64 | 73.85 |
| Maxch 0.0000000000300.0s | $\begin{aligned} & 2,312_{9} 77 k \\ & 2,323,521 \end{aligned}$ | 118.95 | 122.66 | 84.15 |
| April 00000000000000000 | $\begin{aligned} & 2,562,721 \\ & 2,576,185 \end{aligned}$ | 110.29 | 135.28 | 92.81 |

Table 2.--Indexes of Retail Sales of Variety Stores (Cont'd.) -

| Col. 1 | Col. 2 | Col. 3 | Col .4 | Cole 5 |
| :---: | :---: | :---: | :---: | :---: |
| Year and Month | Total <br> Sales | Kelatives of Monthly Sales | Indexes of Sales (Jan. $1930=100$ ) | Indexes (Average Monthly Sales, 1930-100) |
| 1930 |  |  |  |  |
| May | $\begin{aligned} & 2,928,384 \\ & 2,945,326 \end{aligned}$ | 113.67 | 153.77 | 105.49 |
| June | $\begin{aligned} & 2,646,385 \\ & 2,656,107 \end{aligned}$ | 89.85 | 138.16 | 94.78 |
| July | $2,686,611$ $2,710,100$ | 101.15 | 139.75 | 95.88 |
| August | $\begin{aligned} & 2,785,693 \\ & 2,818,734 \end{aligned}$ | 102.79 | 143.65 | 98.55 |
| September | $\left.\begin{array}{l} 2,655,247 \\ 2,657,547 \end{array}\right)$ | 94.20 | 135.32 | 92.84 |
| October | $\left.\begin{array}{l} 3,017,921 \\ 3,045,345 \end{array}\right)$ | 113.56 | 153.67 | 105.43 |
| November | $\begin{aligned} & 2,935,812 \\ & 2,947,631 \end{aligned}$ | 96.40 | 148.14 | 101.63 |
| December | $\begin{aligned} & 5,394,210 \\ & 5,384,867 \end{aligned}$ | 188.00 | 271.10 | 185.99 |
| 1931 |  |  |  |  |
| January | 2,002,078 | 37.18 |  | 69.15 |
| February | 2,010,663 | 100.43 |  | 69.45 |
| March | 2,243,635 | 111.59 |  | 77.50 |
| April | $\left.\begin{array}{l} 2,669,617 \\ 2,663,491 \end{array}\right)$ | 118.99 |  | 92.22 |
| May | $\left.\begin{array}{l} 2,945,980 \\ 2,963,508 \end{array}\right)$ | 110.61 |  | 102.00 |
| June | $\left.\begin{array}{l} 2,738,954 \\ 2,746,597 \end{array}\right)$ | 92.42 |  | 94.27 |
| July | $\left.\begin{array}{l} 2,678,000 \\ 2,689,153 \end{array}\right)$ | 97.50 |  | 91.91 |
| August | $\begin{aligned} & 2,729,886 \\ & 2,741,069 \end{aligned}$ | 101.51 |  | 93.30 |
| September | $\left.\begin{array}{l} 2,572,160 \\ 2,615,899 \end{array}\right)$ | 93.84 |  | 87.55 |
| October | $\begin{aligned} & 3,217,347 \\ & 3,219,659 \end{aligned}$ | 122.99 |  | 107.68 |
| November . ... | $\left.\begin{array}{l} 2,826,548 \\ 2,850,937 \end{array}\right)$ | 87.79 |  | 94.53 |
| December . | 5,440,718 | 190.84 |  | 180.40 |

Table 2.--Indexes of Fetail Sales of Variety Stores (Cont'd.) -


Table 2.--Indexes of Fetail Sales of Variety Stores (Contid.) -


Table 2.-Indexes of Retail Sales of Variety Stores (Cont'd.) -


In the second column of the above table the aggregate monthly sales for all variety chains reporting are listed. That is, these are the aggregates of the monthly figures for all firms corrected as between each pair of consecutive months to take account of newly opened and closed units, and also including any alterations to bring the data to a monthly basis. Leaving the figures for 1929 and the first amount shown for January, 1930, out sof consideration for a moment, the second figure for Jamuary, 1930, is seen to be $\$ 1,885,651$. Sales of the same stores in February, 1930, were $\$ 2,029,621$ or 107.64 per cent of the January figure. This percentage or "relative" is shown in the third column opposite the month of February, 1930 . Sales in March for the same group of stores were $\$ 2,312,772$ or 113.95 per cent of the February figure. This percentage or "relative" is shown in the third column and opposite the month of March. Due to a change in the identity or number of stores operated in comparing the sales of March and April, it was necessary to compute a new figure for the former month. The second March figure (\$2,323,521) is comparable with the $\$ 2,562,721$ shown for April, so that the April business is found to be 110 29 per cent of that in March. Similarly for all cases in which two figures are shown for any month, the second figure for that month and the first figure for the following month represent sales of an identical group of stores and are comparable. Working out the percentages that sales in any month form of the sales of the same stores in the preceding month give the monthly relatives shown in the third column. When only one figure for any month is shown in the second column, that figure may be compared directly with the figures for both the inmediately preceding and immediately following months.

Indexes of Sales (January, $1930=100$ )...-In the fourth column of Table a the monthly relatives for 1930 are linked up so as to form a continuous series on the basis of January, 1930, equals 100. It was seen from comparison of sales of identical stores for January and February that sales for the latter month were 107.64 per cent of those in the former. The index for February is, therefore, $107.64 \times 100.00$ 100

- 107.64. Similarly it was seen from a comparison of sales of identical stores that sales in March were 113,95 per cent of those. in February.. The index for March is, therefore, 113.95 per cent of that for February or $113.95 \times 107.64$-122.66。 In 100
the same manner the index for any month in 1930 is found by multiplying the relative for that month by the index for the preceding month and dividing the product by 100 . The indexes shown in Column 4 have been computed in this manner and they express the sales for each month in 1930 on the basis of January, 1930, equals 100.

Indexes of Sales (Average Monthly Sales, $1930=100$ ). --As already indicated, the indexes for 1930 are computed using the January figure as base. But, for reasons already mentioned, the average of the twelve figures for the year 1930 has been chosen as base. In order to change the indexes in Column 4 to the new base, the twelve figures in this column were averaged and each index in Column 4 was divided through by this average. The results are given in Column 5 opposite the different months for 1930. Thus, using the average monthly sales in 1930 as base, the index for January, 1930, is 68.61; thet for February is 73.85; and so on. It might be mentioned that although the value (100) does not necessarily now appear for any month, if the twelve figures shom in Column 5 for 1930 be summed the total will be found to be 1,200 and the average of these will be exactly 100.00 .

Once the indexes for 1930 are computed, those for months in the following years are derived in the ordinary manner by wultiplying the relative for the given month by the index for the preceding month. Thus, the index for January, 1931, equals (relative for January, 1931) $x$ (index for December, 1930) $=\frac{37.18 \times 185.99}{100}$
$=69.15$. The index for February, 1931, equals $100.43 \times 69.15=69.45$, and so on for the following months.

Indexes of Sales for 1929.--For months previous to the base period the order of procedure is somewhet reversed. Sales for December, 1929, $(\$ 5,316,042)$ are expressed as a percentage of the sales of the same stores in January, 1930 $(\$ 1,878,322)$. This percentage (283.02) is multiplied by the January, 1930, index (68.61) to give the index for December, 1929, or 194.18. Similarly a comparison of sales of identical stores in November and December, 1929, shows that sales in the former month were 61.22 per cent of those in the latter. The index for November is, therefore, 61.22 per cent of 194.18 or 118.88 . In the same manner the index for each month in 1923 is computed, the January figure being found last and defived from the February index and the Jamary relative.

## Indexes of Average Daily Sales

In order to render the indexes for consecutive months more comparable, indexes based upon average daily sales instead of monthly totals have been computed. In deciding upon the number of days to be attributed to each month in computing average daily sales from the monthly totals, weights were assigned to the several days of the week based on the sales experience of the more important contributing firms and were so arranged as to add to a total of six for each full working week. For variety stores the weights given to the different days are as follows:

| Monday $\ldots \ldots .$. | 0.7 |
| :---: | :---: | :---: |
| Tuesday $\ldots \ldots$. | 0.7 |
| Wednesday $\ldots \ldots$. | 0.7 |
| Thursday $\ldots \ldots$. | 0.8 |
| Friday. ......... | 0.8 |
| Saturday $\ldots \ldots$ | 2.3 |
| Total $\ldots \ldots$. | 6.0 |

The number of working days in any one month was then calculated by adding the weights of all the business days in that month. Allowances were also made for the following six holidays: New Year's Day, Good Friday, Victoria Day, Dominion Day, Labour Day and Christmas. The weights of the week days upon which these holldays fell were subtracted from the total number of days in the months in which they occur. It is recognized that some firms may be closed upon days in
addition to those mentioned but, of course, it was necessary to assume a uniform number of holidays for all firms and for all years.

In the following table the number of working days in each month from January, 1929, to December, 1935, used in calculating average daily sales for variety stores are shown:

Table 3.--Mumber of Business Days Weighted by Months, 1929 to 1935
(Used in Calculating Average Daily Sales of Variety Stores)

| Month | 1929 | 1930 | 1931 | 1932 | 1933 | 1984 | 1935 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jamuary | 25.5 | 25.6 | 27.1 | 26.3 | 24.7 | 25.4 | 25.5 |
| February | 24.0 | 24.0 | 24.0 | 24.7 | 24.0 | 24.0 | 24.0 |
| March | 26.3 | 27.0 | 25.4 | 25.4 | 26.3 | 27.1 | 27.1 |
| April | 25.4 | 24.6 | 24.7 | 27.1 | 25.5 | 24.7 | 24.6 |
| May | 25.5 | 25.6 | 26.4 | 24.7 | 25.4 | 25.4 | 25.5 |
| June | 26.3 | 24.7 | 25.4 | 25.5 | 25.6 | 27.1 | 26.3 |
| July | 25.4 | 25.5 | 25.6 | 26.3 | 24.7 | 24.7 | 25.4 |
| August | 27.9 | 27.1 | 27.0 | 26.1 | 26.2 | 26.3 | 27.9 |
| September | 24.0 | 24.7 | 24.7 | 24.9 | 26.4 | 25.6 | 24.0 |
| Octoher | 26.2 | 26.3 | 27.9 | 27.0 | 25.4 | 26.1 | 26.2 |
| November | 27.1 | 26.3 | 24.7 | 25.4 | 25.5 | 25.6 | 27.1 |
| Deceraber | 24.7 | 25.3 | 25.4 | 27.2 | 26.4 | 26.3 | 24.7 |

Average daily sales for each month were obtained by dividing the total monthly sales given in Column 2 of Table 2 by the appropriate number of working days. Relatives of average daily sales were then derived in a similar manner to those obtained when using monthly totals. Indexes for 1930 (January, $1930=100$ ) were found and then recomputed using as base the average of the twelve figures for that year. Indexes of average daily sales for the other years were then obtained in a manner similar to that already explained for monthly totals. These indexes of average daily sales $(1930=100)$ are show in Column 2 of Table 4, and are plotted on Chart No. 3. The differences between these indexes and those based upon monthly totals may be readily seen from the chart.

The February index of average daily sales will be observed to be consistently higher than the unadjusted figure for that month. On the other hand, the August index for each year is almays.lowered when adjustments for the number of business days are made. When corresponding adjustments are made for the other months the resulting indexes are increased in some years and decreased in athers. It will be recognized, of course, that the number of Sundays in a given month varies for different years. And even were the number of Sundays constant, the weighting of the various days of the week in the way already mentioned necessitates the consideration of not only the actual number of days but also their identity (number of Mondays, Tuesdays, etc.).

## Indexen of Retail Sales Corrocted for Seasonal Variations

Original unadjusted indexes of retail sales as given in Column 2 of Table 2 reflect the net composite effect upon trade of variations in number of working days, seasonal variations, cyclical changes in business conditions, long period growth and any random factors which may be in operation. The second set, as given in Column 2 of Table 4, is corrected to allow for differences in the number of work-
ing days. This section deals with the method by wich the more important seasonal swings are removed so as to reveal more clearly the underlying business trends

The problem to be solved is that of determining the most representative ratio that the business of each month in the year normally bears to the business of an average month or to one-twelfth the anmul sales. But since corrections for the number of working days have been made, the problem really consists in determining the ratio that the average daily sales in any month bears to the average daily sales for the year. For example, suppose that the uncorreated index of sales for May of a certain year was 98,0 and that it was established that due to seasonal influences only, sales in any May are normally 120 per cent of the sales of an average month. Then the May index of 98.0 is 20 per cent greater than it would be if all monthe were equal in so far as seasonal influences were concerned. The May indox corrected for seasonal effects would be $98,0 \times 100=81.7$ and the correction factor for the month of May would be 120.0 . $\quad 120.0$.

If monthly sales figurea were available for a number of years during which underlying business conditions did not vary, then any fluctuations shown in sales figures for different months would be due to seasonal variations and random factors only. The extent of these seasonal variations could then be more readily determined and correction factors for their removal ascertained. But the monthly sales figures reported reflect both the seasonal vasiations and also the general underlying trends. The general method of determining the extent of seasonal influences includes the derivation of a normal or trend value for each'month. By "trend value" is meant the value that would obtain for any given month if seasonal influences were removed a comparison of the original data with these normal figures enables one to determino the extent of the seasonal swings and to derive correction factors for their removal.

Table 4.--Indexes of Variety Store Sales Corrected for Seasonal Variations

| Col. 1 | Col .2 | Col. 3 | Col. 4 | Col. 5 | Col. 6 | Col 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year and Month | Index of Average Daily Sales $(1930=100)$ | Twelve <br> Month <br> Moving <br> Averages | Two Item Totals of Twelve Month Moving Averages | Moving <br> Averages | Ratio of <br> Indexes to Moving Averages | Indexes Corrected for Seasonal Variation |
| 1929 |  |  |  |  |  |  |
| January | 74.09 |  |  |  |  | 110.58 |
| February 0.0.0.0. | 88.81 |  |  |  |  | 120.01 |
| March .......... | 100.80 |  |  |  |  | 121.45 |
| April | 100.30 |  |  |  |  | 112.70 |
| May | 130.94 |  |  |  |  | 125.90 |
| June | 121,24 | 1408,77 |  |  |  | 117.71 |
| July | 122.79 | 1403.13 | 2811.90 | 117.16 | 104.81 | 122.79 |
| August | 119.57 | 1392.91 | 2796,04 | 116.50 | 102. 64 | 129.97 |
| September ........ | 115. 23 | 1371.71 | 2764.62 | 115.19 | 100.03 | 118.79 |
| October | 122. 20 | 1367.78 | 2739.49 | 114.15 | 107.05 | 116.38 |
| November | 112,02 | 1342. 10 | 2709.88 | 112.91 | 99.21 | 110,91 |
| December | 200.78 | 1318.88 | 2660.98 | 110.87 | 181.09 | 108,53 |

Table 4, --Indexes of Variety Store Sales Corrected for Seasonal Variations (Cont'd。) -

| Col 1 | Col. 2 | Col 3 | Col. 4 | Col. 5 | Col. 6 | Col. 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year and Month | Index of Average Daily Sales (1930-100) | Twelve <br> Month <br> Moving <br> Averages | Two Item Totals of Twelve Month Moving Average | Moving Averages | Ratio of Indexes to Moving Averages | Indexes Corrected for <br> Seasonal <br> Variation |
| 1930 |  |  |  |  |  |  |
| January | 68,45 | 1292. 11 | 2610.99 | 108.79 | 62.92 | 102.16 |
| February ........ | 78.59 | 1265.42 | 2557. 53 | 106.56 | 73.75 | 106.20 |
| March | 79.60 | 1246.18 | 2511.60 | 104.65 | 76.06 | 100.76 |
| April | 96.37 | 1226.36 | 2472.54 | 103.02 | 93. 54 | 103.62 |
| May | 105.26 | 1213.03 | 2439.39 | 101.64 | 103. 56 | 101. 21 |
| June | 98.02 | 1200.01 | 2413.04 | 100.54 | 97.49 | 95.17 |
| July ............ | 96.02 | 1196.73 | 2396.74 | 99.86 | 96.15 | 96.02 |
| August .......... | 92.88 | 1192.04 | 2388.77 | 99.53 | 93.32 | 100.96 |
| September | 95,99 | 1190.36 | 2382.40 | 99.27 | 96.70 | 98.96 |
| October | 102.38 | 1189.33 | 2379.69 | 99.15 | 103.26 | 97. 50 |
| November | 98.69 | 1182.73 | 2372.06 | 98.84 | 99.85 | 97.71 |
| December | 187.76 | 1179.48 | 2362.21 | 98.43 | 190.75 | 101.49 |
| 1931 |  |  |  |  |  |  |
| Jamuary | 65. 17 | 1175.14 | 2354.62 | 98.11 | 66.43 | 97. 27 |
| February ........ | 73.90 | 1170.50 | 2345.64 | 97.74 | 75.61 | 99.86 |
| March .......... | 77.92 | 1165.03 | 2335.53 | 97.31 | 80.07 | 97.40 |
| April | 95.34 | 1161.22 | 2326. 25 | 96,93 | 98.36 | 103.63 |
| May | 98.66 | 1160,27 | 2321.49 | 96.73 | 102.00 | 94.87 |
| June | 94.77 | 1153.90 | 2314.17 | 96.42 | 98.29 | 92.01 |
| July ........... | 91.68 | 1149.82 | 2303.72 | 95.99 | 95.51 | 91.68 |
| August ........... | 88.24 | 1142.14 | 2291.96 | 95.50 | 92.40 | 95.91 |
| September ........ | 90.52 | 1136.96 | 2279 | 94.96 | 95.32 | 93.32 |
| October | 98.57 | 1117.68 | 2254.64 | 93.94 | 104.93 | 93.88 |
| November | 97.74 | 1107.18 | 2224.86 | 92.70 | 105. 44 | 96.77 |
| December | 181.39 | 1099.62 | 2206.80 | 91.95 | 197.27 | 98.05 |
| 1932 |  |  |  |  |  |  |
| Januery ......... | 61.09 | 1089.05 | 2188.67 | 91.19 | 66.99 | 91.18 |
| February | 66. 22 | 1074.23 | 2163.28 | 90.14 | 73.46 | 89.49 |
| March | 72.74 | 1060.58 | 2134.81 | 88.95 | 81.78 | 87.63 |
| Aprı1 ........... | 76.06 | 1044.39 | 2104.97 | 87.71 | 86.72 | 85,46 |
| May .........0.0.0 | 88.16 | 1025.73 | 2070.12 | 86. 26 | 102. 20 | 84.77 |
| June ............ | 87. 21 | 982.98 | 2008. 71 | 83.70 | 104.19 | 84,67 |
| July ............ | 81.11 | 977.87 | 1960.85 | 81.70 | 99, 28 | 81.11 |
| August .......... | 73.42 | 970,89 | 1948,76 | 81.20 | 90.42 | 79,80 |
| September | 76.87 | 956.80 | 1927.69 | 80.32 | 95.70 | 79.25 |
| October | 82.38 | 954.79 | 1911. 59 | 79.65 | 103.43 | 78,46 |
| November | 79.08 | 942.72 | 1897. 51 | 79.06 | 100.03 | 78.30 |
| December | 138.64 | 937.56 | 1880.28 | 78.35 | 176.95 | 74.94 |

