

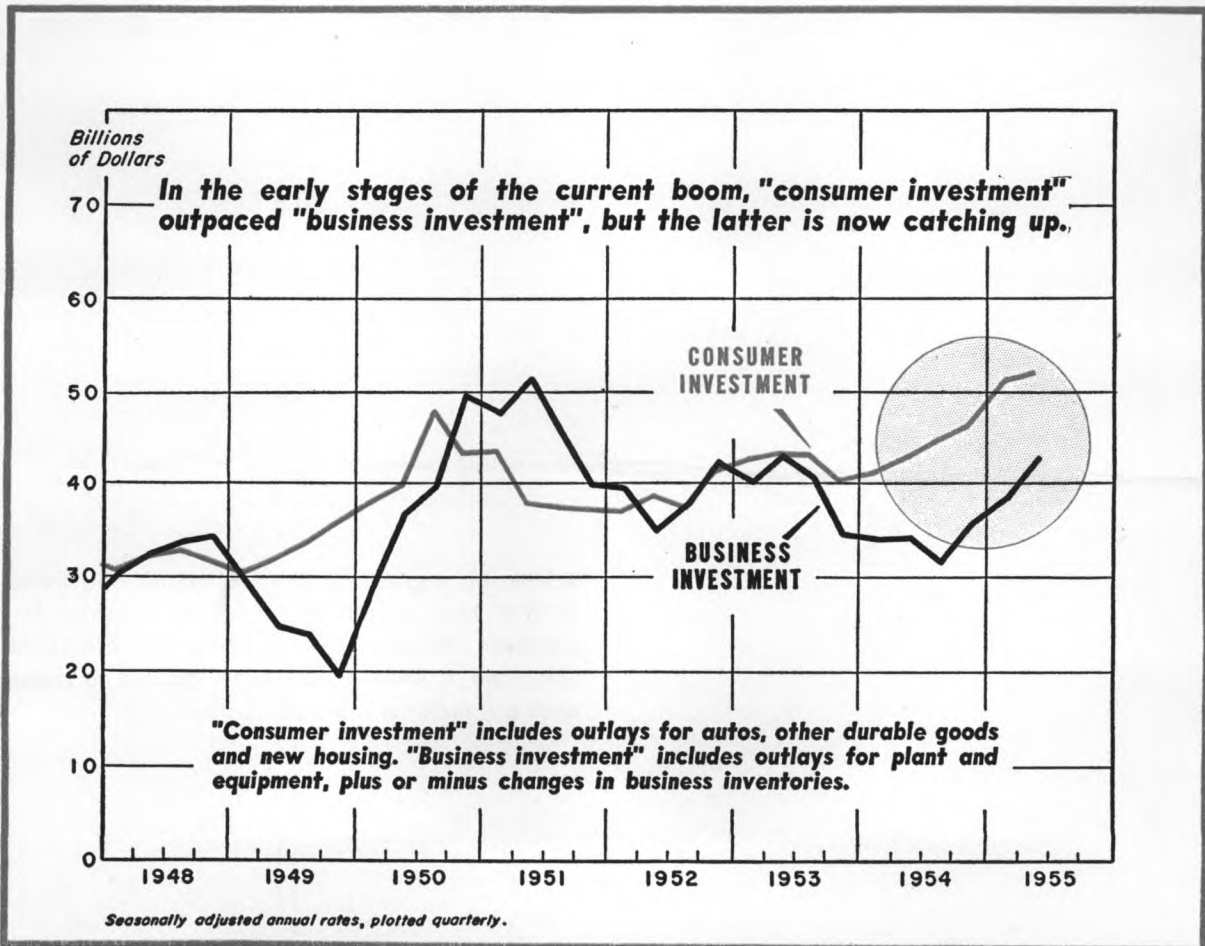
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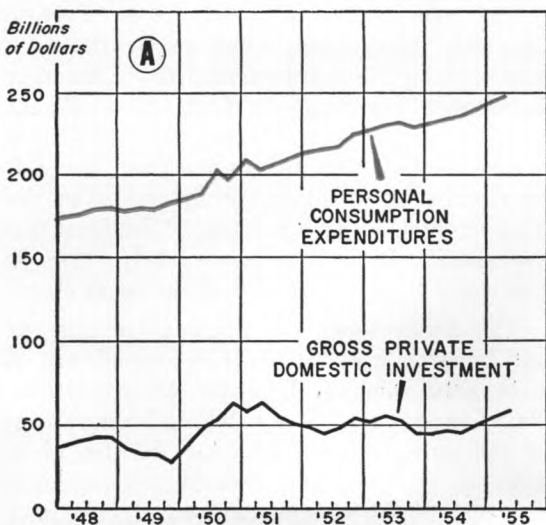
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Consumer Buying and Business Buying

