MONTHLY
Business Review

FINANCE • INDUSTRY • AGRICULTURE • TRADE

FOURTH FEDERAL RESERVE DISTRICT

Vol. 33—No. 8 Federal Reserve Bank of Cleveland Cleveland 1, Ohio

AUGUST 1951

CONTENTS

Trade Inventories and Sales

RARE but not unique in this country's economic history is the present spectacle of an inventory readjustment phase in the midst of boom conditions, with generally high levels of production, employment and income. The readjustment phase takes the form of efforts made by the holders of inventory to bring their stocks back to a more conservative relation to current sales, mainly by a cautious ordering policy but also in some cases by price concessions.

The problem has been especially pressing in the matter of trade inventories. In a number of commodity lines it is plain that the marked accumulation of stocks at retail or wholesale levels also caused manufacturers' inventories of such lines to be unduly large.

The reasons for the somewhat unexpected accumulation of inventory during the past year are no longer mysterious. (1) Suffice it to say here that the drive of consumers generally to buy almost anything available has indeed been present during certain periods of the past year, but the ephemeral quality of the drive has also been demonstrated. At the same time the output of civilian goods has turned out to be somewhat larger than was generally thought to be possible some six months or a year ago, for a number of reasons, some of which are connected with the pace and character of the rearmament program in actual operation.

(1) The accumulation was unexpected in the sense that at the time of the outbreak of the Korean War and during the subsequent building of the rearmament program, it was generally considered both by government and by private business that the main inventory problem in the months ahead would be one of shortage rather than of surplus.

The readjustment phase is apparently under way at the present time, but is has begun so recently that it has hardly yet been reflected in the regular inventory statistics, which necessarily lag behind the actuality. (In fact, inventory statistics are always gathered and digested somewhat less promptly than many other types of business indicators.) Nevertheless, there is some value in reviewing the course of trade inventories in relation to sales over the past year and more, if for nothing else than to grasp the size of the inventory readjustment which is yet to be made; it is just as important to make sure that the inventory problem is not overstated as to assure that it is not understated.

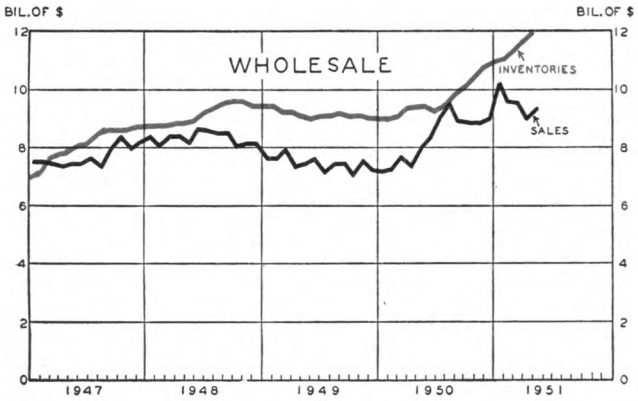
Such an appraisal of the magnitude of the inventory problem is the purpose of the present article, including charts showing trade inventory and sales trends for a number of years, with the latest entries in most cases being for May or June of this year. The portion of 1951 which is shown in the charts was predominantly a period of inventory accumulation, rather than readjustment. Subsequent to the final months shown on the charts it is likely, although not certain, that some progress in inventory readjustment has been made.

Wholesale Inventories The red line on the first of the accompanying charts shows the end-of-month value of all inventories at wholesale, expressed in billions of dollars, from the beginning of 1947 through the spring of this year. Monthly sales by the wholesale trade are also shown in billions of dollars by the black line.

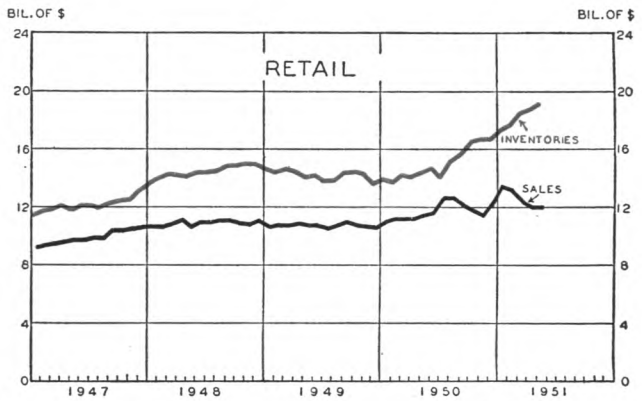
TRADE INVENTORIES AND SALES

U. S., 1947-51, Monthly

(Seasonally adjusted)



. . . inventories of wholesalers continued to rise as sales slackened during the early part of the year; the resulting spread, however, was hardly larger than during the two-year period from mid-'48 to mid-'50.