Table 4.--Indexes of Variety Store Sales Corrected for Seasonal Variations (Cont'd.) -

| Col. 1 | Col. 2 | Col. 3 | Col 4 | Col. 5 | Col. 6 | Col. 7 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Year and Month | Index of Average Daily Sales $(1930=100)$ | Twelve <br> Month <br> Moving <br> Averages | Two Item Totals of Twelve Month Moving Averages | Hoving Averages | Ratio of Indexes to Koving Averages | Indexes Corrected for Seasonal Variation |
| 1933 |  |  |  |  |  |  |
| January ......... | 55.98 | 935.12 | 1872.68 | 78.03 | 71.74 | 83.55 |
| February | 59.24 | 932.57 | 1867.69 | 77.82 | 76.12 | 80.05 |
| March ........... | 58.65 | 932.36 | 1864.93 | 77.71 | 75.47 | 74.24 |
| April ............ | 74.05 | 931.17 | 1863.53 | 77.65 | 95.36 | 79.62 |
| May .............. | 76.09 | 929.40 | 1860.57 | 77.52 | 98.16 | 73.16 |
| June . ............ | 82.05 | 931.26 | 1860.66 | 77.53 | 105.83 | 79.66 |
| July | 78.67 | 930.47 | 1861.73 | 77.57 77.53 | 101.42 | 78.67 |
| August .......... | 70.87 | 930.34 | 1860.81 | 77.53 | 91.41 | 77.03 |
| September ....... | 76.66 | 343.39 | 1873.73 | 78.07 | 98.19 | 79.03 |
| October | 81.19 | 941.56 | 1884.95 | 78.54 | 103.37 | 77.32 |
| November | 77.31 | 958.40 | 1899.96 | 79.17 | 97.65 | 76.54 |
| December | 140.50 | 961.23 | 1919.63 | 79.98 | 175.67 | 75.95 |
| 1934 |  |  |  |  |  |  |
| January .......... | 55.19 | 964.47 | 1925.70 | 80.24 | 68.78 | 82.37 |
| February ........ | 59.11 | 969.10 | 1933.57 | 80.57 | 73.36 | 79.88 |
| March ........... | 71.70 | 972.13 | 1941.23 | 80.88 | 88.65 | 87.44 |
| April ............ | 72.22 | 975.37 | 1947.50 | 81.15 | 89.00 | 80.24 |
| May ............. | 92.93 | 981.76 | 1957.13 | 81.55 | 113.95 | 89.36 |
| June | 84.88 | 996.35 | 1978.11 | 82.42 | 102.98 | 82.41 |
| July . ........... | 81.91 | 994.43 | 1990.78 | 82.95 | 98.75 | 81.91 |
| August .......... | 75.50 | 996.79 | 1991. 22 | 82.97 | 91.00 | 82.07 |
| September ....... | 79.69 | 988.75 | 1985.54 | 82.73 | 96.33 | 82.15 |
| October ......... | 84.43 | 997.42 | 1986.17 | 82.76 | 102.02 | 80.41 |
| November . ........ | 83.70 | 984.18 | 1981.60 | 82.57 | 101.37 | 82.87 |
| December . | 155.09 |  |  |  |  | 83.83 |
| 1935 |  |  |  |  |  |  |
| January .......... | 53,27 |  |  |  |  | 79.51 |
| February ........ | 61.47 |  |  |  |  | 83.07 |
| March .......... | 63.66 |  |  |  |  | 80.58 |
| April ........... | 80.89 |  |  |  |  | 86.98 |
| May .............. | 79.69 |  |  |  |  | 76, 63 |
| June ............. | 86.09 |  |  |  |  | 83.58 |
| July ............. | 83.32 |  |  |  |  | 83.32 |
| August .......... | 76.63 |  |  |  |  | 83.29 |

Method of Moving Averages.-. The method of moving averages in determining trend or normal values may be explained by reference to Table 4, in which indexes of variety chain sales are shown. The indexes adjusted for number of working days are given in Column 2. The average index for the twelve months in 1929 is first obtained by averaging the twelve monthly figures for that year. The total
of these mumbers is 1408.77 and the average is 117.26 which may be set opposite the month of June. Since a figure for each month of the year has been included in the computation of this average, the effects of seasonal changes are offset. The additive effects of including figures for months whose sales are normally above those of an average month for the year are offset by figures for months whose sales are seasonally less than this same average. The value 117.26 might, therefore, be taken as the normal for the twelve-month period centering in June, 1929.

In the same manner the sum of the figures for the twelve months beginning with February, 1929, and continuing through January, 1930, is found. This sum, or 1403.13, divided by 12 gives 116.93 which may be taken as the normal value for the year centering in July, 1929. Similarly, the average of the figures for every consecutive twelve-month period is-taken as the trend or normal value for the year centering at the mid point of that period, or the value which would obtain if seasonal effects were removed.

The sum of each set of twelve consecutive indexes is called a twelvemonth moving total. These totals are shown in Column 3 of Table 4. When dealing with an even number of items a slight difficulty exists in properly centering the average of these figures at any month. The customary method is to add the twelvemonth moving totals for each pair of months and divide the sum by 24. The twelvemonth totals for June and July are added giving the 2811.90 shown in the fourth column of Table 4. This figure divided by 24 gives 117.16 which is entered in Column 5 and opposite the month of July.

The figures given in Column 5 are termed trelve-month moving averages and have been found for the entire period for which data are available. If these values were plotted on a chart, they would be found to lie along a fairly smooth curve with all the major differences between consecutive months as seen in the original indexes eliminated。

The next step was to express the index for each month as given in Column 2 as a percentage of the corresponding value as given in Column 5. Since moving averages for the first six months and the last six months are not available, the first ratio show is that for July, 1929. The uncorrected index for that month, or 122.79 , is 104.81 per cent of the moving average ( 117.16 ) shown in Column 5. Similarly, each index in Column 2 is expressed as a percentage of the corresponding moving average and the ratios thus found are shown in Column 6=

If deviations from the normal were due to seasonal variations only, and if these seasonal effects were perfectly definite in occurrence and magnitude, the percentages thus obtained for identical months in consecutive years would be equal. But no such definiteness exists and the most representative percentage for each month is obtained by taking the average of the figures for identical months over as many years as possible. These ratios of the original indexes to the moving averages for the same month in the different years are arranged in Table 5 in order of magnitude.
Table 5.--Ratios of Indexes of Average Daily Sales of Variety Stores to Moving Averages


In taking the average for each month the lowest and the highest figures were omitted and the mean of the middle terms obtained. Slight adjustments were then necessary to make the sum of the figures equal 1,200 or to make the average equal 100. The following seasonal factors were thus obtained:

| January | 67 |
| :---: | :---: |
| February .... | 74 |
| March | 79 |
| April | 93 |
| May ......... | 104 |
| June | 103 |
| July | 100 |
| August ...... | 92 |
| September | 97 |
| October | 105 |
| November | 101 |
| December | 185 |
| Total | ,200 |

The meaning of these seasonal adjustment factors should be kept clearly in mind. Upon the basis of the data available, it is assumed that the January business of variety stores is normally 67 per cent of that of an average month, while the May business is 104 per cent of that same average. The factor for July is 100 , indicating that this is a normal month or that one-twelfth the annual business is normally transacted during this interval. On the other hand, December sales are exceptionally high, amounting to 185 per cent of those in a normal month.

## Corrections for the Changing Date of Easter

The fact that Easter may occur as early as March 22 or as late as April 25 makes complete adjustments for March and April by means of a single set of correction factors impossible. If Easter occurs before the end of March the entire holiday trade will be concentrated in that month so that sales for March will be exceptionally high. On the other hand, if Easter occurs as late as the 20th of April, sales for that month will be high and those for March proportionally small.

Various methods have been devised to make allowances for the varying dates of Easter. But the period over which monthiy sales data for Canadian retail trade are available is too short to permit any elaborate atterapt in this direction. However, from a careful comparison of the results obtained by using a constant set of factors and the dates upon which Easter fell, a sliding scale of adjustment factors for March and April have been estimated. The correction factors for the varlous months of each year from 1929 to 1935 are given in the following table:

Seasonal Correction Factors (Variety Stores)

|  | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January | 67 | 67 | 67 | 67 | 67 | 67 | 67 |
| February | 74 | 74 | 74 | 74 | 74 | 74 | 74 |
| Merch ..................... | 83 | 79 | 80 | 83 | 79 | 82 | 79 |
| April ..................... | 89 | 93 | 92 | 89 | 93 | 90 | 93 |
| May ...n0.0.0.60000000.0. | 104 | 104 | 104 | 104 | 104 | 104 | 104 |
| June | 103 | 103 | 103 | 103 | 103 | 103 | 103 |
| July ...................... | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| August .,.e.0.0.0.0.0.0.0. | 92 | 92 | 92 | 92 | 92 | 92 | 92 |
| September ................ | 97 | 97 | 97 | 97 | 97 | 97 | 97 |
| October | 105 | 105 | 105 | 105 | 105 | 105 | 105 |
| November .0.0.............. | 101 | 101 | 101 | 101 | 101 | 101 | 101 |
| December | 185 | 185 | 185 | 185 | 185 | 185 | 185 |
| Total | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 |

Index numbers of retail sales corrected for seasonal variations are then computed by dividing each index in Column 2 of Table 4 by the correction factor for the corresponding month as shown in Table 6. The corrected indexes are given in Column 7 of Table 4 and are also shown on Chart No. 3 .

It will be noted that, while the application of the seasonal correction factors eliminates the more important seasonal swings reflected in the original indexes, mfnor fluctuations from month to month still extst in the adjusted series. This, of course, is to be expected since the seasonal factors are based upon the average of a number of items and cannot be expected to bring the original index for any month to exact coincidence with the moving average.

It must also be remembered that not all deviations of the original indexes from the trend values are due to seasonal variations. Random factors are also in operation and, of course, their effects cannot be wiped out by a constant set of seasonal correction factors.

## APPLICATION OF METHOD AND SUMMARY OF RESULTS

All figures given in the preceding sections relate only to variety stores. Similar methods were followed in computing indexes adjusted for seasonal variations for each of the kinds of business for which data have been secured. A brief reference to each of these kinds of business is made here while the results are show in Table 8

In atudying the seasonal variations of the various lines of trade for which data have been secured, it must. be remembered that all sales figures have been given in dollar value and no allowances have been made for price changes. Shifts in demand between standard cheap goods and more expensive articles may account for a considerable part of the seasonal movements.

It must also be remembered that seasonal variations have been studied for the total sales of stores classified according to kind of business and not for specified commodities. Many kinds of retail stores handie a wita range of commodtt.es for which seasonal peaks in demand do not occur at the same time. A sales peak in
one commodity may be offset by a seasonally low level in demand for another. Seasonal swinge in the total sales of the firms involved are, therefore, less pronounced than they ould be if one commodity only were handled.

But even a comparison of the results obtained for the various kinds of business bears out the obvious fact that seasonal variations are least for those kinds of business which deal chiefly in commodities which are subject to regular and continuous consumption, while the seasonal effects are greatest in those lines of trade dealing in merchandise for which the demand is subject to definite conventional or seasonal influences. Drug stores, grocery and meat stores and restaurants belong to the former type while clothing stores, shoe stores, radio and music, hardware and furniture stores belong to the latter. Department stores and variety stores sell a wide range of commodities but chiefly those which are subject to wide seasonal swings. Since these swings are faily uniform as to pattern and timing, consisting of a primary peak in Dacember, a secondary peak in April or May, and a trough or low point in the summer months, department and variety store sales are also highly seasonal in character.

For each of the kinds of business for which indexes of retail sales have been computed, a brief statement follows regarding the weighting of the days, in the week as required in arriving at indexes of average daily sales. The main seasonal characteristics are also outlined and these seasonal characteristics may be described most conveniently by reference to the indexes of seasonal variation or the seasonal correction factors for the various months. As previously explained, the index of seasonal variation or, in other words, the correction factor, for any given month is numerically equal to the percentage that the business of that month normally bears to that of an average month or to one-twelf th the anmal business. A high seasonal factor for a certain month, therefore, indicates that business during that period is above normal while a low seasonal factor for any month implies that business in that period is below normal. A seasonal factor of exactly 100 indicates, of course, that business for that month is normal as far as seasonal effects are concerned. These seasonal variations for the various lines of trade may possibly be most easily visualized by reference to Chart No. I, in which the seasonal factors for each month are shown.

The seasonal factors for March and April, given in the following paragraphs, are those which have been used when the Easter trade is concentrated in the month of April. For some kinds of business it has been necessary to estimate a sliding scale of factors for these two months. These will be found in Table 9.

It should also be stated that all results obtained in this study are based upon reports received from firms which vary widely as regards their sales volume. The index numbers and seasonal characteristics here shown are, therefore, weighted by the figures of the larger organizations. The degree to which the results are representative of the whole is, therefore, dependent upon the extent to which the trends and seasonal characteristics of these larger firms are representative of those of the entire group.

CHART № 1


Department Stores.-.According to the reports received, 21.6 per cent of the week ${ }^{1}$ s business of department stores is normally transacted on Saturday while 15 per cent of the week's business may be attributed toreach of the first three days of the working week. The percentages of the week's business and the weights assigned to each day are shown below:

Per cent of
Weight

| Monday | 0.9 | 15.0 |
| :---: | :---: | :---: |
| Tuesday | 0.9 | 15.0 |
| Tednesday | 0.9 | 15.0 |
| Thursday | 1.0 | 16.7 |
| Friday | 1.0 | 16.7 |
| Saturday | 1.3 | 21.6 |
| Total | 6.0 | 100.0 |

In computing the number of business days in each month, allowances were made for the following six holidayss New Year's Day, Good Friday, Victoria Day (May 24), Dominion Day (July 1), Labour Day and Christmas Day. The number of business days, by months, from 1929 to 1935 will be found in Table 7,

Department store sales reach their peak in December when 12.6 per cent of the annual business or 152 per cent of the business of an average month is normally transacted. A secondary peak $1 . s$ experienced in April and May, while troughs occur in January, July and August. The percentage of the anmal business attributable to each month and the seasonal correction factors for each month are shown below:

| Index of <br> Seasonal <br> Variation | Per cent <br> of Annual <br> Business |
| :---: | :---: |
|  | 60 |
| 84 | 6.7 |
| 89 | 7.0 |
| 103 | 8.4 |
| 102 | 8.6 |
| 97 | 8.5 |
| 80 | 8.1 |
| 80 | 6.7 |
| 104 | 6.7 |
| 115 | 8.6 |
| 114 | 9.6 |
| 152 | 9.5 |
| 1,200 | 12.6 |

The seasonal correation factors shom above for March and April are those used when Easter buying is concentrated in the latter month. As previously indicated, it has been necessary to use a sliding scale of adjustment factors to make provision for the shifting date of Easter. The March and April factors for each year from 1929 to 1935 are shom in Table 9.

Varfety Stores, - The Saturday trade of variety stores forms 38.3 per cent of the week's business according to the estimates received from the various reporting firms: The percantages of the weak's business and weights attributable to each
working day are as follows:

> Per cent of
> Weight Weekly Business

| Monday ...... | 0.7 | 11.7 |
| :---: | :---: | :---: |
| Tuesday ..... | 0.7 | 11.7 |
| Wednesday ... | 0.7 | 11.7 |
| Thursday .... | 0,8 | 13,3 |
| Friday | 0.8 | 13.3 |
| Saturday .... | 2,3 | 38.3 |
| Total | 6.0 | 100.0 |

In computing the number of working days in each month allowances were made for the six holidays mentioned in the section on department stores. The number of business days (weighted) for each month from 1925 to 1935 will be found in Table 7.