DURING THE EARLIEST STAGES of the current business boom, in late 1954 and early '55, the surge of activity in autos, other consumer durable goods, and residential construction appeared to be pacing the recovery. More recently, the main thrust has been shifting to business investment activities such as output of plant or equipment and the building of business inventories.

Such a development, although noteworthy, is not necessarily significant of any deep-seated change; differences of pace among the various sectors of business activity stand for the rule rather than the exception, as short-run

In terms of the usual classifications of Gross National Product, the large sector called "Personal Consumption Expenditures" has shown a steady upward trend, while "Gross Private Domestic Investment" has fluctuated markedly.



Seasonally adjusted annual rates, plotted quarterly.

fluctuations of American business run their course. Nonetheless, a scrutiny of the comparative behavior of consumption and investment may serve to throw added light on current and prospective trends of general business.

The main lines of recent developments in consumer buying and in business buying can be seen from an examination of the behavior of the major component parts of the Gross National Product. In this connection, a rearrangement of some of the constituent items of GNP into groupings differing from the conventional classifications may bring out more sharply the important features of recent trends.

Chart "A" of the accompanying series shows the consumption and investment components of the Gross National Product in the familiar form of "Personal Consumption Expenditures" and "Gross Private Domestic Investment." The first, as is well known, includes consumer expenditures for durable goods other than housing, for nondurable goods, and for services; the second includes outlays for new private construction of all kinds and for producers' durable equipment, plus or minus any changes in business inventories. Together, these two large sectors account currently for about 80 percent of the Gross National Product.⁽¹⁾

A first impression of Chart "A" is that

(1) The remaining parts of GNP, which are not shown on the charts and not directly considered in this discussion, are "Net Foreign Investment" and "Government Purchases of Goods and Services." The first of these, as implied by its name, partakes of the nature of investment; the second represents mainly the consumption of current goods and services by three levels of government, although there are important and undifferentiated elements of investment included therein. Both the foreign investment and the government-purchase components are, of course, significant parts of GNP, and a fuller treatment of the subject would include their relation to the investment-consumption questions which are here under consideration.

Personal Consumption Expenditures have grown vigorously and steadily for seven years and more, while Gross Private Domestic Investment has shown no net gain since the highs of 1950-51. Such an impression is correct, arithmetically, but an interpretation of its meaning would need to take into account the circumstances of the Korean War and its aftermath, and of the relative role at various times of government purchases, which are not shown here. Furthermore, the prominence of the Korean bulge, as shown on the chart, tends to make it less obvious that there have been important over-all gains in investment. In fact, from the first quarter of 1948 through the second quarter of 1955 (from first to last entry on the chart) the percentage gain in investment exceeds that of consumption, i.e. 56 percent as against 44 percent. (This would appear more clearly on a chart drawn to a ratio scale.) Likewise, between the second quarter of 1952 (when the shake-down aspects of the Korean bulge had been largely completed) and the second quarter of 1955, investment rose by a larger percentage than did consumption, i.e. 20 percent as against 17 percent.

So far as the developments of the past year and a half are concerned, the familiar arrangement portrayed in Chart "A" fails to bring out clearly the key features. The rise in consumption expenditures, as shown by the colored line, seems to take its course during 1954 and the first half of 1955 on approximately the same upward slope that has characterized most of the entire span of years since the early postwar period. The recent surge in the auto industry fails to stand out; consumer purchases of autos are included within the totals represented by the colored line, but their fluctuations tend to be overshadowed by the large dollar volume of consumer purchases of other kinds. At the same time, the total of investment, as shown by the black line, includes residential construction, but the latter's strength during 1954 is hardly apparent in the chart because it was offset during a considerable part of the year by declines in other parts of "Gross Private Domestic Investment." At this point a rearrangement of the usual classification may be useful.