. . . although retail sales are scarcely above the June 1950 level, inventories of retailers have risen markedly; the resulting spread is of a magnitude without precedent in recent years.

It is apparent that inventories of wholesalers continued to rise as sales slackened during the early part of this year. However, the resulting spread in terms of dollars between current inventory and monthly sales was hardly larger at the end of the period under observation than it was during most of the two-year period from mid-1948 to mid-1950. (The latter period included the so-called "inventory recession of 1949".) It seems probable that the outbreak of the Korean War caught the wholesalers in a somewhat unusually low inventory position in comparison with the then-current sales. Altogether the chart showing the inventory and sales trends in wholesale trade suggests at most a rather moderate problem of inventory accumulation.

Retail Inventories The second of the accompanying charts shows trends of inventories and sales in retail trade. Here the accumulation has been larger, and the prospect of a readjustment or even "liquidation" phase for the immediate future is more pronounced. The chart shows that the cumulative rise of retail inventories since July of last year was in marked contrast with sales trends. The resulting spread, in dollar terms, was of a magnitude without precedent in recent years.

The fact that the inventory problem shows up as more serious in the case of retail trade than in wholesale trade is largely explainable by differences among industry lines in respect to characteristic trade channels. Thus, for example, many of the consumer durable goods which have been conspicuous in the recent inventory bulge are commodities which are sold directly from manufacturer to retailer rather than through wholesaler intermediaries. Wholesale trade statistics, on the other hand, include a relatively large component of grocery and food data, which tend to lend stability to the inventory figures.

It is in department store trade that some of the most conspicuous inventory movements have taken place. A series of charts on an adjoining page show the course of inventories and sales for department stores of the Fourth Federal Reserve District, including a number of selected soft-goods and hard-goods departments. Seasonally adjusted monthly indexes are used throughout this series of six charts.

1948 for Comparison A word about the base period used in the department store charts is in order. The base period used in all six charts is the average of 1948, that is, the inventories or sales for any particular month are expressed as a percentage of the average 1948 position. The effect of this is to take the inventory-sales relationship of 1948 as a standard of comparison for the more recent period. (It will be noticed that both the red and the black lines for 1948 hover about the 100 position in all six of the charts.)

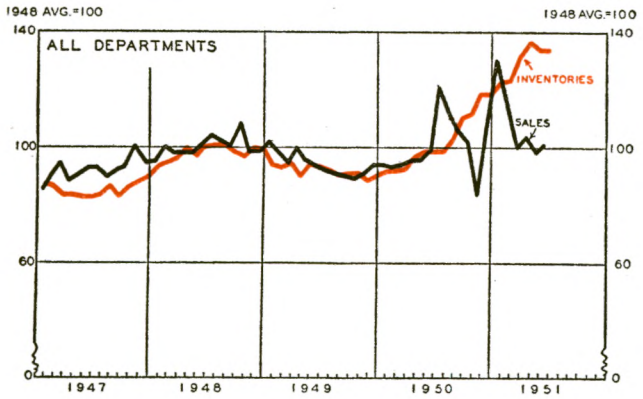
It will be recalled in this connection that by 1948 inventories had fully recovered from wartime and early postwar shortages. In fact from some standpoints inventories can be considered to have been large in relation to sales in 1948, partly for the very reason that an inventory liquidation phase was a conspicuous part of the ensuing business recession of late 1948 and 1949. (2) Nevertheless, the inven-

(2) At the same time it should be remembered that by prewar standards, trade inventories were not especially large in 1948. See final series of charts showing stock-sales ratios in 1948 compared with 1935-39 in partial support of this view.