The seasonal pattern of varlety store sales is largely influenced by the Christmas trade, 15.4 per cent of the annual business, or 185 per cent of the bus:iness of an average month, being transacted during December. Indicating the business levels in any month by means of the corresponding correction factors (a low factor indicating a trough and a high factor, a peak), it is found that variety store sales start from a primary low of 67 in Jamary, rise fairly uniformly to a secondary peak of 104 in May, fall off to a smaller extent in the summer months than do most other lines of retail trade, and then rise sharply in December to the primary peak of 185 already mentioned.

The indexes of seasonal variation, together with the percentages of the annual business attributed to each month, are show below. The varying correction factors for March and April to take account of the varying dates of Easter are shown in Table 9 .

|  | Index of Seasonal Variation | Per cent of Anmual Business |
| :---: | :---: | :---: |
| January | 67 | 5.6 |
| February | 74 | 6.2 |
| March . | 79 | 6,6 |
| April | 93 | 7,7 |
| May | 104 | 8.7 |
| June | 103 | 8.6 |
| July | 100 | 8.3 |
| August | 92 | 7.7 |
| September | 97 | 8.1 |
| October. | 105 | 8.7 |
| November | 101 | 8.4 |
| December | 185 | 15.4 |
| Total | 1,200 | 100.0 |

Men's Clothing Stores - According to the information received, the distribution of the weekly business over the six working days is aimilar for men ${ }^{8}$ s and women's clothing stores. Provision was made in both groups for the aix statutory holidays zentioned above Consequently, the number ci buafnss days attributable to each day of the month will be the same for the two lines of trade. The weights
given to each business day, together with the corresponding percentages of the weekly business, are shown below. The number of business days in each month from 1929 to 1935 will be found in Table 7.

## Weight

\(\left.\begin{array}{r}Per cent of <br>

Heekly Business\end{array}\right\}\)| 10.0 |
| :---: |
| 11.7 |
| 13.3 |
| 13.3 |
| 16.7 |
| 35.0 |
| 100.0 |

For those years in which the Easter trade is concentrated in April, sales of men's clothing stores for that month are normally greater than for any other single month in the year. Rising from the customary low level in January and February, they reach a peak in April represented by a seasonal index of 137. Business then declines to a secondary 10 w of 70 in August and afterwards rises to a comparatively high and fairly constant level in October, November and December.

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| Jamary | 66 | 5.5 |
| February | 62 | 5.2 |
| March | 78 | 6.5 |
| April | 137 | 11.4 |
| May . | 117 | 9.7 |
| June | 116 | 9.7 |
| July | 85 | 7.1 |
| August... | 70 | 5.8 |
| September | 92 | 7.7 |
| October | 124 | 10.3 |
| November | 125 | 10.4 |
| December | 128 | 10.7 |
| Total | 1,200 | 100.0 |

Seasonal indexes for March and April vary constderably according to the date upon which Easter falls; that for March is increased to 100; while that for April is decreased to 115 in those years in which the Easter buginess falls wholly within the former month.

Women's Clothing Stores.--Weighting of the days of the week and the number of business days in the month is the same for women's clothing stores as for men's. The seasonal pettern, however, is somewhat different. A secondary peak is reached in April with a seasonal index of 124, while the primary peak occurs in December with an Index of 185. Troughs occur in February and August, the seasomel index for the former month being 68 and that for the latter 76 . In the case of men's clothing it was noted that sales in October, November and December were comparatively uniform, each of these months having a seasomal index lying between 120 and 180. In the case of women's clothing, the indexes for October and November are much lower but a much greater rise is experienced in December, as reflected in
the seasonal index of 185 for that month.

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| January | 69 | 5.7 |
| Februery . | 68 | 5.7 |
| March | 76 | 6.3 |
| April .......... | 124 | 10.3 |
| May ............ | 110 | 9.2 |
| June .......... | 120 | 10.0 |
| July ........... | 93 | 7.8 |
| August | 76 | 6.3 |
| September ...... | 90 | 7.5 |
| October | 96 | 8.0 |
| November ........ | 93 | 7.8 |
| December ....... | 185 | 15.4 |
| Total $\ldots .$. | 1,200 | 100.0 |

Boot and Shoe Stores.--More than 38 per cent of the weekly business of boot and shoe stores is normally transacted on Saturday, while sales on Tuesday are estimated at 10 per cent of the same total. The weights assigned to each day together with the corresponding percentages are given below:

|  | Weight | Per cent of Weekly Business |
| :---: | :---: | :---: |
| Monday | 0.8 | 13.3 |
| Tuesday | 0.6 | 10.0 |
| Wednesday | 0.7 | 11.7 |
| Thursday | 0.8 | 13.3 |
| Friday | 0.8 | 13.3 |
| Saturday | 2.3 | 38.4 |
| Total | 6.0 | 100.0 |

The seasonal peaks in the boot and shoe store trade occur in June and December while seasonal lows take place in January, February and in August. The secondary seasonal peak in June rather than in April or May gerves to distinguish the seasonal pattern for this line of trade from those previously described for other kinds of business. The indexes of seasonal variation and corresponding percentages of annual business for the various months are as follows:

|  | Index of Seasonal Variation | Per cent of Annual Business. |
| :---: | :---: | :---: |
| Jemuary | 66 | 5,5 |
| February | 64 | 5.3 |
| March | 74 | 6.2 |
| April | 118 | 9.8 |
| May | 117 | 9.7 |
| June | 133 | 11.1 |
| Juiy | 102 | 8.5 |
| August | 83 | 6.9 |
| September | 97 | 8.1 |
| October | 97 | 8.1 |
| November | 108 | 9.0 |
| December | 141 | 11,8 |
| Total | $1,200$ | $100.0$ |

Candy and Confectionery Stores.-In computing the number of business days (weighted) for candy and confectionery stores, it was assumed that all stores were closed on Sunday. No provision was made, however, for the six holidays, since the majority of the reporing firms indicated that they were open for at least part of these days. The waights and percentages attributable to each business day are as follows:

Per cent of
Weight

| Monday | 0.7 | 11.7 |
| :---: | :---: | :---: |
| Tuesday | 0.7 | 11.7 |
| Wednesday | 0.8 | 13.3 |
| Thursday | 0,8 | 13.3 |
| Friday | 0.9 | 15.0 |
| Soturdey | 2.1 | 35.0 |
| Total | 6.0 | 100.0 |

The seasonal pattern of candy and confectionery store sales is influenced to a greater extent by the holiday seasons at Easter and Christmas than are those of the other kinds of bustness for which indexes have been computed. From a low in January represented by a seasonal index of 75 , sales increase to a secondary peak in April represented by an index of 130 . A secondary low is reached in June with a seasonal index of 77, after which sales rise to a fairly uniform level during August, September and October rapresented by indexes lying between 90 and 100 for these threemonths. After a alight recession in November, the primary peak is reached in December with a seasonal index of 185.

Since the relative monthly business of sandy and confectionery stores is so largely influenced by the two holiday seasons, it is only natural to find that the shifting date of Easter has a pronounced effect upon the seasonal indexes for March and April. For years in which the Easter business is concentrated in April the index of seasonal variation for that month is 130 while that for March is 85 . When the Easter business takes place wholly in March, the seasonal indexes for the two months are interchanged.

|  | Index of Seasonal Yariation | Per cent of Annual Business |
| :---: | :---: | :---: |
| Jamuary | 75 | 6.2 |
| February | 92 | 7.7 |
| March | 85 | 7.1 |
| April | 130 | 10.8 |
| May ...... | 98 | 8.2 |
| June .o. | 77 | 6.4 |
| July | 85 | 7.1 |
| August | 98 | 8.2 |
| September | 93 | 7.7 |
| October | 95 | 7.9 |
| November | 86 | 7.2 |
| December | 186 | 15.5 |
| Total | 1,200 | $100.0$ |

Radio and Music Stores. .-. The lack of uniformity in the percentages of the weekly business transacted upon the various days of the week, as reported by the various reporting firms, was such that no attempt was made to weight the different days. In computing average daily sales, allowances only were made for the six holidays previousiy mentioned.

For the kinds of business which have already been described, it was possIble to remove the main seasonal effects by a set of correction factors which could be kept constant for any given month over the period for which indexes of retail sales have been computed. An exception to this statement, of course, occurs in the case of March and April where adjustments for the varying dates of Easter were necessary. When this was attempted in the case of radio and music stores, it was found that no single set of factors would remove the seasonal swings for the entire period from 1929 to 1935, but that the seasonal pattern for this kind of business has undergone a change. While the greatest proportion of the annual business of radio and music stores has been consistently transacted in the autumn months and in December, it is found that a smaller proportion is transacted in these months than was formerly the case. On the other hand, the proportions of the annual business attributable to the spring and summer months has increased during the period under review. As previlously stated, indexes of retail sales have been computed for kinds of business and not for specified commodities. The addition of electrical refrigerators to the lines of merchandise carried by music and radio stores has undoubtediy been effective in changing the proportion of the anmual business transacted in each month.

It was, therefore, necessary to compute sliding sale of correction factors for almost all months of the year. A brief description of the method followed in arriving at these factors follows:

It will be remembered that seasonal correction factors were derived by taking an average of the ratios of the actual indexes to the moving averages for the corresponding manths in each year. In the case of radio and music stores, however, it was found that these ratios or relatives increased consistently for consecutive years for some months and decreased for other months, thus indicating a change in the seasonal pattern.

The relatives for each month were first arranged in chronological order, That is to say, all the relatives for the month of Jamary were axranged according to the years to which they belonged and the relatives for eack of the athem months
were arranged in a similar manner. Each set of monthly ralatives was then smoothed by taking a three-year moving average and the resulting values were plotted on a chart against the year at which they were centered. Smooth curves were drawn through these points and produced so as to extend to the end years. From these twelve curves, sets of correction factors for each month were then read off. The correction factors thus obtained for radio and music stores are shown below:

Seasonal Correction Factors, 1929-1935, Radio and Music Stores

| Month | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Jamuary | 90 | 90 | 90 | 87 | 84 | 83 | 83 |
| February | 87 | 87 | 87 | 87 | 87 | 87 | 87 |
| March.. | 78 | 78 | 79 | 81 | 82 | 82 | 82 |
| April | 74 | 74 | 75 | 76 | 80 | 81 | 81 |
| May | 79 | 79 | 79 | 82 | 86 | 87 | 87 |
| June | 62 | 62 | 62 | 66 | 70 | 71 | 71 |
| July | 60 | 60 | 61 | 63 | 65 | 65 | 65 |
| August | 76 | 76 | 76 | 76 | 76 | 76 | 76 |
| September | 127 | 127 | 130 | 134 | 136 | 137 | 137 |
| October | 144 | 144 | 140 | 135 | 133 | 132 | 132 |
| November | 154 | 154 | 154 | 151 | 143 | 141 | 141 |
| December | 169 | 169 | 167 | 162 | 158 | 158 | 158 |

Furniture Stores.-According to the reports received from the several contributing firms, 25 per cent of the weekly business is normally transacted on Saturday, while approximately 15 per cent may be attributed to each of the other days in the week. The weights assigned to the various days together with the corresponding percentages of the weekly total are as follows:


A study of the seasonal swings in the sales of furniture stores reveals two peaks: one occurs in May with a seasonal Index of 116 and another occurs in September and October, the seasonal indexes for these two months being 122 and 118 respectively. Sales then fall off somewhat in November after which another minor peak occurs in December. A major low occurs in January with a seasonal tndex of 67 and a minor low occurs in July for which month the index is 80.

The indexes mentioned in the preceding paragraph are those which have been used in removing seasonal variations from the indexes of retail sales for the latter years of the period, 1929 to 1955.

A study of the figures submitted by the different furniture stores reveals that this is another kind of business for which a constant set of seasonal factors
is not satisfactory in removing seasonal swings from the indexes of average daily salea for each month. It is found that the proportions of the annual business transacted in the months from April to August have been increasing while the relative proportions transacted in the months from November to February have been decreasing to a corresponding degree. In making corrections for seasonal variations, it was therefore necessary to use varying correction factors for corresponding months in consecutive years. These correction factors are shown below:

Seasonal Correction Factors, $1929=1935$, Furniture Stores

| Month | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 | 1935 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January | 75 | 75 | 75 | 72 | 70 | 67 | 67 |
| February | 89 | 89 | 89 | 88 | 85 | 83 | 83 |
| March | 90 | 90 | 90 | 90 | 90 | 90 | 90 |
| April | 96 | 96 | 98 | 100 | 106 | 107 | 107 |
| May | 102 | 102 | 103 | 108 | 112 | 116 | 116 |
| June | 88 | 88 | 89 | 93 | 98 | 100 | 100 |
| July | 72 | 72 | 73 | 74 | 77 | 80 | 80 |
| August | 95 | 95 | 95 | 98 | 101 | 102 | 102 |
| September | 117 | 117 | 120 | 121 | 122 | 122 | 122 |
| October | 118 | 118 | 118 | 118 | 118 | 118 | 118 |
| November | 126 | 126 | 124 | 118 | 106 | 103 | 103 |
| December | 132 | 132 | 126 | 120 | 115 | 112 | 112 |

Hardware Stores.-In computing average daily sales of hardware stores each day of the week has been given an equal weight and provision has been made only for the six holidays previously mentioned.

Rising from a primary low in January, represented by a seasonal index of 64, sales of hardware stores reach a primary peak in the month of May as reflected in the seasonal index of 136 for that month. Sales then fall off to about normal amounts for the months of July and August, after which a secondary peak is reached in September.

Hardware stores represent still another kind of business for which it was impossible to remove all seasonal swings by means of a single set of correction factors. Not only does a major peak in the hardware store business occur in May but the proportion of the annual business transacted during May has increased during the past four years. The proportions for April and June have also increased while the proportions attributable to November, December and January have been decreasing. This change in the seasonal pattern for hardware store sales may be attributed to the general decline in building trades during the period under review and the accompanying concentration of the continuing building trade in the months most suited to this activity. The seasonal factors by months for each of the years 1929 to 1935 are as follows:

Seasona1 Correction Factors, 1929 1935, Hardware Stores

| Month | 1929 | 1930 | 1951 | 1932 | 1933 | 1934 | 1935 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January | 70 | 70 | 70 | 69 | 65 | 64 | 64 |
| February | 75 | 75 | 75 | 72 | 69 | 68 | 68 |
| March.. | 82 | 82 | 81 | 78 | 77 | 77 | 77 |
| April | 99 | 99 | 100 | 101 | 104 | 105 | 105 |
| May | 114 | 116 | 122 | 131 | 135 | 136 | 136 |
| June | 108 | 108 | 108 | 112 | 114 | 115 | 115 |
| July | 99 | 99 | 99 | 100 | 103 | 103 | 103 |
| August | 102 | 102 | 102 | 102 | 102 | 102 | 102 |
| September | 120 | 120 | 121 | 122 | 122 | 122 | 122 |
| October | 112 | 112 | 112 | 112 | 112 | 112 | 112 |
| November | 106 | 105 | 103 | 98 | 95 | 94 | 94 |
| December | 115 | 112 | 107 | 103 | 102 | 102 | 102 |

Grocery and Mest Stores - Forty per cent of the weekly business of grocery and meat stores is normally transacted on Saturday according to the information received from the reporting firms. The weights assigned to the several days of the week, together with the corresponding percentages of the weekly business are as fol lows:

|  | Weight | Per cent of Weekly Business |
| :---: | :---: | :---: |
| Monday | 0.5 | 8.3 |
| Tuesday | 0.6 | 10.0 |
| Wednesday | 0.7 | 11.7 |
| Thursday | 0.8 | 13.3 |
| Friday | 1.0 | 16,7 |
| Saturday | 2.4 | 40.0 |
| Total | 6.0 | 100.0 |

In computing the average daily sales, allowances were made for the six holidays mentioned in the section on department stores.

Seasonal variations in the business of grocery and meat stores are much less pronounced than are those of the kinds of business previously described. Minor peaks do occur, however, in April, May and in December while a low point for the year is reached in August which has an index of seasonal variation of 92. The indexes of seasonal variation for the various monthe, together with the corresponding percentages of the annual business are as followd:

|  | Index of Seasonal Variation | Per cent of Annual Eusiness |
| :---: | :---: | :---: |
| Jamuary | 97 | 8.1 |
| February | 98 | 8.2 |
| March | 96 | 8.0 |
| April | 107 | 8.9 |
| May | 106 | 8.8 |
| June | 100 | 8.3 |
| July | 98 | 8.3 |
| August | 92 | 7.7 |
| September | 100 | 8.3 |
| October | 100 | 8.3 |
| November | 99 | 8.2 |
| December | 107 | 8.9 |
| Total | 1,200 | 100.0 |

Drug Stores --Since many drug stores are open for business on Sunday, in computing average dally sales for this kind of business it was necessary to assign weights to each of the seven days of the week rather than to six. No allowances for holidays were made since it was assumed that the stores were open every day in the year.

|  | Weight | Per cent of Weekly Business |
| :---: | :---: | :---: |
| Sunday | 0.4 | 5.7 |
| Monday | 0.8 | 11.4 |
| Tuesday | 1.0 | 14.3 |
| Wednesday | 1.0 | 14.3 |
| Thursday | 1.0 | 14.3 |
| Friday | 1.1 | 15.7 |
| Saturday | 1.7 | 24.3 |
| Total | 7.0 | 100:0 |

With the exception of a minor peak in December represented by a seasonal index of 114, sales of drug stores are comparatively uniform throughout the year. Again it should be emphasized that in this bulletin sales for certain kinds of business and not for specified commodities are studied. The peak in December is due, of course, to the increased sale of comodities other than drugs or drug sundries prior to the Christmas season.