"Consumer Investment" and Business Investment

Consumer expenditures for durable goods, including autos, may be bracketed with outlays for residential construction under a heading which may conveniently be called "Consumer Investment." (See colored line of cover chart.) In effect, this means combining one item which is usually classed as consumption with another which is usually classed as investment. There are, perhaps, some elements of the arbitrary in imputing an investment character to all consumer expenditures for durable goods, but the conventional classification also has its arbitrary features. There is no question, however, about the fact that outlays for consumer durables as well as for new housing are, by nature, postponable; like business investment, they are highly volatile items, sensitive to changes in outlook, and, for the very reason of their volatility, influential upon changes in the pace of business. The case for classifying residential construction as a "consumer" rather than a business investment (at least in the tentative and *ad hoc* fashion which is essayed here) rests upon the obvious fact that consumer initiative is strategic in the making of the decisions which govern the pace of residential construction activity.

The remaining parts of Gross Private Domestic Investment, after residential construction has been transferred to "Consumer Investment" in the way just indicated, are outlays for producers' durable equipment and nonresidential private construction, as well as change in business inventories. For the present purpose, this is termed "Business Investment." Its course since early 1948 is portrayed by the black line of the cover chart.

The dollar totals of consumer investment and business investment, thus defined, are of a broadly comparable order of magnitude. This feature facilitates a detailed comparison of the two kinds of behavior; it also gives more recognition than does the conventional classification to the importance of consumer durable goods, whose rise has been termed by

a leading economist to be the "outstanding economic phenomenon of our times."⁽²⁾

The recent very rapid rise of "Consumer Investment," i.e. autos, housing, etc., is clearly portrayed by the cover chart. Between the first quarter of last year and the first quarter of this year, the annual rate jumped from about \$40 billion to \$50 billion, or a gain over the period of 26 percent. During the second quarter, Consumer Investment made a further slight gain, although very much less than in previous quarters.

Meantime what had been happening to Business Investment? During the first three quarters of last year the rate was stationary or declining, at a level representing a sharp reduction from that of the early part of 1953. The pickup began in the final quarter of last year. As measured from the third-quarter trough, the rate of gain through the second quarter of this year was particularly sharp, i.e. from an annual rate of \$31.6 billion to \$43.7 billion, or 38 percent. The sharpness of the increase between the first and second quarters of this year, when taken in conjunction with what is known about the outlook of the constituent parts of the business investment sector, appears to indicate a strong momentum implying further gains in quarters ahead.

The point that consumer investment outpaced business investment in the early stages of the current boom, whereas the latter now appears to be overtaking the former, is, thus, clearly indicated by the figures portrayed by the cover chart. The question naturally arises as to whether this represents an extraordinary relationship or one which may be expected to be encountered frequently.

Certainly there is some precedent, even within the period spanned by the chart; thus, during 1949 and early 1950, prior to Korea, the consumer investment curve showed a marked lead, on the upswing, over the business investment curve. A superficial impression derived from the cover chart might even suggest that there is a characteristic lead-lag relationship between the two series, with consumer in-

vestment as the leader. However, a consideration of the nature of the two series, and of the different factors that underlie each of them respectively, would lead to the view that they are only partially explainable in terms of each other and that the main lines of explanation of their respective movements should be sought elsewhere. Thus, any lead-lag relationship would be mainly fortuitous.⁽³⁾

The Component Parts

The compositions of "Consumer Investment" and of "Business Investment" are shown, respectively, by charts B and C. In the case of Consumer Investment, as shown by Chart B, it will be seen that both residential construction and consumer expenditures for durable goods have increased during each of the five calendar quarters since the first quarter of last year. An accelerated gain during the first quarter of this year, for both series, was followed by a markedly reduced rate of gain during the second quarter.