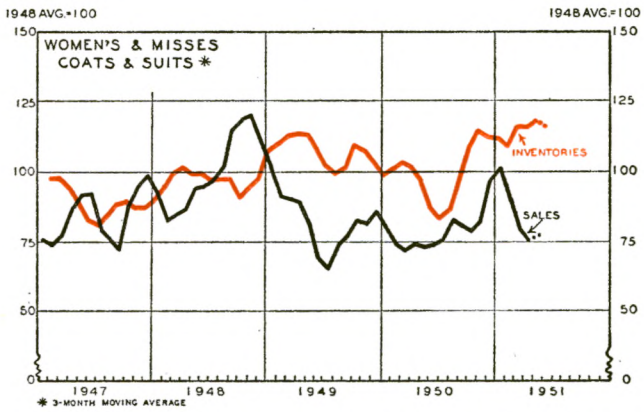
INVENTORIES AND SALES OF SELECTED DEPARTMENTS

FOURTH DISTRICT DEPARTMENT STORES

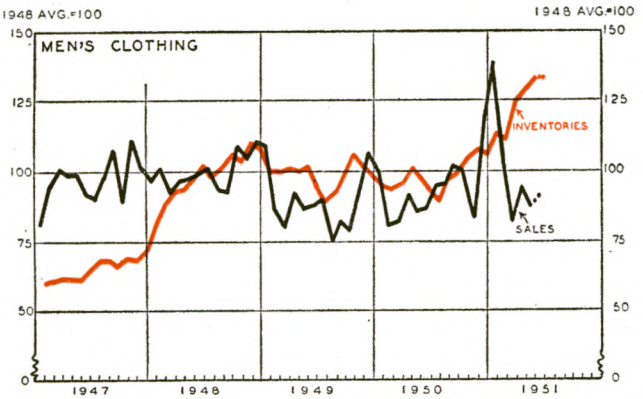
(Seasonally adjusted monthly indexes)



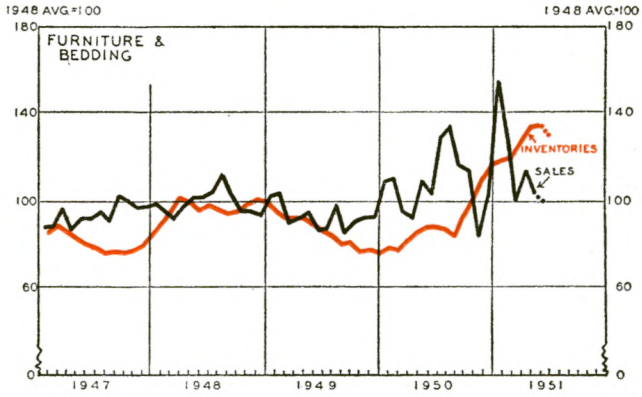
. . . department store inventories (all departments combined) rose out of proportion to sales during the year of the Korean war; if the stock-sales relationship had continued the same as in 1948, the red line would have kept pace at least roughly with the black line.



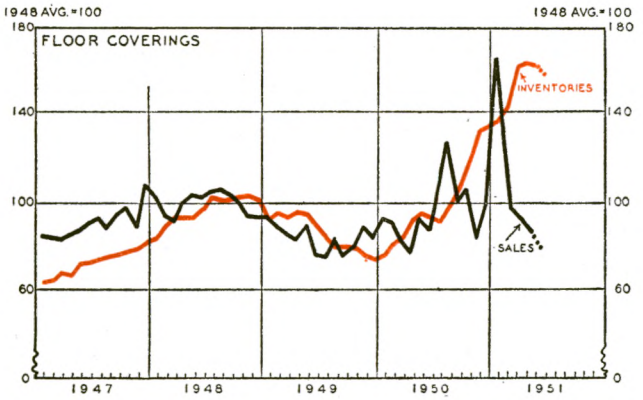
. . . inventories in the women's coats and suits department have been high in relation to sales for more than two years, as judged by 1948 standards; Korean war developments seem not to have altered this relationship appreciably.



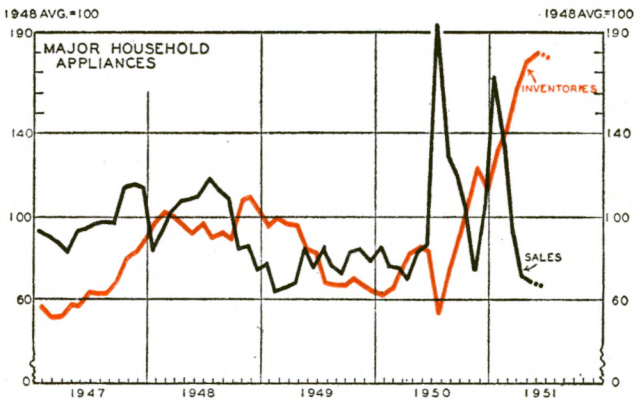
. . . the men's clothing department participated quite heavily in the inventory bulge of the past year.