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| January | 96 | 8.0 |
| February | 101 | 8.4 |
| March | 101 | 8.4 |
| April | 99 | 8.3 |
| May | 96 | 8.0 |
| June | 101 | 8.4 |
| July | 97 | 8.0 |
| August | 98 | 8.2 |
| September | 98 | 8.2 |
| October | 99 | 8.3 |
| November | 100 | 83 |
| December | 114 | 9.5 |
| Total | 1200 | 100,0 |

Restaurants.--In compliting average daily sales for this group, it was assumed that the various firms were open every day throughout the year. Weights were assigned to the different days of the week as follows:

|  |  | Weight |
| :--- | :---: | :---: |$\quad$| Per cent of |
| :---: |
| Weekly Business |

Rising from a low in January represented by a seasonal index of 93, the business transacted by the restaurant group rises fairly uniformly until a peak is reached in August for which month the seasonal index is 106. A secondary low occurs in November with an index of 96 followed by a secondary peak in December with an index of 102.

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| Jamary | 93 | 7.8 |
| February | 96 | 8.0 |
| March . | 97 | 8.1 |
| April | 101 | 8.4 |
| May | 100 | 8.3 |
| June | 101 | 8.4 |
| July | 103 | 8.6 |
| August | 106 | 8.8 |
| September | 105 | 8.8 |
| October . | 100 | 8.3 |
| November | 96 | 8.0 |
| December | 102 | 8.5 |
| Total | $1,200$ | $\begin{aligned} & 100.0 \\ & \hline \end{aligned}$ |

Dyers and Cleaners.-Although this classification refers to a servicing rather than to a retail merchandising activity, monthly indexes of the business done by dyers and cleaners have been published in conjunction with the indexes of retail sales. No weights were assigned to the several days of the week but allowances were made for the six holidays previously mentioned. The number of business days for each month used in calculating average daily sales is, therefore, the same as the corresponding data for hardware and radio and music stores.

Rising from a primary low in January and February, represented by indexes of 71 and 70 respectively, the business of dyers and cleaners reaches a primary peak in the month of April as reflected in the seasonal index of 140 for that month Business then falls off to about normal proportions in July and August as indicated by seasonal indexes of 98 and 96 for these two months. A secondary peak occurs in September after which a gradual decline is registered throughout the remainder of the year.

As is to be expected, the proportions of the annual business attributable to March and April vary widely according to the date upon which Easter occurs. It has, therefore, been necessary to vary the correction factors for these two months to make provision for this factor.

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| Januery | 71 | 5.9 |
| February | 70 | 5.8 |
| March | 90 | 7.5 |
| April | 140 | 11.6 |
| May | 125 | 10.4 |
| June. | 111 | 9.3 |
| July | 98 | 8.2 |
| August. | 96 | 8.0 |
| September | 121 | 10.1 |
| October | 111 | 9.3 |
| November | 90 | 7.5 |
| December | 77 | 6.4 |
| Total | 1,200 | 100.0 |

General Index. --In addition to deriving indexes of retail sales for each of the kinds of business already mentioned, a general index has also been computed. The general indexes of monthly sales were built up from the indexes of monthly sales (unadjusted for number of days or seasonal variations) for each of the several lines of trade, each individual figure being weighted in proportion to the relative sales volume of the corresponding kind of business as determined by the results of the Census of Merchandising and Service Establishments, 1931. Similarly, the general indexes of average daily sales were built up from the indexes of average daily sales (unadjusted for seasonal variations) for each of the several lines of trade and using the same weighting as in the previous case.

But the general indexes corrected for seasonal variations were not built up from the indexes for the several kinds of business corrected for number of business days and for seasonal variations. In order to remove seasonal variations from the general indexes the same procedure was followed as for each of the individual lines of business. That is to say, using the general indexes of average daily sales as mentioned in the preceding paragraph, twelve-month moving averages were found. The ratios of the actual indexes to the moving averages for corresponding months in the various years were meaned and the results rounded off so that the sum of the twelve figures totalled 1,200 . The indexes of seasonal variation thus obtained were as follows:

|  | Index of Seasonal Variation | Per cent of Annual Business |
| :---: | :---: | :---: |
| January | 84 | 70 |
| February | 87 | 7.3 |
| March | 89 | 7.4 |
| April | 109 | 9.1 |
| May | 105 | 8,7 |
| June | 101 | 8.4 |
| July | 90 | 7.5 |
| August | 87 | 7.3 |
| September | 102 | 8.5 |
| October | 107 | 8.9 |
| November | 106 | 8.8 |
| December | 133 | 11.1 |
| Total | 1,200 | 100,0 |

A comparison of these indexes reveals the same general seasonal swings which were apparent in most of the individual lines of trade. Starting from a primary low in Jamary represented by an index of 84 , retaj 1 trade rises to a secondary peak in April and May represented by indexes of 109 and 105 respectively. After a recession in the summer months culminating in a secondary low in August, represented by a seasonal index of 87 for that month, retail sales rise seasonally in the autumn months to a level somewhat above normal for the year. Then follows the customary peak in December as indicated by a seasonal index of 133

The relative importance of those kinds of business requiring a silding scale of correction factors for practically all months of the year (radio and music stores, hardware stores and furniture stores) was not sufficiently great as to require corresponding adjustments to the indexes of seasonal variation for the composite figures. But adjustments to the March and April factors were required in order to remove the effects of the shifting date of Easter The correction factors for these two months as used for the different years are shown in Table 9 .

It will be noted, of course, that monthly indexes of retail sales have not been computed for all kinds of business. In fact, the results of the Census of Merchandising and Service Establighments show that the sales of those kinds of business represented in the monthly figures form approximately 55 per cent of the total retail trade of the country. Highest in sales rank of those kinds of business for which monthly indexes are not avajlable are the following: (1) Automotive establishments, including in addition to automobile retailers those establishments such as filling stations and garages which are closely ailied with the automotive trade; (2) country general stores; (3) Government Ilquor stores; (4) coal and wood yards; and (5) lumber and building material dealers. It is apparent, there fore, that the general index here shown cannot be taken to mean a general index of all retail trade but a composite of the indexes for the kinds of business ior which data have been secured

## COMPARISON OF INDEXES OF RETAIL SALES AND INDEXES OF RETATL PRICES

The general decrease in the dollar value of retail sales as indicated by tha Endexes shom in this report, is the resultant of two factors: (1) A decline in price levels, and ( 2 ) a rathorinn in actual quantity of goods consumed. The
exact proportion of the decrease in dollar volume which should be attributed to each of these two factors cannot be definitely stated due to the absence of price indexes so constructed as to be strictly comparable.

Indexes of retail sales shown here are based upon reports received from firms operating in certain lines of business only and cannot be assumed to cover all retail trade. For example, no returns are received from country general stores, tobacco stores, or from coal and wood dealers. Nor are retail sales made by manufacturing bakeries and dairies inaluded. On the other hand, the whole weighting system used in computing the Bureau's Indexes of Retail Prices is based on an estimated aggregate consumption in Canada, including a proportion which does not pass through the channels of distribution covered by the monthly indexes of retail sales.

But while retail price indexes are not computed in such a way as to warrant their use as a correction for price changes in these indexes of retail sales, they do give an indication of the order of magnjtude of the price trends. The Bureau's Indexes of Retail Prices for the period 1929 to 1934 are given below and, for comparison purposes, have been adjusted to make the average of the twelve figures for 1930 equal 100. The annual averages derived from the monthly figures are also shown.

Table 6-Monthly Retail Price Indexes, Canada
(Foods, fuel, clothing, household requirements)
$(1930-100)$

| Month | 1929 | 1930 | 1931 | 1932 | 1933 | 1934 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| January | 102.2 | 105.0 | 93.3 | 79.3 | 73.0 | 75.1 |
| February 00000.0.0.0.0.0. | 101.7 | 104.4 | 91,5 | 77.8 | 71.9 | 76.0 |
| March | 1020 | 103.8 | 88.9 | 76.7 | 70.7 | 78.0 |
| April | 1009 | 102,0 | 87.8 | 76.4 | 71.3 | 77.0 |
| May | 100.6 | 101,3 | 86.2 | 75.0 | 71.6 | 75.8 |
| June | 100,5 | 101.1 | 83.7 | 73.7 | 71.5 | 75.4 |
| July | 100.9 | 100.2 | 83, 5 | 73.3 | 71,8 | 75.7 |
| August | 103.7 | 99.1 | 84.1 | 74.5 | 74.1 | 76.2 |
| September | 103.4 | 96.4 | 82.2 | 73.7 | 74.4 | 76.7 |
| October | 103.3 | 96.3 | 81.2 | 74.0 | 74.1 | 77.0 |
| November | 103.8 | 96.2 | 81.3 | 74.1 | 74,5 | 77.2 |
| December | 104,0 | 94.5 | 80.4 | 73.6 | 74.7 | 76.6 |
| Annual Average | 102.3 | 100.0 | 85.3 | 75.2 | 72.8 | 76.4 |

Annual indexes of retail sales were obtained by averaging the monthly figures for the general indexes mentioned in the preceding section and listed in Table $8-\mathrm{N}$. A comparison of the two sets of indexes is shown below.

| Year | Index of Retail Sales $(1930=100)$ | Retail Price Index $(1930=100)$ |
| :---: | :---: | :---: |
| 1929 | 111.4 | 102.3 |
| 1930 | 100.0 | 1000 |
| 1931 | 87.7 | 85.3 |
| 1932 | 71.9 | 75.2 |
| 1933 | 669 | 72.8 |
| 1934 | 69.6 | 76.4 |

While an exact comparison between the two sets of indexes is not valid, yet the figures are sufficiently comparable to show that a large portion of the decrease in dollar volume of retail trade during the period 1930 to 1933 was due to a decline in price levels.

## Table 7.-- Number of Business Days (Weighted) by Months, 1929-1935, by Kinds of Business

| Year and Month | A. | B. | C. | D. | E. | F. | G. | H. | I. | J. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1929 |  |  |  |  |  |  |  |  |  |  |
| January | 25.9 | 25.5 | 25.6 | 25.5 | 26.3 | 25.8 | 25.5 | 31.0 | 31.0 | 26 |
| February | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24,0 | 28.0 | 28.0 | 24 |
| March | 25.3 | 26.3 | 26.1 | 26.3 | 27.0 | 25.5 | 26.4 | 31.2 | 31.0 | 25 |
| April | 25.8 | 25.4 | 25.3 | 25.4 | 25.4 | 25.8 | 25.1 | 29.8 | 30.0 | 26 |
| May | 25.9 | 25.5 | 25.6 | 25.5 | 26.5 | 25,8 | 25.5 | 31.1 | 31.1 | 26 |
| June | 25.3 | 26.3 | 26.1 | 26.3 | 26.1 | 25.5 | 26.4 | 30.1 | 29.9 | 25 |
| July | 25.8 | 25.4 | 25.5 | 25.3 | 26.2 | 25.8 | 25.3 | 30.8 | 31.0 | 26 |
| August | 27.3 | 27.9 | 27.9 | 27.9 | 27.8 | 27.3 | 28.2 | 31.8 | 31.4 | 27 |
| September | 24.0 | 24.0 | 24.0 | 24.0 | 24.7 | 24.0 | 24.0 | 29.2 | 29.6 | 24 |
| October | 26.8 | 26.2 | 26.3 | 26.1 | 26.3 | 26.7 | 26.1 | 31.0 | 31.0 | 27 |
| November | 26.3 | 27.1 | 27.1 | 27.1 | 27.0 | 26.4 | 27.4 | 30.8 | 30.4 | 26 |
| December | 24.9 | 24.7 | 24.5 | 24.7 | 25.4 | 24.9 | 24.4 | 30.2 | 30.6 | 25 |
| 1930 |  |  |  |  |  |  |  |  |  |  |
| January | 26.0 | 25.6 | 25.8 | 25.6 | 26.5 | 25.8 | 25.8 | 31.1 | 31.1 | 26 |
| February | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 28.0 | 28.0 | 24 |
| March | 26.2 | 27.0 | 26.7 | 27.1 | 26.8 | 26.4 | 26.9 | 30.9 | 30.9 | 26 |
| April | 24.8 | 24.6 | 24.5 | 24.5 | 25.5 | 24.9 | 24.3 | 30.0 | 30.0 | 25 |
| May | 26.0 | 25.6 | 25.8 | 25.6 | 27.8 | 25.8 | 25.8 | 31.8 | 31.4 | 26 |
| June | 24.9 | 24.7 | 24.6 | 24.8 | 24.7 | 24.9 | 24.5 | 29.2 | 29.6 | 25 |
| July | 25.9 | 25.5 | 25.6 | 25.5 | 26.3 | 25.8 | 25.5 | 31.0 | 31.0 | 26 |
| August | 26.3 | 27.1 | 27.1 | 27.1 | 27.0 | 26.4 | 27.4 | 31.2 | 31.0 | 26 |
| September | 24.9 | 24.7 | 24.7 | 24.6 | 25.4 | 24.9 | 24.6 | 29.8 | 30,0 | 25 |
| October | 26.9 | 26.3 | 26.6 | 26.3 | 26.5 | 26.7 | 26.5 | 31.1 | 31.1 | 27 |
| November | 25.3 | 26.3 | 26.1 | 26.3 | 26.1 | 25.5 | 26.4 | 30.1 | 29.9 | 25 |
| December | 25.7 | 25.3 | 25.3 | 25.3 | 26.2 | 25.8 | 25.0 | 30.8 | 31.0 | 26 |
| 1931 |  |  |  |  |  |  |  |  |  |  |
| January | 26.3 | 27.1 | 27.1 | 27.1 | 27.8 | 26.4 | 27.4 | 31.8 | 31.4 | 26 |
| February | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 28.0 | 28.0 | 24 |
| March | 25.8 | 25.4 | 25.3 | 25.4 | 25.4 | 25.8 | 25.1 | 30.2 | 30.6 | 26 |
| April | 24.9 | 24.7 | 24.6 | 24.7 | 25.6 | 24.9 | 24.5 | 30.0 | 30.0 | 25 |
| May | 25,4 | 26, 1 | 26.5 | 26.3 | 27.0 | 25.5 | 26.9 | 31.2 | 31.0 | 25 |
| June | 25.8 | 25.4 | 25.3 | 25.4 | 25.4 | 25.8 | 25.1 | 29.8 | 30.0 | 26 |
| July | 26.0 | 25,6 | 25.8 | 25.6 | 26.5 | 25.8 | 25.8 | 31.1 | 31.1 | 26 |
| August | 26.2 | 27.0 | 26.7 | 27.1 | 26.8 | 26.4 | 26.9 | 30.9 | 30.9 | 26 |
| September | 24.9 | 24.7 | 24.9 | 24.5 | 25.5 | 24.9 | 24.8 | 30.0 | 30.0 | 25 |
| October | 27.3 | 27.9 | 27.9 | 27.9 | 27.8 | 27.3 | 28.2 | 31.8 | 31.4 | 27 |
| November | 24,9 | 24.7 | 24.6 | 24.8 | 24.7 | 24.9 | 24.5 | 29.2 | 29.6 | 25 |
| December | 25.8 | 25.4 | 25.3 | 25.3 | 26.3 | 25.8 | 25.1 | 31.0 | 31.0 | 26 |

## Legend:

A. Department Stores.
B. Variety Stores.
C. Men's and Nomen's Olothing Btoren.
D. Boot and Shoe Stores. H. Drag Stores.
E. Candy and Confectionery stores.
F. Furniture Stores.
G. Grocery and Meat Stores.
I. Restaurants.
J. Radio and Misic, Hardware, and Dyers and Cleaners.