An important question for the immediate outlook is whether the existing levels of activity in these two areas can be maintained. Further substantial gains are neither needed or expected. On the other hand, fewer observers than formerly seem to expect a sharp recession in residential construction or in consumer durables in the second half of 1955.

So far as residential construction is concerned, the very high totals of housing starts and contract awards during the first seven or eight months of this year would seem to assure a continuation of a large volume of activity, at least throughout the year and perhaps considerably longer.⁽⁴⁾ Such activity should con-

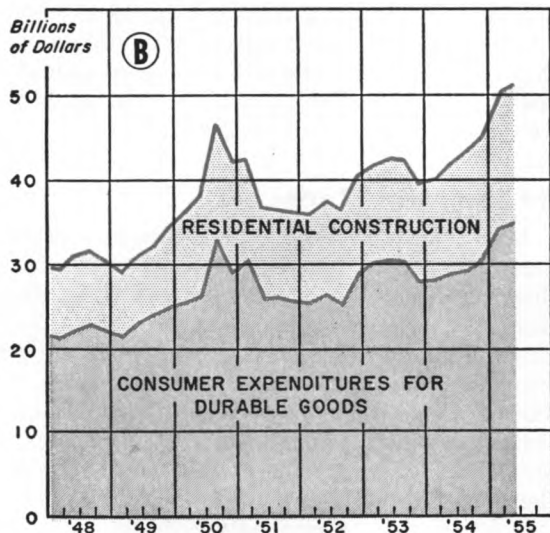
(3) Use of prewar data, at least on an annual basis, fails to disclose any significant lead-lag relations of the two items under discussion. Quarterly data are not readily available for periods earlier than 1939.

Note also that the Consumer Investment line of the cover chart is somewhat less volatile than the Business Investment line. The strength of the auto and residential sectors during 1949, for example, was recognized at the time (or slightly later) to have been a crucially important factor in holding the general business recession at that time to very moderate limits.

(4) This is the broad view of the situation. It should be fully recognized that the rate of housing starts has eased somewhat, i.e. from 1.4 million annual rate in the early months of the year to 1.2 million in July, seasonally adjusted. That, and the effects of the recent tightening in terms of mortgage credit, are not reflected in the construction data portrayed in the charts here.

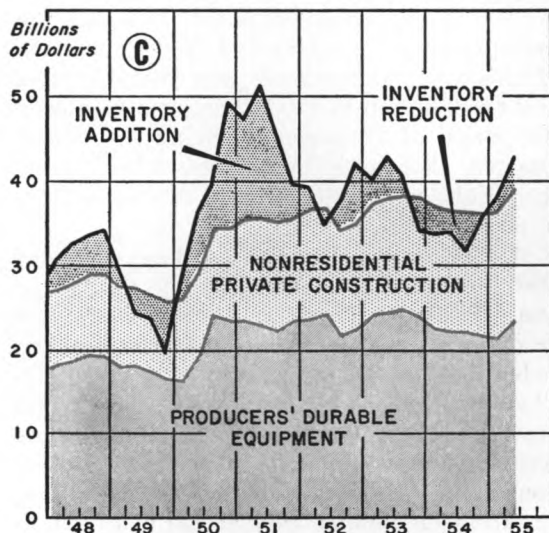
(2) John H. Williams in a paper delivered to the American Economic Association, December 1947.

Both components of **CONSUMER INVESTMENT** have increased during each of the five calendar quarters since the first quarter of last year, but at the last quarterly reports the gains were slowing.



Seasonally adjusted annual rates, plotted quarterly.

After showing considerable sluggishness in 1954, all three components of **BUSINESS INVESTMENT** were rising sharply at last report.



Seasonally adjusted annual rates, plotted quarterly.

tinue to lend support to the household equipment sector of the consumer durables total. In respect to automobiles, the startling performance during the first half of this year, although it could lead to a collapse in the second half, seems less likely to do so than had been feared to be the case earlier this year. Estimates of the annual total of cars to be sold in 1955 have been continuously raised as the year progressed. At press time, there were no indications that the estimates were being cut back.