. . . inventories of furniture and bedding, after a decline to "subnormal" levels in 1949 and early 1950, rose to a position somewhat out of line with sales, as judged by 1948 standards.



. . . the rise in stocks of floor coverings during the past year far outstripped the sales position, after nearly three years of a comparatively steady relationship between inventories and sales.



. . . stocks of major household appliances have also become swollen as sales declined this year; past fluctuations in sales of this department have been outstanding, especially the peak of last July.

tory-sales relationship of 1948 can be taken as a convenient benchmark from which to measure inventory rises during late 1950 and the first half of this year. To the extent that inventories have outstripped sales since 1948, it seems justifiable to regard inventories as out of line with sales; this in fact has been the view of merchants themselves, as already noted.

Department Store Inventories The first of the series of charts on department store inventories shows the course of inventories and sales for all departments taken together. It applies to the Fourth Federal Reserve District only, although essentially the same pattern would be exhibited in a chart applying to total department store sales in the United States. (3) It is apparent that department store inventories rose out of proportion to sales during the year of the Korean War. This is indicated by the divergence of the red line from the general drift of the fluctuating black line during the second half of 1950 and the first half of this year.

Clothing Inventories The second chart of the department store series applies to inventories and sales of *women's coats and suits* in Fourth District department store trade. Although this department is not necessarily typical of all soft-goods departments, it is nevertheless a large one and is very important to department store trade. The chart shows that inventories of coats and suits have been high in relation to sales for more than two years, as judged by 1948 standards. The Korean War developments seem not to have altered this relationship appreciably.

The *men's clothing* department, however, did participate quite heavily in the inventory bulge of the past year, as shown by the next chart. In fact, the behavior of this department, both with respect to sales and inventories, was more nearly similar to that of the housefurnishings departments than were most of the other apparel lines. No doubt such a development in men's clothing marked the ebb and flow of expectations as to the prospects of wool supplies and wool prices in the light of shifting international circumstances.

Housefurnishings Inventories It is in the housefurnishings lines that sales and inventory positions have been especially affected by war and rearmament factors insofar as dependence on prospectively scarce materials has carried weight in the appraisals of buyers and sellers. The last three of the six department store charts present important samples of such departments.

Inventories of the *furniture and bedding* department, which always require a rather large monetary outlay on the part of merchants, are shown in the next chart. It is apparent that furniture stocks, from a "subnormal" level in 1949 and early 1950, rose to a position somewhat out of line with sales, as judged by 1948 standards. It cannot be said, however, that furniture stocks in the spring of this year were strikingly abnormal. In fact they looked relatively conservative as compared with some of the other housefurnishings departments shown in the succeeding charts. Furthermore, furniture inventories did not appear any further out of line with sales than did the average inventory of all departments together, as shown by the first chart in this series.

Floor coverings, as depicted in the next chart, have exhibited problems of inventory more serious than those of furniture. The rise in stocks of domestic floor coverings during the past year far outstripped the sales position, after nearly three years of a comparatively steady relationship between inventories and sales. Movements in the price of wool are reflected, with some lag, in both the inventory and sales series for this department. (4)

Stocks of *major household appliances* have also become swollen as sales declined this year. On this chart it may be noted that the two "Korean" buying waves were outstandingly large in this department as shown by the sharp peaks of sales in July 1950 and January 1951.

In addition to the samples of housefurnishings departments which are depicted in the charts, it should be noted that the *radio, phonograph* and *television* department developed an inventory problem during the early part of this year which is considered to be in many respects the most serious of any department store line. Unfortunately, it is not feasible to chart this situation in a form comparable with the other departments, because of the relative newness of television as a product and the consequent inadequacy of past statistical records.