Table 7.--Mumber of Business Days (Weighted) by Months, 1929-1935, by Kinds of Business (Cont'd.) -

| Year and Month | A. | B. | c. | D. | E. | F. | G. | H. | 1. | J. |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1932 |  |  |  |  |  |  |  |  |  |  |
| January | 25.3 | 26.3 | 26.1 | 26.3 | 27.0 | 25.5 | 26.4 | 31.2 | 31.0 | 25 |
| February | 24.9 | 24.7 | 24.6 | 24.8 | 24.7 | 24.9 | 24.5 | 28.8 | 29.0 | 25 |
| March | 25.8 | 25.4 | 25.3 | 25.3 | 26.3 | 25.8 | 25.1 | 31.0 | 31.0 | 26 |
| April | 26.3 | 27.1 | 27.1 | 27.1 | 27.0 | 26.4 | 27.4 | 30.8 | 30.4 | 26 |
| May | 24.9 | 24.7 | 24.6 | 24.8 | 25.4 | 24.9 | 24.5 | 30.2 | 30.6 | 25 |
| June | 25.9 | 25.5 | 25.6 | 25.5 | 25.6 | 25.8 | 25.5 | 30.0 | 30.0 | 26 |
| July | 25.3 | 26.3 | 26.1 | 26.3 | 27.0 | 25.5 | 26.4 | 31.2 | 31.0 | 25 |
| August | 26.7 | 26.1 | 26.1 | 26.1 | 26.2 | 26.7 | 25.8 | 30.8 | $31: 0$ | 27 |
| Septembe | 25.1 | 24.9 | 25.2 | 24.8 | 25.7 | 24.9 | 25.3 | 30.1 | 30.1 | 25 |
| October | 26.2 | 27.0 | 26.7 | 27.1 | 26.8 | 26.4 | 26.9 | 30.9 | 30.9 | 26 |
| November | 25.8 | 25.4 | 25.5 | 25.3 | 25.5 | 25.8 | 25.3 | 30.0 | 30.0 | 26 |
| December | 26.4 | 27.2 | 27.3 | 27.1 | 27.8 | 26.4 | 27.7 | 31.8 | 31.4 | 26 |
| 1933 |  |  |  |  |  |  |  |  |  |  |
| Jamaary | 24.9 | 24.7 | 24.7 | 24.6 | 25.4 | 24.9 | 24.6 | 30.2 | 30.6 | 25 |
| February | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 28.0 | 28.0 | 24 |
| March | 26.9 | 26.3 | 26.6 | 26.3 | 26.5 | 26.7 | 26.5 | 31.1 | 31.1 | 27 |
| April | 24.3 | 25.5 | 25.1 | 25.5 | 26.1 | 24.6 | 25.4 | 30.1 | 29.9 | 24 |
| May | 25.8 | 25.4 | 25.3 | 25.4 | 26.2 | 25.8 | 25.1 | 30.8 | 31.0 | 26 |
| June | 26.0 | 25.6 | 25.8 | 25.6 | 25.7 | 25.8 | 25.8 | 30.1 | 30.1 | 26 |
| July | 24.9 | 24.7 | 24.6 | 24.8 | 26.8 | 24.9 | 24.5 | 30.9 | 30.9 | 25 |
| August | 26.8 | 26.2 | 26.3 | 26.1 | 26.3 | 26.7 | 26.1 | 31.0 | 31.0 | 27 |
| Septemb | 25. 4 | 26.4 | 26.5 | 26.3 | 27.0 | 25.5 | 26.9 | 30.8 | 30.4 | 25 |
| October | 25.8 | 25.4 | 25.3 | 25.4 | 25.4 | 25.8 | 25.1 | 30.2 | 30.6 | 26 |
| November December | $\begin{aligned} & 25.9 \\ & 25.4 \end{aligned}$ | 25.5 26.4 | 25.6 26.5 | 25,5 | 25.6 27.0 | 25.8 | 25.5 | 30.0 | 30.0 | 26 |
| December |  | 26.4 | 26.5 | 26.3 | 27.0 | 25.5 | 26.9 | 31.2 | 31.0 | 25 |
| 1934 |  |  |  |  |  |  |  |  |  |  |
| January | 25,8 | 25.4 | 25.5 | 25.3 | 26.2 | 25.8 | 25.3 | 30.8 | 31.0 | 26 |
| February | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 24.0 | 28.0 | 28.0 | 24 |
| March | 26.3 | 27.1 | 26.9 | 27.1 | 27.8 | 26.4 | 27.2 | 31.8 | 31.4 | 26 |
| April | 24.9 | 24.7 | 24,6 | 24.8 | 24.7 | 24.9 | 24.5 | 29.2 | 29.6 | 25 |
| May | 25.8 | 25.4 | 25.5 | 253 | 26.3 | 25.8 | 25.3 | 31.0 | 31.0 | 26 |
| June | 26.3 | 27.1 | 27.1 | 27.1 | 27.0 | 26.4 | 27.4 | 30.8 | 30.4 | 26 |
| July | 24.9 | 24.7 | 24.7 | 24.6 | 25.4 | 24.9 | 24.6 | 30.2 | 30.6 | 25 |
| August | 26.9 | 26.3 | 26.6 | 26.3 | 26.5 | 26.7 | 26.5 | 31.1 | 31.1 | 27 |
| September | 24.4 | 25.6 | 25.5 | 25.5 | 26.1 | 24.6 | 25.9 | 30.1 | 29.9 | 24 |
| October | 26.7 | 26,1 | 26.1 | 26.1 | 26,2 | 26.7 | 25:8 | 30.8 | 31.0 | 27 |
| November | 26.0 | 25.6 | 25,8 | 25.6 | 25.7 | 25.8 | 25.8 | 30.1 | 30.1 | 26 |
| December | 25.3 | 26.3 | 26.0 | 24, 5 | 26.8 | 25.5 | 26.3 | 30.9 | 30.9 | 25 |
| 1935 |  |  |  |  |  |  |  |  |  |  |
| January | 25.9 | 25.5 | 25,6 | 25.5 | 26.3 | 25.8 | 25.5 | 31.0 | 31.0 | 26 |
| February | 24.0 | 24.0 | 24.0 | 24,0 | 24.0 | 24.0 | 24.0 | 28.0 | 28.0 | 24 |
| March | 26.3 | 27.1 | 27.1 | 27.1 | 27.0 | 26.4 | 27.4 | 31.2 | 31.0 | 26 |
| April | 24.8 | 24.6 | 24.3 | 24.6 | 25.4 | 24.9 | 24.1 | 29.8 | 30.0 | 25 |
| May | 25.9 | 25.5 | 25.6 | 25.5 | 26.5 | 25.8 | 25.5 | 31.1 | 31.1 | 26 |
| June | 25.3 | 26.3 | 26.1 | 26.3 | 26.1 | 25.5 | 26.4 | 30.1 | 29.9 | 25 |
| July | 25.8 | 25.4 | 25.5 | 25.3 | 26,2 | 25.8 | 25.3 | 30.8 | 31.0 | 26 |
| August . | 27.3 | 27.9 | 27.9 | 27.9 | 27.8 | 27.3 | 28.2 | 31.8 | 31.4 | 27 |
| September October | 24.0 26.8 | 24.0 26.2 | 24.0 26.3 | 24.0 26.1 | 24. 26.3 | $\begin{aligned} & 24.0 \\ & 26.7 \end{aligned}$ | $\begin{aligned} & 24.0 \\ & 26.1 \end{aligned}$ | 29.2 31.0 | 29.6 31.0 | 24 27 |
| October November | 26.8 26.3 | 26.2 27.1 | 26.3 27.1 | 26.1 | 26.3 27.0 | 26.7 | 26.1 27.4 | 31.0 30.8 | 31.0 30.4 | 27 26 |
| December | 24.9 | 24.7 | 24.5 | 24.7 | 25.4 | 24.8 | 24.4 | 30.2 | 30.6 | 25 |

Table 8.-Monthly Indexes of Retail Sales by Kinds of Business (Average for $1930=100$ )

| Year and Month | A. Department Stores |  |  | B. Variety Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ```Indexes of Monthly Sules``` | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \\ \hline \end{gathered}$ | Indexes <br> Corrected for <br> Seasonal <br> Variations | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Monthly } \\ \text { Sales } \end{gathered}$ | Indexes of <br> Average Daily Sales | Indexes Corrected for Seasonal Variations |
| $\underline{1929}$ |  |  |  |  |  |  |
| January | 89.1 | 88.0 | 110.0 | 74.0 | 74.1 | 110.6 |
| February ........ | 81.6 | 86.9 | 103.5 | 83,5 | 88.8 | 1200 |
| March ........... | 101.5 | 102.6 | 105.7 | 103.8 | 100.8 | 121.5 |
| April | 104.1 | 103.2 | 108.6 | 99.8 | 100.3 | 112.7 |
| May ............. | 107.3 | 105.9 | 103.8 | 130.8 | 130.9 | 125.9 |
| June .o........... | 103.1 | 104.2 | 107.4 | 124.9 | 121.2 | 117.7 |
| July ............ | 91.9 | 91.1 | 113.8 | 122.1 | 122.8 | 122.8 |
| August ........... | 96.2 | 90.1 | 112.7 | 130.6 | 119.6 | 130,0 |
| September ....... | 107.5 | 114.5 | 110.1 | 108.3 | 115.2 | 118.8 |
| October .......... | 128.6 | 122.7 | 106.7 | 125.4 | 122.2 | 116.4 |
| November ........ | 123,2 | 119.8 | 105.1 | 118.9 | 112.0 | 110.3 |
| December ........ | 154.1 | 158.3 | 104.2 | 194.2 | 200.8 | 108.5 |
| 1930 |  |  |  |  |  |  |
| January ......... | 92.0 | 90,5 | 113.2 | 68.6 | 68.5 | 102.2 |
| February ........ | 83.0 | 88.4 | 105,2 | 73.9 | 78.6 | 106.2 |
| March ............ | 88.5 | 86.4 | 97.1 | 84.2 | 79.6 | 100.8 |
| April ........... | 105,6 | 108.9 | 105.7 | 92.8 | 96.4 | 103.6 |
| May ............ | 104.8 | 103.1 | 101.1 | 105.5 | 105.3 | 101.2 |
| June ............ | 95.3 | 97.9 | 101.0 | 94.8 | 98.0 | 95.2 |
| July ............ | 83.1 | 82.0 | 102.5 | 95.9 | 96.0 | 96.0 |
| August .......... | 82.3 | 80.1 | 100.1 | 98.6 | 92.9 | 101.0 |
| September ....... | 99.9 | 102.6 | 98.7 | 92.8 | 96.0 | 99.0 |
| October .......... | 117.1 | 111.3 | 96.8 | 105.4 | 102.4 | 97.5 |
| November .... | 103.7 | 104.8 | 92.0 | 101.6 | 98,7 | 97.7 |
| December ........ | 144.7 | 144.0 | 94.7 | 186.0 | 187.8 | 101.5 |
| 1931 |  |  |  |  |  |  |
| January ......... | 75.1 | 73.0 | 91.2 | 69.2 | 65.2 | 97.3 |
| Februery ......... | 75.9 | 80.9 | 96.3 | 69.5 | 7 7.9 | 99.9 |
| Warch ........... | 86.6 | 85.9 | 93.3 | 77.5 | 77.9 | 97.4 |
| April ........... | 94.5 | 97.0 | 97.0 | 92.2 | 95.3 | 103.6 |
| May ............. | 89.3 | 89.9 | 88.1 | 102.0 | 98.7 | 94.9 |
| June ........... | 87.6 | 86.8 | 89.5 | 94,3 | 94.8 | 92.0 |
| July ........... | 71.7 | 70.5 | 88.2 | 91.9 | 91.7 | 91.7 |
| August .......... | 69.7 | 68.0 | 85,0 | 93.3 | 88.2 | 95.9 |
| September ....... | 82.4 | 84.6 | 81.3 | 876 | 90.5 | 93.3 |
| October ..0...... | 94.4 | 88.4 | 76.9 | 107.7 | 98.6 | 93.9 |
| November ........ | 94.0 | $96 . .5$ | 81.7 | 94.5 | 97.7 | 96.8 |
| December | 128.2 | 127.0 | 83.6 | 180.4 | 181.4 | 98.1 |

Table 8 - Monthly Indexes of Retail Sales by Kinds of Business (Cont'd.)
(Average for $1930=100$ )

| Year and Month | A. Department Stores |  |  | B, Variety Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of <br> Monthly Sales | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \\ \hline \end{gathered}$ | Indexes Corrected for Seasonal Variations | Indexes of <br> Monthly Sales | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \end{gathered}$ | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January | 61.5 | 62.2 | 77.8 | 62.9 | 61.1 | 91.2 |
| February | 62.1 | 63.8 | 75.9 | 64.0 | 66.2 | 89.5 |
| March .,ow...0... | 69.2 | 68.6 | 70.7 | 72.3 | 72.7 | 87.6 |
| April | 77.7 | 75.6 | 79.6 | 80.7 | 76.1 | 85.5 |
| May ...0.0.0.0.0. | 73.7 | 75.7 | 74.2 | 85.3 | 88.2 | 84.8 |
| June | 70.5 | 69.7 | 71.8 | 87.1 | 87.2 | 84.7 |
| July | 54.5 | 55.0 | 68.8 | 83.5 | 81.1 | 81.1 |
| August ............ | 56.8 | 54.4 | 68.0 | 75.0 | 73.4 | 79.8 |
| September ........ | 68,6 | 69.9 | 67.2 | 75.0 | 76.9 | 79.3 |
| October ........... | 81.2 | 79.2 | 68.9 | 87.1 | 82.4 | 78.5 |
| November ......... | 78.9 | 78.2 | 68.6 | 78.7 | 79.1 | 78.3 |
| December ......... | 98,8 | 95.6 | 62.9 | 147.7 | 138.6 | 74.9 |
| 1933 |  |  |  |  |  |  |
| January | 51.7 | 53.1 | 66.4 | 54.2 | 56.0 | 83.6 |
| February ......... | 495 | 52.7 | 62.7 | 55.7 | 59.2 | 80.1 |
| March ....0.0.0... | 59.4 | 56.5 | 63.5 | 60.4 | 58.7 | 74.2 |
| April ..........sos | 66.6 | 70.1 | 68.0 | 73.9 | 74.1 | 79.6 |
| May ............... | 70.0 | 69,4 | 68.0 | 75.7 | 76.1 | 73.2 |
| June | 68.8 | 67.6 | 69.7 | 82.3 | 82.1 | 79.7 |
| July | 52.8 | 54.2 | 67.7 | 76.1 | 78.7 | 78.7 |
| August ............ | 57.1 | 54.4 | 68.0 | 72.7 | 70.9 | 77.0 |
| September .....s. | 71.3 | 71.8 | 69.0 | 79.2 | 76.7 | 79.0 |
| October | 81.2 | 80.5 | 70.0 | 80.8 | 81.2 | 77.3 |
| November | 77.7 102.4 | 76.7 103.1 | 67.2 67.8 | 77.2 145.2 | 77.3 140.5 | 76.5 76.0 |
| 1934 |  |  |  |  |  |  |
| January ......... | 56.1 | 55, 6 | 69.5 | 54.9 | 55.2 | 82.4 |
| February .0.0.... | 54.9 | 58.5 | 69.7 | 55.5 | 59.1 | 79.9 |
| March . | 67.1 | 65.3 | 68.0 | 76.1 | 71.7 | 87.4 |
| April ....0.0.0.0. | 66.3 | 68.1 | 70.9 | 69.8 | 72.2 | 80,2 |
| May ....0.0.0.0. | 73.6 | 72,9 | 71.5 | 92.4 | 92,9 | 89.4 |
| June ............. | 69.9 | 68.0 | 70.1 | 90.0 | 84.9 | 82.4 |
| July ............0. | 54.2 | 55.6 | 69.5 | 79.2 | 81.9 | 81,9 |
| August .0.0.0.0.0 | 59.0 | 56.1 | 70.1 | 77.7 | 75.5 | 82.1 |
| September .0.0.0.0 | 72.2 | 75.7 | 72.8 | 79.8 | 79.7 | 82.2 |
| October .......... | 83.9 | 80.4 | 69.9 | 86.3 | 84.4 | 80.4 |
| November .......... | 83.1 | 81.7 | 71.7 | 83.9 | 83.7 | 82.9 |
| December . $\ldots . . . .$. | 112.0 | 113,2 | 74.5 | 159.6 | 155.1 | 83.8 |
| 1935 |  |  |  |  |  |  |
| January .....e.o.... | 56.3 | 55,6 | 69.5 | 53.2 | 53, 3 | 79,5 |
| February 0.0 .0 .0 | 54.3 | 57.9 | 68.9 | 57.7 | 61.5 | 83.1 |
| March 000.0.0.0. | 61.1 | 59.4 | 66.7 | 67.5 | 63.7 | 80.6 |
| April ............ | 72.3 | 74.5 | 72.4 | 77.9 | 80.9 | 87.0 |
| May .0..n00.0.0.0. | 70.8 | 69.9 | 68.5 | 79,5 | 79.7 | 76.6 |
| June ............. | 70.8 | 71.5 | 73,7 | 88.6 | 86.1 | 83.6 |
| July ............ | 56.9 | $56=4$ | 70.5 | 82.8 | 83.3 | 83.3 |
| August September $^{\text {a }}$ | $\begin{array}{r}59.5 \\ 71.5 \\ \hline\end{array}$ | 55.7 75 | $\begin{array}{r}69.7 \\ 72.9 \\ \hline\end{array}$ | 83.7 <br> 77.9 | 76.6 <br> 83.0 | 83.3 85.5 |