The composition of "Business Investment," as shown in Chart C, shows in more detail how business buying has supplanted consumer investment as the driving force of the current boom. Outlays for producers' durable equipment, as depicted by the shaded area at the bottom of the chart, were declining throughout 1954 and early 1955. The second quarter of this year shows a sharp turnabout. There is scarcely any question that this important item is headed upward.

The volume of nonresidential construction, as shown by the area of the color band near the top of Chart C, held approximately steady

during 1954, but showed increases during both the first and second quarters of this year. Here, too, the general direction of movement seems to be upward.

Last, but far from least, the course of inventory change goes far to explain the pattern of business investment in its entirety. (In the absence of inventory changes, business investment would be the sum of producers' durable equipment and nonresidential private construction.) In periods of inventory addition such as '50-'51, late '52 and early '53, and '55, the black line of the chart, which represents the total of the three business investment items, is above the shaded colored areas representing the two items other than inventory; in periods of inventory reductions such as late '49, late '53 and all of '54, the black line cuts below the sum of the other two items. During the entire year 1954, the effect of inventory reduction in pulling down the total of business investment is quite apparent in Chart C. During the fourth quarter of last year, however, the pull-down was less marked. During

the first two quarters of this year, inventory accumulation has been gathering momentum.

Underlying Factors

The volume of "Consumer Investment" and the volume of Business Investment are, to some extent, mutually interrelated, as has been stated earlier, but it would be a mistake to regard either as directly dependent upon the other. Numerous important factors work upon both of them.⁽⁵⁾

Among the factors which bear upon Business Investment, for example, are the following: trends of profits and expected profits, financial factors surrounding the cost and availability of credit, the prices of capital goods and their constituent parts relative to other prices, the complex range of considera-

(5) The fact that any contemporary discussion of investment and consumption and their mutual relationship to the national product (or national income) is, whether consciously or not, indebted to the contribution made by the Keynesian system of economic theory does not mean that a quick recourse to the Keynesian apparatus will solve the problems of the relations imbedded in current statistical data of the type under examination here. As a background, however, it may be noted that in the Keynesian system, investment is used to explain consumption by way of the influence of investment upon the national income. Consumption is not used as a primary explanation of investment. The main lines of relationships run as follows:

(1) Consumption plus investment equals national income. (2) Consumption is determined by the "propensity to consume" and national income. (3) Therefore, in effect, the national income depends upon the "propensity to consume" and investment. (4) Investment, in turn, depends upon the "marginal efficiency" of capital (i.e. the expected profitability of new capital goods) and the interest rate. (5) The interest rate depends upon "liquidity preference" and the amount of money available.

For one among the many skeletonized versions of the Keynesian system, see: "An Exposition of Keynesian Economics," a paper delivered by Lorie Tarshis at the 60th annual meeting of the American Economic Association, Chicago, December 1947.

tions involved in business expectations as to future prices and future volume, and (far from least) the impact of international developments.

Some of these factors are readily measurable and some are not. Trends of corporate profits, for instance, trace a postwar pattern which is definitely related to the trend of Business Investment here under discussion. However, it may be noted that corporate profits (after taxes) have been in a rising phase since early 1954, whereas Business Investment, as previously stated, did not begin its current recovery until the final quarter of last year, with the plant-and-equipment part of business investment even later in its recovery.

The fact that the recovery of Business Investment was late in relation to the pickup in corporate profits serves to underscore the sluggishness of business investment during 1954, which has already been emphasized in the comparisons between business and consumer buying. The slowness of business investment may have reflected some undue pessimism or it may be ascribable to other factors not examined here.

The fact that business investment is now very definitely on the rebound represents a considerable reassurance as to the likelihood of strong business in the months ahead. But the question of how long the boom will endure may turn, in considerable part, around the question of whether the rebound in investment is kept within moderate limits—especially, on the inventory side.