Table 8.--Monthly Indexes of Retail Sales by Kinds of Business (Cont'd.) =
(Average for $1930=100$ )

| Year and Month | C. Men's Clothing Stores |  |  | D. Women's Clothing Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | $\begin{gathered} \hline \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \\ \hline \end{gathered}$ | Indexes Corrected for Seasonal Variations | Indexes of <br> Monthly Sales | Indexes of <br> Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1929 |  |  |  |  |  |  |
| January | 130.5 | 130.0 | 197.0 | 83.3 | 82.9 | 120.2 |
| February ........ | 119.9 | 127.5 | 205.6 | 74.1 | 78.7 | 115.7 |
| March | 162.5 | 158.9 | 158.9 | 113.1 | 110.5 | 120.1 |
| April | 158.3 | 159.6 | 138.8 | 114.7 | 115.6 | 107.0 |
| May | 146,0 | 145.5 | 124.4 | 121.7 | 121.2 | 110.2 |
| June | 143.8 | 140.6 | 121.2 | 141.4 | 138.1 | 115.1 |
| July | 104.2 | 104.3 | 122.7 | 115.7 | 115.6 | 124.3 |
| August | 107.2 | 98.1 | 140.1 | 102.9 | 94.0 | 123.7 |
| September | 119.7 | 127.3 | 138.4 | 96.3 | 102.3 | 113.7 |
| October | 194.3 | 188.6 | 152.1 | 112.2 | 108.8 | 113.3 |
| November | 152.2 | 143.3 | 114.7 | 106.3 | 100.0 | 107.5 |
| December | 132.7 | 138.2 | 108.0 | 181.1 | 188.4 | 101.8 |
| 1930 |  |  |  |  |  |  |
| January ........ | 78.0 | 77.1 | 116.9 | 74.9 | 74.0 | 107.3 |
| February ........ | 68.9 | 73.2 | 118.1 | 76.4 | 81.1 | 119.3 |
| March | 102.1 | 97.6 | 125.1 | 87.9 | 83.9 | 110.4 |
| April ............ | 148.7 | 154.9 | 113.1 | 126.9 | 132.0 | 106.5 |
| May . ............. | 126.5 | 125.1 | 106.9 | 118.7 | 117.2 | 106.6 |
| June | 109.0 | 113.1 | 97.5 | 115.7 | 119.9 | 99.9 |
| July | 86.4 | 86.1 | 101.3 | 96.9 | 96.4 | 103.7 |
| August .......... | 73.7 | 69.4 | 99.2 | 81.2 | 76.4 | 100.5 |
| September ....... | 83.4 | 86.2 | 93.6 | 88.0 | 90.8 | 100.9 |
| October | 116.4 | 111.6 | 90.0 | 96.7 | 92.6 | 96.5 |
| November | 97.3 | 95.1 | 76.1 | 85.9 | 83.9 | 90.2 |
| December | 109.7 | 110.7 | 86.5 | 150.7 | 151.8 | 82.1 |
| 1931 |  |  |  |  |  |  |
| January | 57.2 | 53.8 | 81.5 | 57, 6 | 54.2 | 78.5 |
| February ........ | 49.1 | 52.2 | 84.2 | 53.7 | 57.0 | 83.8 |
| March ........... | 77.4 | 78.1 | 87.7 | 77.0 | 77.6 | 92.4 |
| April ........... | 107.5 | 111.5 | 88.5 | 101.1 | 104.7 | 90.3 |
| May .............. | 90.1 | 86.8 | 74.2 | 92.4 | 88.9 | 80.8 |
| June | 85.0 | 85.7 | 73.9 | 98.3 | 99.0 | 82.5 |
| July | 65.4 | 64.7 | 76.1 | 71.2 | 70.3 | 75.6 |
| August | 53,6 | 51.2 | 73.2 | 58.5 | 55.8 | 73.5 |
| September ....... | 63,8 | 65.3 | 71.0 | 65.0 | 66.5 | 73.9 |
| October ........ | 81.9 | 74.9 | 60.4 | 81.0 | 73.9 | 77.0 |
| November | 79.9 | 82.9 | 66.3 | 72.9 | 75.4 | 81.1 |
| December | 89.0 | 89.7 | 70.1 | 134.2 | 135.1 | 73.0 |

Table $8_{2}-$ Monthly Indexes of Retail Sales by Kinds of Business (Contid.) -
(Average for $1930=100$ )

| Year and Month | C. Men's Clothing Stores |  |  | D. Women's Clothing Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales. | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of <br> Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January | 45.4 | 44.3 | 67.2 | 53.1 | 51.8 | 75.1 |
| February | 37.7 | 39.1 | 63.1 | 46.2 | 47.8 | 70.3 |
| March | 56.0 | 56.5 | 56.5 | 63.3 | 63.7 | 69.2 |
| April | 67.7 | 63.7 | 55.4 | 79.2 | 74.4 | 68.9 |
| May | 67.4 | 69.9 | 59.8 | 70.7 | 73.2 | 66.6 |
| June | 72.6 | 72.4 | 62.4 | 79.5 | 79.1 | 65.9 |
| July | 52.7 | 51.5 | 60.6 | 58.5 | 57.1 | 61.4 |
| August | 40.2 | 39.3 | 56.1 | 46.0 | 44.8 | 59.0 |
| September ....... | 55.4 | 56.1 | 61.0 | 53.2 | 53.7 | 59.7 |
| October | 71.3 | 68.2 | 55.0 | 60.0 | 57.2 | 59.6 |
| November | 72.4 | 72.4 | 57.9 | 57.5 | 57.5 | 61.8 |
| December | 80.2 | 74.9 | 58.5 | 127.1 | 118.5 | 64.1 |
| 1933 |  |  |  |  |  |  |
| January ......... | 41.4 | 42.8 | 64.8 | 41.2 | 42.5 | 61.6 |
| February ........ | 28.0 | 29.8 | 48.1 | 39.4 | 41.8 | 61.5 |
| March | 49.7 | 47.7 | 61.2 | 46.7 | 44.7 | 58.8 |
| April | 82.8 | 84.1 | 61.4 | 67.2 | 68.2 | 55.0 |
| May ............. | 68.2 | 68.7 | 58.7 | 64.8 | 65.2 | 59.3 |
| June | 72.2 | 71.4 | 61.5 | 72.8 | 71.9 | 59.9 |
| July | 47.81 | 49.5 | 58.3 | 53.1 | 55.0 | 59.2 |
| August .......... | 42.9 | 41.6 | 59.4 | 45.9 | 44.4 | 58.4 |
| September ....... | 56.0 | 53.9 | 58.6 | 54.7 | 52.6 | 58.4 |
| October | 75.0 | 75.7 | 61.0 | 56.1 | 56.4 | 58.8 |
| November ........ | 76.9 | 76.6 | 61.3 | 54.4 | 54.2 | 58.2 |
| December ........ | 74.0 | 71.3 | 55.7 | 125,0 | 120.2 | 65.0 |
| 1934 |  |  |  |  |  |  |
| January | 36.9 | 37.0 | 56.0 | 41.9 | 41.9 | 60.7 |
| February | 37.9 | 40.3 | 65.0 | $38 . ?$ | 40.5 | 59.6 |
| March . | 63.1 | 59.8 | 59.8 | 59.0 | 55.9 | 60.8 |
| April | 66.0 | 68.5 | 59.6 | 62.3 | 64.5 | 59.7 |
| May ............. | 76.1 | 76.1 | 65.0 | 68.7 | 68.6 | 62.4 |
| June | 73.9 | 69.6 | 60.0 | 74.7 | 70.2 | 58.5 |
| July | 52.1 | 53.8 | 63.3 | 55.5 | 57.2 | 61.5 |
| August ........... | 45.5 | 43.6 | 62.3 | 52.3 | 50.1 | 65.9 |
| September ....... | 56.1 | 56.1 | 61.0 | 57.7 | 57.6 | 64.0 |
| October .......... | 85.2 | 83.2 | 67.1 | 60.5 | 59.1 | 61.5 |
| November ........ | 86.0 | 85.0 | 68.0 | 60.6 | 59.8 | 64.3 |
| December ........ | 94.7 | 92.9 | 72.6 | 122.2 | 119.8 | 64.7 |
| 1935 |  |  |  |  |  |  |
| January ........ | 44.8 | 44.6 | 67.6 |  | 38.1 | 55.3 |
| February ........ | 39.6 | 42.1 | 67.8 | 39.4 | 41.8 | 61.5 |
| March ............ | 53.2 | 50.1 | 64.2 | 51.6 | 48.5 | 63.9 |
| April ........... | 84.9 | 89.1 | 65.0 | 70.6 | 74.0 | 59.7 |
| May ............. | 71.4 | 71.1 | 60.8 | 61.0 | 60.7 | 55.2 |
| June ........... | 75.3 | 73.6 | 63.5 | 69.5 | 67.8 | 56.5 |
| July | 57.7 | 57.7 | 67.9 | 56.3 | 56.3 | 60.5 |
| August .......... | 50.0 | 45.7 | 65.3 | 50, 5 | 46.1 | 60.6 |
| September ...... | 59.6 | 63.4 | 68.9 | 52.5 | 55.7 | 61.9 |

Table 8.--Monthly Indexes of Retail Sales by Kinds of Business (Cont d ) :-
(Average for $1930=100$ )

| Year and Month | E. Boot and Shoe Stores |  |  | F. Candy and Confectionery Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes <br> Corrected for Seasonal Varietions | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes <br> Corrected for <br> Seasonal <br> Variations |
| 1929 |  |  |  |  |  |  |
| January | 91.5 | 91.6 | 138.7 | 88.8 | 87.9 | 117.2 |
| February ....... | 81.2 | 86.3 | 134.8 | 99.5 | 107.9 | 117.3 |
| March ........... | 137.9 | 133.7 | 152,0 | 149.5 | 144.2 | 110.9 |
| April ........... | 132.9 | 133.4 | 128.3 | 93.5 | 95.9 | 112.8 |
| May ............. | 149.3 | 149.4 | 127.7 | 116.7 | 114.7 | 117.0 |
| June | 155.2 | 150.6 | 113.2 | 101.3 | 101.1 | 131.3 |
| July | 117.2 | 118.2 | 115.9 | 104.9 | 104.3 | 122.7 |
| August .......... | 112.1 | 102.5 | 123.5 | 135.0 | 126.5 | 129.1 |
| September ........ | 111.3 | 118.3 | 122.0 | 107.4 | 113,2 | 121.7 |
| October ......... | 121.4 | 118,6 | 122.3 | 109.8 | 108.7 | 114.4 |
| November ........ | 128.6 | 121.1 | 112,1 | 110.7 | 106.8 | 121.2 |
| December ........ | 155.6 | 160.7 | 114.0 | 201.5 | 206.. 7 | 111.1 |
| 1930 |  |  |  |  |  |  |
| January ......... | 67.5 | 67.2 | 101.9 | 84.6 | 83.2 | 110.9 |
| February ........ | 73.3 | 77.9 | 121.7 | 100.4 | 109.0 | 118.5 |
| March . | 89.6 | 84.4 | 114.0 | 92.4 | 89.8 | 105,7 |
| April ........... | 123.5 | 128,6 | 109.0 | 130.0 | 132.8 | 102. 1 |
| May .............. | 120.9 | 120.5 | 103.0 | 106.1 | 99.4 | 101.5 |
| June | 118.6 | 121.9 | 91.7 | 76.3 | 80.5 | 104.5 |
| July ............. | 96.9 | 96.9 | 95.0 | 86.7 | 85.9 | 101.1 |
| August .......... | 91.7 | 86.3 | 103,9 | 105.9 | 102.1 | 104.2 |
| September ....... | 89.4 | 92.7 | 95, 6 | 87.8 | 90.1 | 96.8 |
| October ......... | 97.8 | 94.8 | 97.7 | 86.8 | 85.3 | 89.8 |
| November | 100.0 | 97.0 | 89,8 | 81.1 | 80,9 |  |
| December ..... | 130,9 | 131.9 | 93.6 | 162.0 | 161.0 | 86.6 |
| 1931 |  |  |  |  |  |  |
| January ......... | 66,1 | 62.2 | 94.2 | 68.4 | 64.1 | 85.4 |
| February ........ | 59.7 | 63.5 | 99.1 | 743 | 80.6 | 87.6 |
| March ........... | 76.2 | 76.5 | 95.6 | 68.3 | 70.1 | 82.1 |
| April ........... | 104:2 | 107.6 | 96.0 | 107:5 | 109.3 | 84.1 |
| May .............. | 103.4 | 100.2 | 85.6 | 87.8 | 84.7 | 86.5 |
| June | 109.5 | 103.9 | 82.6 | 63.1 | 64.7 | 84.1 |
| July ............ | 93.0 | 92.7 | 90.8 | 70.4 | 69.2 | 81.4 |
| August .......... | 77.7 | 73.1 | 88.1 | 83.6 | 81.3 | 82.9 |
| September ....... | 80.6 | 83.9 | 86.5 | 74.8 | 76.4 | 82. 2 |
| October | 90.0 | 82. 2 | 84.8 | 86.2 | 80.7 | 85.0 |
| November | 85.7 | 88.1 | 81.6 | 67.4 | 710 | 82.6 |
| December | 123.9 | 124.9 | 88,6 | 154.6 | 153.0 | 82.3 |

Table 8, Monthly Indexes of Retail Sales by Kinds of Business (Cont!do) -
(Averege for $1930=100$ )

| Year and Month | E Boot and Shoe Stores |  |  | F. Candy and Confectionery Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of Monthly Sales | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \\ \hline \end{gathered}$ | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January .......... | 63.5 | 61, 6 | 93.3 | 61.0 | 58.8 | 78.4 |
| February .......... | 48.8 | 50.2 | 78.4 | 63.4 | 66.8 | 72.7 |
| March ........o.0. | 64.3 | 64.8 | 73.7 | 93.0 | 98.0 | 75.4 |
| April | 88.9 | 83,6 | 80.4 | 61.3 | 59.1 | 69.5 |
| May ............0. | 91.8 | 94.4 | 80.7 | 67.3 | 68.9 | 70.3 |
| June , .r.o.e.o.e.s | 104.0 | 104.0 | 78.2 | 53.0 | 53.9 | 70.0 |
|  | 82.6 | 80,1 | 78.5 | 63.2 | 61.0 | 71.7 |
| August ....0.0.0.0. | 61.5 | 60,1 | 72.4 | 61.7 | 61.3 | 62.5 |
| September | 68.1 | 70.0 | 72.2 | 59.8 | 60.6 | 65.1 |
| October | 742 | 69.8 | 72.0 | 61.5 | 53.7 | 62.8 |
| November <br> December | 84.2 1027 | 849 | 78.6 | 49.8 | 50.8 | 59.1 |
| 1933 |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| January ........... | 45.1 | 46. 8 | 70.9 | 46.0 | 47.1 | 62.8 |
| February ........ | 392 | 41.6 | 65.0 | 51.5 | 55.8 | 60.6 |
| March | 45.7 | 44.3 | 59.9 | 44.0 | 43.1 | 50.8 |
| Way. | 77.5 | 77.8 | 66.5 | 80.5 59.9 | 80.3 59.4 | 61.7 60.6 |
| June | 95.4 | $95 \%$ | 71.4 | 44.1 | 44.6 | 58.0 |
| July .0........... | 69.7 | 71.6 | 70, 2 | 50.0 | 48.5 | 57.1 |
| August .0.0.0.0.0. | 55.7 | 54.4 | 65.6 | 58.2 | 57.6 | 58.7 |
| September .0.0.0. | 68.2 | 66.1 | 68.1 | 57.6 | 55.4 | 59.6 |
| October $\ldots \ldots .0$. | 67.5 | 67.7 | 63.8 | 57, 2 | 58.6 | 61.7 |
| November . . . . . | 82.9 | 82.9 | 76.8 | 49,9 | 50.7 | 58.9 |
| December .......... | 96.1 | 93.1 | 66.0 | 112.1 | 107.9 | 58.0 |
| 1934 |  |  |  |  |  |  |
| January .......... | 45.4 | 45.8 | 69.3 | 47.5 | 47.1 | 62.8 |
| February ......... | 37.5 | 39.9 | 62.3 | 51.7 | 56.0 | 60.9 |
| March .o.o.us.o.s. | 73.8 | 69.4 | 78.9 | 84.2 | 78.8 | 60.6 |
| April ............s. | 71.0 | 73.0 | 70.2 | 55.2 | 58.2 | 68.4 |
| Nuy May | 92.1 | 92.8 | 79.3 | 60.0 | 59.3 | 60.5 |
| June July | 109.3 | 1028 | 77.3 | 48.4 | 46.7 | 60.6 |
| August .0.0...... | 68.6 58.2 | 71.1 56.4 | 69.7 68.0 | 46.8 58.6 | 47.9 | 56.4 |
| September ....... | 71.5 | 71.5 | 73.7 | 54.2 | 54.0 | 58.0 |
| October .......... | 68.1 | 66.6 | 68.6 | 56.4 | 56.0 | 58.9 |
| November | 70.5 | 70.2 | 65.0 | 49.2 | 49,8 | 57.9 |
| December .......... | 121.5 | 117.0 | 82, 9 | 115.4 | 112.0 | 60.2 |
| 1935 |  |  |  |  |  |  |
| January .......... | 43.9 | 43.9 | 66.5 | 39.8 | 39.4 | 52.5 |
| February .......... | 36.4 | 38.7 | 60,4 | 55.6 | 60.3 | 65.5 |
| March | 61,2 | 57.6 | 77.9 | 52.2 | 50.3 | 59.2 |
| April .nno.e.on. | 83.1 | 86.1 | 73.0 | 78.9 | 80.8 | 62.2 |
| May | 80.9 | 80.9 | 69.2 | 608 | 59.7 | 61.0 |
| June . $\quad 0.0 .0 .0 .$. | 1098 | 106.5 | 80.1 | 47.1 | 46.9 | 61.0 |
| July .0........... | 70.0 | 70.6 | 69.2 | 44.0 | 43.8 | 51.5 |
| August | 62.7 | 57.3 | 68.9 | 59.2 | 55.4 | 56.6 |
| September . . ...... | 71.1 | 75.5 | 77.9 | 52.6 | 55.4 | 59.6 |

Table 8. - Monthly Indexes of Retail Sales by Kinds of Business (Cont'a.) =
(Average for $1930=100$ )

| Year and Month | G. Radio and Music Stores |  |  | H. Furniture Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1929 |  |  |  |  |  |  |
| January | 126.2 | 124.3 | 138.1 | 96.6 | 95.7 | 127.6 |
| February | 132.5 | 141.4 | 162.6 | 132.8 | 141.5 | 159.0 |
| March .. | 116.4 | 119.2 | 152.8 | 143.6 | 144.0 | 160.0 |
| April ........... | 108.1 | 106.5 | 143.9 | 142.9 | 141.6 | 147.5 |
| May . . . . ......... | 118.4 | 116.6 | 147.6 | 155.8 | 154.4 | 151.4 |
| June | 82.9 | 85.0 | 137.1 | 135.2 | 135.6 | 154.1 |
| July | 83.3 | 82.1 | 136.8 | 114.7 | 113.7 | 157.9 |
| August | 111.5 | 105.8 | 139.2 | 151.6 | 142.0 | 149.5 |
| September ...... | 163.2 | 174.2 | 137.1 | 146.9 | 156.5 | 133.8 |
| October ......... | 209.9 | 199.2 | 138.3 | 165.7 | 158.7 | 134.5 |
| Hovember | 189.7 | 186.9 | 121.3 | 165.0 | 159.8 | 126.8 |
| December ........ | 197.8 | 202.7 | 120.0 | 158.6 | 162.8 | 123.4 |
| $\underline{1930}$ |  |  |  |  |  |  |
| January ....... | 105.4 | 103.8 | 115.4 | 90.4 | 89.6 | 119.4 |
| February ........ | 89.6 | 95.6 | 109.9 | 92.6 | 98.6 | 110.8 |
| March ........... | 93.3 | 91.9 | 117.8 | 99.1 | 96.0 | 106.7 |
| April ........... | 79.3 | 81.3 | 109.8 | 101.5 | 104.3 | 108.6 |
| May .............. | 82.3 | 81.1 | 102.6 | 113.3 | 112.3 | 110.1 |
| June ............. | 62.6 | 64.2 | 103.5 | 93.4 | 95.9 | 109.0 |
| July ............ | 56.8 | 55.9 | 93.2 | 69.3 | 68.7 | 95.4 |
| August .......... | 70.2 | 69.2 | 91.0 | 97.9 | 94.8 | 99.8 |
| September ....... | 113.4 | 116.2 | 91.5 | 105.7 | 108.5 | 92.8 |
| October ......... | 138.7 | 131.6 | 91.4 | 112.2 | 107.4 | 91.0 |
| November | 137.1 | 140.4 | 91.2 | 106.8 | 107.1 | 85.0 |
| December ........ | 171.5 | 168.9 | 100.0 | 117.9 | 116.8 | 88.5 |
| $\underline{1931}$ |  |  |  |  |  |  |
| January ......... | 86.0 | 84.7 | 94.1 | 67.0 | 64.9 | 86.6 |
| February ........ | 82.3 | 87.8 | 100.9 | 76.7 | 81.8 | 91.9 |
| March ........... | 73.9 | 72.8 | 92.2 | 78.0 | 77.3 | 85.8 |
| April ........... | 61.5 | 63.0 | 84.0 | 77.7 | 79.8 | 81.4 |
| May .............. | 63.7 | 65.2 | 82.6 | 77.9 | 78.1 | 75.8 |
| June ............. | 47.8 | 47.1 | 76.0 | 68.3 | 67.7 | 76.0 |
| July ............ | 48.5 | 47.7 | 78.3 | 57.0 | 56.5 | 77.4 |
| August .......... | 59.1 | 58.2 | 76.6 | 72.9 | 70.6 | 74.3 |
| September ....... | 84,2 | 86.3 | 66.4 | 92.1 | 94.5 | 78.8 |
| October .......... | 98.6 | 93.5 | 66.8 | 98.4 | 92, 2 | 78.1 |
| November | 103.9 | 106.4 | 69.1 | 99.7 | 102. 4 | 82.5 |
| December | 102.8 | 101.3 | 60.7 | 98.0 | 97.1 | 77.1 |

## Table 8.-Monthly Ind es of Retail Sales by Kinds of Business (Cont'd.) = <br> (Average for $1930=100$ )

| Year and Month | G. Radio and Music Stores |  |  | H. Furniture Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Mouthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variatio: 3 | Indexes of <br> Monthly Sales | Indexes of Average Daily -Sales | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January | 53.7 | 55.0 | 63.2 | 52.8 | 52.9 | 73.5 |
| February | 50.2 | 51.4 | 59.1 | 60.8 | 62.4 | 70.9 |
| March . | 44.3 | 43.7 | 53.9 | 61.0 | 60.4 | 67.1 |
| April | 41.8 | 41.2 | 54.2 | 64.4 | 62.4 | 62.4 |
| May | 37.5 | 38.4 | 46.9 | 62.7 | 64.3 | 59.6 |
| June | 31.6 | 31.1 | 47.2 | 52.1 | 51.6 | 55.5 |
| July | 24.1 | 24.7 | 39.2 | 38.7 | 38.8 | 52.4 |
| August | 33.2 | 31.6 | 41.5 | 49.0 | 46.9 | 47.9 |
| September | 56.7 | 58.2 | 43.4 | 61.1 | 62.7 | 51.8 |
| October | 54.6 | 53.8 | 39.9 | 62.7 | 60.7 | 51.4 |
| November | 58.0 | 57.1 | 37.8 | 60.1 | 59.5 | 50.5 |
| December | 61.3 | 60.4 | 37.3 | 62.2 | 60.2 | 50.2 |
| 1933 |  |  |  |  |  |  |
| January ...... | 29.4 | 30.2 | 35.9 | 31.5 | 32.3 | 46.1 |
| February | 24.9 | 26.6 | 30.5 | 38.1 | 40.5 | 47.7 |
| March | 29.7 | 28.2 | 34.4 | 53.2 | 51.0 | 56.6 |
| April | 26.2 | 28.0 | 35.0 | 56.1 | 58.3 | 55.0 |
| May | 30.6 | 30.2 | 35.1 | 63.9 | 63.4 | 56.6 |
| June | 23.7 | 23.4 | 33.4 | 54.6 | 54.1 | 55.2 |
| July | 22.5 | 23.1 | 35.5 | 41.0 | 42.1 | 54.7 |
| August | 28.8 | 27.3 | 36.0 | 61.7 | 59.1 | 58.5 |
| September | 43.8 | 45.0 | 33.1 | 68.6 | 68.8 | 56.4 |
| October | 42.4 | 41.8 | 31.5 | 67.5 | 66.9 | 56.7 |
| November | 49.7 | 49.0 | 34.3 | 56.1 | 55.6 | 52.5 |
| December | 53.8 | 55.1 | 34.9 | 61.6 | 61.8 | 53.7 |
| '1934 |  |  |  |  |  |  |
| January ...... | 30.2 | 29.8 | 35,9 | 42.5 | 42.1 | 62.8 |
| February | 31.4 | 33.6 | 38.6 | 48,6 | 51.8 | 62.4 |
| March | 32.9 | 32.5 | 39.6 | 56.8 | 55.1 | 61.3 |
| April | 29,9 | 30.7 | 37.9 | 65.5 | 67,3 | 62.9 |
| May | 37.1 | 36.6 | 42.0 | 74.9 | 74.2 | 64.0 |
| June | 28.9 | 28.5 | 40.2 | 67.7 | 65,6 | 65.6 |
| July | 24.7 | 25.3 | 38.9 | 51.2 | 52.6 | 65.7 |
| August | 33.8 | 32.1 | 42.2 | 72.5 | 69.4 | 68.1 |
| September | 52.8 | 56.5 | 41.2 | 78.0 | 81.1 | 66.5 |
| October. | 57.5 | 54.6 | 41.4 | 79.8 | 76.4 | 64.7 |
| November | 59.6 | 58.8 | 41.7 | 72.3 | 71.7 | 69.6 |
| December | 67.4 | 69.2 | 43.8 | 79.4 | 79.6 | 71.0 |
| $\underline{1935}$ |  |  |  |  |  |  |
| January | 37.2 | 36.7 | 44.2 | 44.8 | 44.4 | 66.3 |
| February | 36.1 | 38.6 | 44.4 | 55.6 | 59.2 | 71.3 |
| March | 39.7 | 39.2 | 47.8 | 63.7 | 61.7 | 68.6 |
| April | 35.5 | 36.4 | 45.0 | 74.8 | 76.8 | 71.8 |
| May | 43.0 | 42.4 | 48.8 | 77.4 | 76.7 | 66.1 |
| June | 30.1 | 30.9 | 43.5 | 70.8 | 71.0 | 71.0 |
| July | 26.6 | 26.2 | 40.4 | 59.2 | 58.6 | 73.3 |
| August | 35.2 | 33.4 | 44.0 | - 78.6 | 73.7 | 72.2 |
| September | 51.9 | 55.5 | 40.5 | 85.0 | 90.5 | 74.2 |

Table 8 --Monthly Indexes of Retail Sales by Kinds of Business (Cont! de)
(Average for $1930=100$ )

| Year and Month | I Hardware Stores |  |  | J Grocery and Meat Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of <br> Monthly Seles | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \end{gathered}$ | Indexes Corrected for Seasonal Variations | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Monthiy } \\ \text { Sales } \end{gathered}$ | Indexes of <br> Average <br> Daily <br> Sales | Tndexes Corrected for Seasonal Variations |
| 1929 |  |  |  |  |  |  |
| January | 80.6 | 79.4 | 113.5 | 99.1 | 99.1 | 102. 2 |
| February | 77.9 | 83.1 | 110.8 | 97.4 | 103.5 | 105.6 |
| March . | 89.1 | 91.2 | 1113 | 108.8 | 105.2 | 105.2 |
| April ............ | 114.5 | 112.8 | 113.9 | 105.7 | 107.4 | 104.3 |
| May .............. | 121.2 | 119.3 | 104.7 | $111 . .8$ | 111.9 | 105.5 |
| June .........0.0 | 118,2 | 121.0 | 1121 | 105.7 | 102. 1 | 102.1 |
| July | 117.1 | 115.3 | 116.5 | 106.2 | 107.1 | 109.3 |
| August | 121.1 | 114.9 | 112.6 | 107.6 | 97.3 | 105.8 |
| September | 133.7 | 142.7 | 118.9 | 104.5 | 111.1 | 111.1 |
| October ......... | 133.3 | 126.5 | 112.9 | 114.6 | 112.0 | 112.0 |
| November ........ | 117.4 | 115,6 | 109.0 | 111.5 | 103.8 | 104.8 |
| December ......... | 122,7 | 125 ? | 111.2 | 114.7 | 119.9 | 112.0 |
| 1930 |  |  |  |  |  |  |
| January ......... | 72.6 | 71.5 | 102.1 | 106.6 | 105.4 | 108.7 |
| February ........ | 74.0 | 79.0 | 105.3 | 96.8 | 102.9 | 105,0 |
| March .......... | 30.0 | 88.6 | 108.1 | 100.9 | 95.7 | 39.7 |
| April ............ | 98.0 | 100.3 | 101.4 | 105.9 | 111.2 | 103.9 |
| May ............. | 123.7 | 121.8 | 105.0 | 109.7 | 108.5 | 102.4 |
| June ............ | 105.0 | 107.5 | 99.6 | 94.3 | 98.2 | 98.2 |
| July ............. | 95.6 | 94.2 | 95.1 | 96.6 | 96.7 | 98.6 |
| August .......... | 103.0 | 101.4 | 99.4 | 95.3 | 88.8 | 96.5 |
| September ....... | 111.9 | 114,6 | 95.5 | 94.8 | 98.3 | 98.3 |
| October .......... | 115.1 | 109,2 | 97.5 | 98.4 | 94.7 | 94.7 |
| November | 100.9 | 103.4 | 98.4 | 95.3 | 92.1 | 93.1 |
| December ........ | $110 . .3$ | 108.6 | 96.9 | 105,3 | 107.5 | 100.4 |
| 1931 |  |  |  |  |  |  |
| Jamuary .......... | 68.6 | $67 . .5$ | 96.5 | 95.4 | 88.9 | 91,6 |
| February ........ | 64.6 | 68.9 | 91.9 | 88.2 | 93.8 | 95.7 |
| March ........... | 76.6 | 75.4 | 93.1 | 94.6 | 96.2 | 98.1 |
| April ............ | 88.4 | 90. 5 | 90.5 | 97.0 | 101.1 | 96.2 |
| May ............. | 105.7 | 108.3 | 88.8 | 96.6 | 91.6 | 86.4 |
| June ............. | 95.7 | 94.3 | 87.3 | 91.9 | 93.4 | 93.4 |
| July .............. | 89.3 | 87.9 | 88.8 | 90.4 | 89.4 | 97.2 |
| August ........... | 89.8 | 88.5 | 86,7 | 84.0 | 79.7 | 86.6 |
| September ........ | 96.1 | 98.4 | 81.4 | 88.4 | 91.0 | 91.0 |
| October .......... | 95.0 | 90.0 | 80,4 | 91.2 | 82.5 | 82,5 |
| November | 82.5 | 84.5 | 82.0 | 82.7 | 86.1 | 87.0 |
| December | 87.0 | 85.7 | 80.1 | 92.8 | 94.3 | 88,2 |

Table 8 -Monthly. Indexes of Retail Sales by Kinds of Business (Cont'd.)
(Average for $1930=100$ )

| Year and Month | I Hardware Stores |  |  | J. Grocery and Meat Stores |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | $\begin{gathered} \text { Indexes } \\ \text { of } \\ \text { Average } \\ \text { Daily } \\ \text { Sales } \\ \hline \end{gathered}$ | Indexes Corrected for Seasonal Variations | Indexes of <br> Monthly Sales | Indexes of <br> Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January | 53.4 | 54.7 | 79.3 | 79.3 | 76.6 | 79.0 |
| February | 59.5 | 61.0 | 84.7 | 77.9 | 81.1 | 82.7 |
| March .0.0.0.0.0. | 60.5 | 59.5 | 76.3 | 84.7 | 86.1 | 86.1 |
| April ............ | 76.8 | 75.6 | 74.9 | 81.4 | 75.8 | 73.6 |
| May ............... | 92.9 | 95.1 | 72.6 | 79,8 | 83.1 | 78.4 |
| June $\ldots . .00 .0 .0 .0$ | 78.6 | 77.4 | 69.1 | 77.9 | 77.9 | 77.9 |
| July . .o. ...0.0.... | 66.1 | 67.7 | 67.7 | 75.9 | 73.3 | 74,8 |
| August ........... | 69.7 | 66.1 | 64.8 | 72.3 | 71.5 | 77.7 |
| September .a.c.... | 76.2 | 78.0 | 64.0 | 75.7 | 76.4 | 76.4 |
| 0itober .n...o.... | 71.1 | 70.0 | 62.5 | 76.6 | 72.7 | 72.7 |
| November ........ | 63.4 | 62.4 | 63.7 | 74,2 | 74.8 | 75.5 |
| December .......... | 64,4 | 63,5 | 61.6 | 82.1 | 75.6 | 70.6 |
| 1933 |  |  |  |  |  |  |
| January | 39.7 | 40.6 | 62.5 | 66.7 | 69.1 | 71.2 |
| February ......... | 36.7 | 39.2 | 56.8 | 64.0 | 68,0 | 69.4 |
| March .0...n.0.0. | 50.1 | 47.5 | 61.6 | 75.0 | 72.2 | 75.2 |
| April 1000000.0. | 60, 5 | 64.5 | 62.0 | 70.2 | 70.5 | 65.9 |
| May .............0. | 86, 2 | 84.8 | 62.8 | 75.7 | 77.0 | 72.6 |
| June | 77.1 | 75.9 | 66.6 | 73.3 | 72.4 | 72.4 |
| July ........... | 64.1 | 65.6 | 63.7 | 68.9 | 71.8 | 73.2 |
| August .......... | 70.7 | 67.0 | 65.7 | 70.4 | 68.8 | 74.8 |
| September ....o.o. | 80.0 | 81.9 | 67.1 | 73,8 | 69.9 | 69,9 |
| October .0.......00 | 81.0 | 79,7 | 71.1 | 71.6 | 72.8 | 72.8 |
| November ........ | 64.5 | 63.5 | 66.8 | 71.7 | 71.7 | 72.4 |
| December . .0..... | 62.9 | 64.3 | 63.1 | 78.6 | 74.5 | 69.6 |
| $\underline{1934}$ |  |  |  |  |  |  |
| January .0........ | 42.1 | 41.4 | 64.7 | 70.8 | 71.4 | 73.6 |
| February .......... | 43.2 | 46.0 | 67.7 | 68.6 | 72.9 | 74.4 |
| March . .o.sospoo. | 55.1 | 54.2 | 70.4 | 78.7 | 73.8 | 73.8 |
| April $0.0200 . \ldots .{ }^{\text {a }}$ | 74.2 | 75.9 | 72.3 | 71.6 | 74,5 | 72,4 |
| May .....o.o..... | 103,7 | 102.0 | 75.0 | 76,8 | 77.4 | 73.0 |
| June ,owo.n...... | 85.4 | 84.0 | 73.1 | 74.7 | 69.5 | 69.5 |
| July | 77,1 | 78.9 | 76.6 | 67.9 | 70.4 | 71.8 |
| August 0..0.0.0.... | 77.9 | 73.8 | 72.4 | 69.9 | 67.2 | 73.1 |
| September ........ | 87.5 | 93.2 | 76.5 | 69.7 | 68.6 | 68.6 |
| October . .n........ | 92.6 | 87.7 | 78.3 | 75.3 | 74.4 | 74.4 |
| November $\ldots \ldots \ldots \ldots$ | 69.4 | 68.2 | 72.6 | 71.7 | 70.8 | 71.6 |
| December .....s.... | 79.9 | 81.7 | 80.1 | 75.3 | 73.0 | 68.2 |
| 1935 |  |  |  |  |  |  |
| January . .0. 00.0 | 52.4 | 51.5 | 80.5 | 71.7 | 71.7 | 73.9 |
| February . 2.0 .0 | 49,8 | 53.0 | 78.0 | 67.6 | 71.8 | 73.2 |
| March . | 62.3 | 61.2 | 79.5 | 75.2 | 70.0 | 72.9 |
| April | 80.6 | 82.4 | 78.5 | 73.9 | 78,1 | 73.0 |
| May :0,000,0000, | 101.8 | 100.1 | 73,6 | 74.8 | 74.7 | 70.5 |
| June oun........... | 87.5 | 89.5 | 77.8 | 71,4 | 68.9 | 68.9 |
|  | 83.3 | 81.9 | 79.5 | 69.9 | 70.5 | 71.9 |
| August | 84.3 | 79.8 | 78, 3 | 71.3 | 64.5 | 70.1 |
| September | 91.1 | 96.0 | 78.7 | 70.1 | 745 | 74.5 |