Seasonal Allowances for Department Store Trade

RECENT DEVELOPMENTS in department store trade in the Fourth Federal Reserve District, as elsewhere in the nation, have been suggestive of a need for revising the seasonal allowances made for department store sales and stocks data each month. A thorough review of the allowances now being used to adjust department store sales and stocks for seasonal variation has shown that a number of significant changes have recently occurred in the importance of sales during certain months relative to annual totals.⁽¹⁾

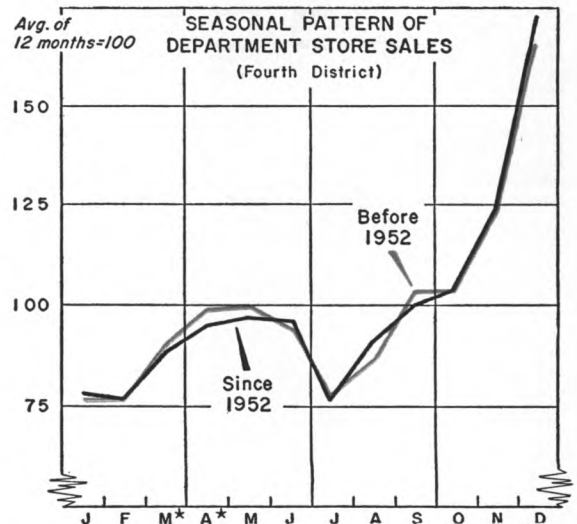
An accompanying chart illustrates the average seasonal pattern of monthly department store sales in the Fourth District both before and after the revision of seasonal allowances just completed. The data plotted on the chart are typical sales for each month of the year expressed as a percentage of the monthly averages for the year. Such percentages represent the values used to adjust monthly sales for seasonal variation.

The colored line on the chart indicates monthly seasonal allowances which have been used up to the present time in adjusting Fourth District department store sales for seasonal variation. In the process of revising the allowances, it was found that the former seasonal pattern was still generally applicable to the years 1950 and 1951; thus, no change appeared to be required in the seasonal adjustments for these years. A somewhat different seasonal pattern emerged for the years since 1951, however, and this pattern is shown as the black line on the chart.

The most striking difference between the seasonal pattern for the years prior to 1952 and that since 1952 is in the December allowance, which required an increase of 7 points to 173 (based on the average for all months equal to 100) for the most recent period of years. Thus, while December sales were typically 66 percent above the average for all months before 1952, such sales have tended to run 73 percent above the monthly average since that year.

The recent increase in the relative importance of department store sales in December

February, March, and April appear to have become relatively less important trading months since 1952, while December has increased substantially in importance.



* The levels shown for March and April are long-run averages requiring special adjustment each year to take account of the date of Easter. Details of this adjustment are described in the *Federal Reserve Bulletin*, December 1951, p. 1473.

(1) The method used for computing seasonal adjustment allowances is described in detail in the *Federal Reserve Bulletin* of June 1941.

REVISED INDEXES OF DEPARTMENT STORE SALES

Fourth District
1947-49 Average Daily Sales = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average for Year
Without Seasonal Adjustment*													
1948	75	80	98	97	105	100	85	93	110	117	127	170	105
1949	80	80	88	106	102	92	75	82	99	96	117	160	98
1950	75	75	88	100	102	97	99	101	116	110	108	186	105
1951	101	93	99	103	105	99	84	94	114	114	139	180	110
1952	86	83	95	103	105	105	82	99	110	118	139	194	110
1953	87	89	106	102	114	110	88	104	113	115	141	185	113
1954	79	79	81	104	98	100	82	94	105	111	133	191	105
1955	87	83	93	112	110	104	96						

Adjusted for Seasonal Variation*													
1948	100	104	103	102	103	107	109	107	105	113	103	102	...
1949	107	103	99	105	100	98	96	94	94	93	95	97	...
1950	98	98	98	100	102	103	126	116	112	105	88	112	...
1951	132	120	104	108	105	105	107	108	110	110	113	109	...
1952	110	108	113	105	108	110	106	108	110	114	112	112	...
1953	111	116	116	113	118	115	115	114	113	111	114	107	...
1954	101	103	98	103	101	104	106	103	105	106	107	110	...
1955	111	108	107	116	113	108	124						...