Table 8.-Monthly Indexes of Retall Sales by Kinds of Business (Cont'd.) -
(Average for $1930=100$ )

| Year and Month | K. Drug Stores |  |  | L. Restaurants |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1929 |  |  |  |  |  |  |
| Januery | 101.1 | 99.1 | 103.2 | 105.9 | 103.9 | 111.7 |
| February | 99.3 | 107.9 | 106.8 | 101.6 | 110.4 | 115.0 |
| March. | 109.0 | 106.3 | 105.2 | 110.7 | 108.6 | 111.9 |
| April | 101.0 | 103.0 | 104.1 | 108.1 | 109.6 | 108.5 |
| May | 104.4 | 102.1 | 106.3 | 116.6 | 114.1 | 114.1 |
| June | 107.6 | 108.7 | 107.7 | 110.1 | 112.0 | 110.9 |
| July | 106.8 | 105.4 | 108.7 | 122.1 | 119.8 | 116.3 |
| August .......... | 112.5 | 107.6 | 109.8 | 127.3 | 123.3 | 116.3 |
| September ....... | 101.2 | 105.4 | 107.6 | 114.7 | 117.8 | 112.2 |
| October | 106.5 | 104.5 | 105.6 | 116.4 | 114.2 | 114.2 |
| November | 105.7 | 104.3 | 104.3 | 102.7 | 102.8 | 107.0 |
| December ....... | 116.9 | 117.7 | 103.3 | 110.1 | 109.4 | 107.3 |
| 1930 |  |  |  |  |  |  |
| January ......... | 99.5 | 97.3 | 101.3 | 104.6 | 102.3 | 110.0 |
| February ........ | 96.2 | 104.5 | 103.4 | 95.0 | 103.2 | 107.5 |
| March | 107.1 | 105.4 | 104.4 | 100.1 | 98.5 | 101.6 |
| April ........... | 101.5 | 102.8 | 103.9 | 97.8 | 99.1 | 98.1 |
| May .............. | 101.8 | 97.4 | 191.4 | 104.3 | 101.0 | 101.0 |
| June ............ | 97.9 | 102.0 | 100.9 | 101.4 | 104.2 | 103.1 |
| July ............. | 99.0 | 97.1 | 100.1 | 105.4 | 103.4 | 100.4 |
| August .......... | 103.0 | 100.3 | 102.4 | 108.1 | 106.0 | 100.0 |
| September ....... | 93.4 | 95.3 | 97.2 | 100.4 | 101.7 | 96.9 |
| October | 98.3 | 96.0 | 97.0 | 99.5 | 97.3 | 97.3 |
| November ........ | 93.5 | 94.4 | 94.1 | 87.1 | 88.9 | 92.6 |
| December ........ | 109.0 | 107.6 | 94.4 | 96.1 | 94.3 | 92.5 |
| 1931 |  |  |  |  |  |  |
| January ......... | 94.7 | 90.5 | 94.3 | 87.2 | 84.5 | 90.8 |
| February ........ | 89.0 | 96.7 | 95.7 | 80.1 | 87.0 | 90.7 |
| March ........... | 93.6 | 94.2 | 93.3 | 88.0 | 87.5 | 90.2 |
| April ........... | 91.2 | 92.4 | 93.3 | 87.5 | 88.7 | 87.8 |
| May ............. | 91.0 | 88.7 | 92.4 | 89.4 | 87.7 | 87.7 |
| June ............ | 87.8 | 89.6 | 88.7 | 83.3 | 84.4 | 83.6 |
| July ............. | 89.9 | 87.9 | 90.6 | 90.3 | 88.3 | 85.7 |
| August .......... | 91.1 | 89.6 | 91.4 | 90.0 | 88.5 | 83.5 |
| September ....... | 86.5 | 87.7 | 89.5 | 86.1 | 87.5 | 83.1 |
| October ......... | 89.9 | 86.0 | 86.8 | 81.5 | 78.9 | 78.9 |
| November | 88.1 | 91.7 | 91.7 | 71.7 | 73.6 | 76.7 |
| December | 102.3 | 100.5 | 88.0 | 81.6 | 80.0 | 78.5 |

Table 8. - Nonthly Indexes of Retail Sales by Kinds of Business (Cont'd.) -
(Average for 1930 - 100)


Table 8.--Monthly Indexes of Retail Sales by Kinds of Business (Cont'da)
(Average for $1930=100$ )

| Year and Month | M. Dyers and Cleaners |  |  | N, General Index |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of Monthly Sales | $\begin{aligned} & \text { Indexes } \\ & \text { of } \\ & \text { Average } \\ & \text { Daily } \\ & \text { Sales } \end{aligned}$ | Indexes Corrected for Seasonal Variations |
| 1929 |  |  |  |  |  |  |
| Jamaxy | 69.2 | 68.2 | 96.11 | 94.7 | 93.9 | 111.8 |
| February ......... | 70.5 | 75,2 | 107.5 | 91.4 | 97.6 | 112.2 |
| March ........... | 113.5 | 116.2 | 116.2 | 110,0 | 108.8 | 111.0 |
| April ........... | 139.5 | 137.3 | 105,7 | 109.8 | 110.2 | 110.2 |
| May .............. | 123.9 | 122.0 | 97.6 | 115.2 | 111.3 | 108.8 |
| June ........... | 113.9 | 116.7 | 105.1 | 111.1 | 110.3 | 109,2 |
| July ............ | 104.4 | 102.8 | 104.9 | 103.2 | 102.8 | 114.3 |
| August ........... | 105.6 | 100.1 | 104.3 | 107.3 | 99.6 | 114.5 |
| September ........ | 121.0 | 129.1 | 106.7 | 109.7 | 116.5 | 114.2 |
| October ......... | 124.9 | 118.5 | 106.7 | 126.7 | 122.3 | 114.3 |
| November ........ | 97.3 | 95.8 | 106.4 | 119.7 | 114.8 | 108.3 |
| December | 78.7 | 80.6 | 104.6 | 133.1 | 143.4 | 107.9 |
| 1930 |  |  |  |  |  |  |
| Jamuary ......... | 72.0 | 70,9 | 99.9 | 93.7 | 92.4 | 110.0 |
| February ........ | 66.7 | 71.1 | 101.6 | 86.8 | 92.7 | 106.5 |
| March .o......... | 104.4 | 102.8 | 111.2 | 94.7 | 91.4 | 102.7 |
| April ........... | 137.0 | 140.3 | 100.2 | 107.8 | 111.7 | 102.5 |
| May .............. | 136.9 | 134.8 | 107.9 | 109.1 | 107.4 | 102,3 |
| June ............. | 104.4 | 106.8 | 96, 2 | 37.4 | 100,6 | 99.6 |
| July ............. | 33.6 | 32.1 | 94.0 | 90.3 | 89.6 | 99.6 |
| August .......... | 96.1 | 94,6 | 98.5 | 90,2 | 86.3 | 99.2 |
| September ........ | 119.1 | 121.9 | 100.8 | 97.3 | 100.2 | 98.2 |
| Octaber | 114.8 | 108.9 | 98.1 | 107.8 | 103.3 | 96.6 |
| November ........ | 81.2 | 83.1 | 92.3 | 98.6 | 98.0 | 92.5 |
| December ........ | 73.9 | 72.7 | 94.4 | 126.3 | 126.5 | 95. 1 |
| 1931 |  |  |  |  |  |  |
| January ......... | 69.6 | 68.5 | 96.5 | 80.1 | 76.4 | 91.0 |
| February ........ | 63.1 | 67.2 | 96.1 | 77.1 | 82.3 | 94,6 |
| March ........... | 98.6 | 97.1 | 102.2 | 87.2 | 87.3 | 93.9 |
| April ........... | 124.1 | 127.1 | 94.1 | 95.1 | 98.0 | 93.3 |
| Nay .............. | 106,5 | 103.0 | 87.2 | 92.6 | 90.8 | 86.5 |
| June | 101.5 | 99.9 | 90.0 | 88,9 | 89.2 | 88.3 |
| July :........... | 88.5 | 87.2 | 88.9 | 79.9 | 78.8 | 97.5 |
| August ........... | 82.1 | 80.8 | 84.1 | 76.6 | 74,0 | 85.0 |
| September ....... | 93.1 | 95.3 | 78.8 | 83.9 | 86.1 | 84.4 |
| October | 88.6 | 84.0 | 75.7 | 91.8 | 85.1 | 79.6 |
| November ........ | 72.3 | 74.0 | 82.2 | 86.9 | 89.7 | 84.7 |
| December ......... | 58.8 | 57.9 | 75.1 | 111.0 | 110.9 | 83,4 |

Table 8 Monthly Indexes of Fetail Sales by Kinds of Business (Cont'd.
(Average for $1930=100$ )

| Year and Month | $M$ Dyers and Cleaners |  |  | $\mathrm{N}^{\text {G }}$ General Index |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Indexes of Monthly Sales. | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations | Indexes of Monthly Sales. | Indexes of Average Daily Sales | Indexes Corrected for Seasonal Variations |
| 1932 |  |  |  |  |  |  |
| January . ......... | 51.1 | 52.3 | 73,6 | 66.3 | 65,5 | 77.9 |
| February ......... | 49.3 | 50.4 | 72.0 | 65.5 | 67.9 | 78.0 |
| March 000000000 | 63.8 | 62.8 | 62.8 | 73.1 | 73.2 | 74.6 |
| April 0.0 .0 .0 .0 | 887 | 87.3 | 67.1 | 77.7 | 74.5 | 74.5 |
| May .............0 | 806 | 82.5 | 66.0 | 75.6 | 77,8 | 74.1 |
| June , wnou0000.0 | 76.9 | 75.6 | 68.1 | 73.6 | 73.3 | 72.6 |
| July | 64.0 | 65.4 | 66.8 | 63.6 | 62.7 | 69.7 |
| August . . . . . . . . | 64.1 | 60.7 | 63.3 | 62.2 | 60.6 | 69.6 |
| September ......... | 77.9 | 79.7 | 65.9 | 69.6 | 70.6 | 69,2 |
|  | 73.3 | 72.2 | 65.0 | 75.8 | 73.1 | 68,4 |
| November | 59.6 | 58,6 | 65.1 | 73.1 | 73,0 | 68.9 |
| December | 50.5 | 49.7 | 64.5 | 90.6 | 86.0 | 64.7 |
| 1933 |  |  |  |  |  |  |
| January ......ape. | 44.5 | 45,5 | 64.1 | 54, | 56.2 | 66,9 |
| February . . ...... | 419 | 44.6 | 63.7 | 51.9 | 55.4 | 63.7 |
| March .0.0.0. ${ }^{\text {a }}$ | 58.2 | 55.1 | 61.3 | 62.1 | 59.6 | 66,9 |
| April ....enos.o.s | 876 | 93.4 | 66.7 | 67.6 | 69.4 | 63.7 |
| May .0.0.0.e.... | 85.9 | 845 | 67.6 | 71.0 | 70.9 | 67,6 |
| June ......o.o... | 74.3 | 73.1 | 65.8 | 69.1 | 69.3 | 68.6 |
| July ............. | 60.9 | 62.3 | 63.6 | 59.1 | 60.7 | 67.4 |
| August ......an...0 | 70.4 | 66.6 | 69.4 | 61.4 | 59.3 | 68.2 |
| September ........ | 81.1 | 82.9 | 68.5 | 69.9 | 68.7 | 67.3 |
| October .0........ | 78.5 | 77.2 | 69.6 | 73.7 | 73.7 | 68.9 |
| November , ...s..... | 61.8 | 60.8 | 67.5 | 71.4 | 71.0 | 67.0 |
| December ........as | 54.8 | 56.1 | 72.8 | 89.4 | 87.8 | 66.0 |
| $\underline{1934}$ |  |  |  |  |  |  |
| Jamuary $\quad 0.0000 .0$ | 53.0 | 52.1 | 73.4 | 57.7 | 57.6 | 68.5 |
| February ......... | 49.1 | 52.3 | 74.7 | 56,2 | 59.9 | 68.9 |
| March ............ | 72.5 | 71.3 | 71.3 | 69.3 | 66.3 | 67.6 |
| April ............ | 87.9 | 89.9 | 69.1 | 67.4 | 69.6 | 69.6 |
| May ......, $0.0 \ldots$ | 94.0 | 92.4 | 73.9 | 75.3 | 75,0 | 71.4 |
| June .0.0.0.0.mes | 83,4 | 82,0 | 73.9 | 72,6 | 69.4 | 68.7 |
| July .............. | 72.4 | 74.1 | 75.6 | 60.6 | 62.2 | 69.1 |
| August .n... 0 .... | 78.1 | 74.0 | 77.1 | 63.4 | 60.8 | 69.9 |
| September ....... | 79.6 | 84.8 | 70.1 | 69.7 | 71.2 | 69.8 |
| October ........... | 85.0 | 80.4 | 72.5 | 77.7 | 75.5 | 70.5 |
| November . $\quad . \ldots \ldots$. | 69.7 | 68.5 | 76.1 | 74.9 | 74.1 | 69.9 |
| December .......... | 59.1 | 60.4 | 78.5 | 95.2 | 94.5 | 71.1 |
| 1935 |  |  |  |  |  |  |
| January | 51.7 | 50.8 | 71.6 | 58.6 | 58.2 | 69,2 |
| February ........ | 44.7 | 47.6 | 68.1 | 56.4 | 60.1 | 69,1 |
| March .0.0.0.0. ${ }^{\text {a }}$ | 64.1 | 63.0 | 70.0 | 64.8 | 61.8 | 69.5 |
| April ...e......... | 96.3 | 98.4 | 70.3 | 72.9 | 75.7 | 69.5 |
| May .on........... | 93.7 | 92.1 | 73.7 | 72.4 | 71.8 | 68.3 |
| June 0000000000 | 90.0 | 92.0 | 82.9 | 71.6 | 71.0 | 70,3 |
| July :0.....noun | 77.6 | 76.3 | 77.9 | 63.1 | 62,9 | 69.8 |
| August .......... | 75.2 | 71.2 | 74.2 | 64.9 | 60.1 | 69.1 |
| September ........ | 77.1 | 82.1 | 67.9 | $69 ?$ | 73.8 | 72.4 |

Table 9.--Indexes of Seasonal Variation for March and April, by Yearse 1929-1935, for Certain Kinds of Business
(Adjusted to Account for the Varying Dates of Easter)

| Year and of Easter | Department Store Indexes |  | Variety Store Indexes |  | Men's <br> Clothing Store Indexes. |  | Women's <br> Clothing <br> Store <br> Indexes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | March | Apr 11 | March | April | March | Apri]. | March | April |
| 1929, March 31 | 97 | 95 | 83 | 89 | 100 | 115 | 92 | 108 |
| 1930, April 20 | 89 | 103 | 79 | 93 | 78 | 137 | 76 | 124 |
| 1931, April 5 | 92 | 100 | 80 | 92 | 89 | 126 | 84 | 116 |
| 1932, March 27 | 97 | 95 | 83 | 89 | 100 | 115 | 92 | 108 |
| 1933, April 16 | 89 | 103 | 79 | 93 | 78 | 137 | 76 | 124 |
| 1934, April 1. | 96 | 96 | 82 | 90 | 100 | 115 | 92 | 108 |
| 1935, April 21. | 89 | 103 | 79 | 93 | 78 | 137 | 76 | 124 |


| YearandDate of Easter | Boot and Shoe Store Indexes |  | Candy and Confectionery Store Indexes |  | Grocery and Meat Store Indexes. |  | Dyers and <br> Cleaners Indexes |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | March | April | March | April | March | April | March | April |
| 1929, March 31 | 88 | 104 | 130 | 85 | 100 | 103 | 100 | 130 |
| 1930, April 20 | 74 | 118 | 85 | 130 | 96 | 107 | 90 | 140 |
| 1931, April 5 | 80 | 112 | 85 | 130 | 98 | 105 | 95 | 135 |
| 1932, March 27 | 88 | 104 | 130 | 85 | 100 | 103 | 100 | 130 |
| 1933, April 16 | 74 | 118 | 85 | 130 | 96 | 107 | 90 | 140 |
| 1934, April 1 | 88 | 104 | 130 | 85 | 100 | 103 | 100 | 130 |
| 1935, April $21 . .$. | 74 | 118 | 85 | 130 | 96 | 107 | 90 | 140 |


| YearandDate of Easter | General <br> Indexes |  |
| :---: | :---: | :---: |
|  | March | April |
| 1929, March 31. | 98 | 100 |
| 1930, April 20 | 89 | 109 |
| 1931, April 5 | 93 | 105 |
| 1932, March 27 | 98 | 100 |
| 1933, April 16 | 89 | 109 |
| 1934, April 1 | 98 | 100 |
| 1935, April 21 | 89 | 109 |

Note: No adjustments in the seasonal factors were necessary for the other kinds of business for which indexes of retail sales have been computed.