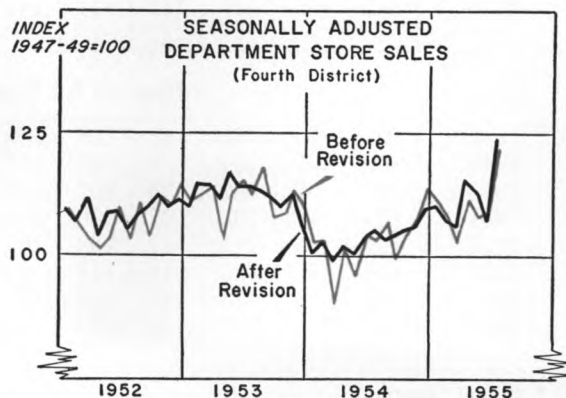
* Allows for differences in number of trading days per month.

could be interpreted as having been at the expense of Easter trade, which has become relatively less important to the annual total in recent years. The seasonal allowance for March, for example, was reduced by 3 points for the years since 1952, and the April allowance was cut by 4 points.

The revision also showed that the index of relative importance of August sales should be increased by 4 points while that for September should be reduced by 4 points. Changes in seasonal allowances for the remaining months were smaller.

The effect of the change in seasonal patterns on the seasonally adjusted indexes of Fourth District department store sales is illustrated on a second accompanying chart. This chart shows the seasonally adjusted monthly sales

Revision of the allowances for seasonal variation results in a somewhat smoother path of the sales index; July 1955 is a recent high by either measurement.



indexes for the period January 1952 through July 1955. The colored line on the chart traces the indexes on the basis of the old seasonal allowances, while the black line indicates the adjusted indexes after the revision in seasonal allowances. Whether measured by the old series or by the revised series, the adjusted index for July 1955 stands out as the highest for the period charted. One significant result of the revision in seasonal allowances, however, has been to shift the second-highest month of the past year from December 1954 to April 1955. Another result is that the high month of 1953 now appears to have been May rather than August.

Use of the revised seasonal allowances for adjusting Fourth District department store sales results in a generally smoother series than had been obtained by use of the old allowances. For example, the "see-saw" effect observed in the former series during the months from

May through October in each of the years charted has been virtually eliminated by the use of the revised seasonal factor. It is also apparent that numerous of the smaller peaks and valleys which punctuate the former series are absent or greatly reduced in amplitude in the revised indexes.

In addition to the revision of the sales index, seasonal allowances applying to the monthly index of Fourth District department store stocks have also been revised, although the changes are smaller than in the case of the sales index. Revised indexes of both sales and stocks for the period 1948 through 1954 are shown on the accompanying tables, for the Fourth Federal Reserve District.

Seasonal allowances for department store sales indexes of major metropolitan areas within the Fourth District have also been revised. Tables of the revised indexes for these areas are available on request.

REVISED INDEXES OF DEPARTMENT STORE STOCKS*

Fourth District
1947-49 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average for Year
Without Seasonal Adjustment													
1948	94	102	111	114	108	102	99	106	112	117	123	95	107
1949	93	100	108	103	104	95	90	94	103	111	109	85	100
1950	92	97	103	105	103	94	89	102	117	130	136	108	106
1951	114	125	143	146	139	127	122	125	130	131	128	104	128
1952	103	109	115	117	113	100	101	104	116	123	128	98	111
1953	104	114	119	120	118	114	111	118	126	138	136	106	118
1954	103	110	117	119	119	108	105	111	120	128	129	104	114
1955	101	109	117	119	117	110	109						
Adjusted for Seasonal Variation													
1948	103	103	105	109	106	109	110	110	107	105	109	108	...
1949	102	102	102	98	102	101	100	98	99	99	96	96	...
1950	101	99	97	99	101	100	99	106	111	117	121	123	...
1951	126	128	135	137	136	135	135	130	124	118	113	118	...
1952	116	113	112	111	109	105	110	108	111	110	113	111	...
1953	116	118	115	114	114	120	120	122	120	123	120	119	...
1954	115	114	114	113	114	114	115	115	114	114	114	117	...
1955	114	114	113	113	113	116	118						...

* End of Month.

FOURTH FEDERAL RESERVE DISTRICT