Prewar Ratios for Comparison In addition to charting the comparative trends of inventories and sales, as described above, it is possible to arrive at some understanding of the inventory-sales relationship by means of direct ratios

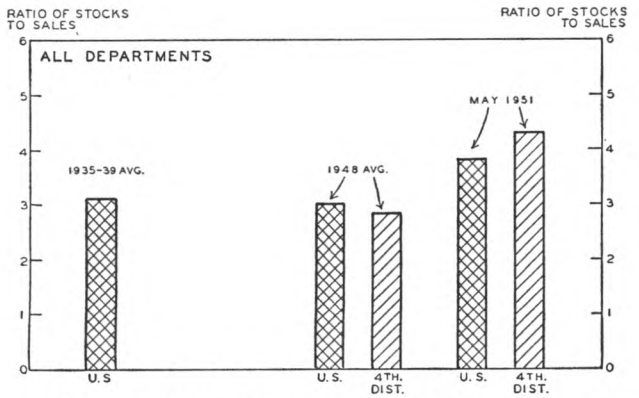
(3) A similar chart for U. S. department store sales would differ mainly in the following respects: (a) The divergence between inventories and sales during early 1951 would be slightly less pronounced in the national series; the latter would also show a steadiness of sales from April through June of this year. (b) The steep drop in sales in November of last year would be less pronounced in the national series since the blizzard of that month affected other parts of the country less severely than this particular District.

(4) Both the inventory and sales series in these charts are drawn from dollar values at retail. As a consequence, if the trend of sales or of inventories is observed separately in relation to time, important allowance for price changes should be made by the reader in case he is interested in physical-volume trends. However, since the price factor affects *both* the red and black lines it can be practically disregarded in studying the *relationship* between inventories and sales, as is the purpose of this article.

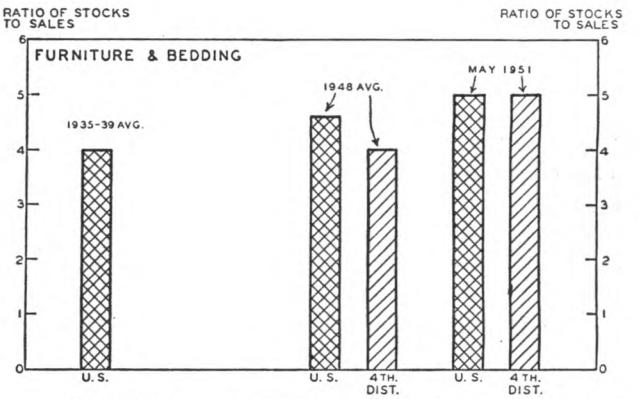
STOCK - SALES RATIOS FOR SELECTED DEPARTMENTS

MAY 1951 COMPARED WITH PREWAR AND 1948

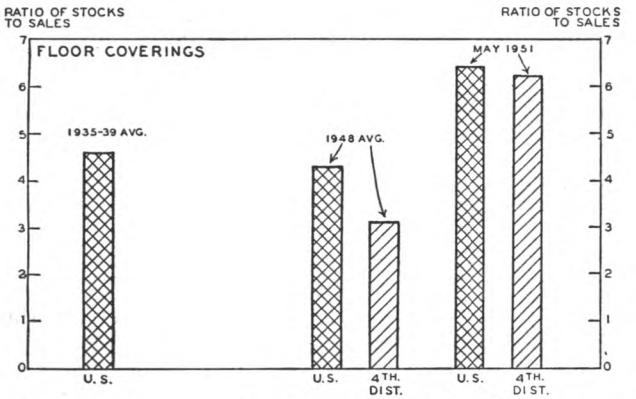
U. S. and Fourth District Department Stores



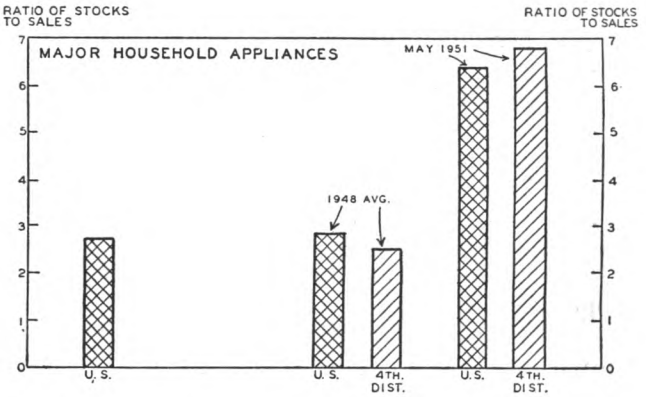
. . . the ratio of department store stocks to sales in May 1951 was higher than in the 1935-39 prewar period as well as higher than in the year 1948; the ratio for Fourth District stores climbed more than the national average.



. . . the stock-sales ratio for furniture and bedding has been moderately higher than in 1948 or prewar; in the case of the national average, the rise since 1948 has been quite small.



. . . for floor coverings the stock-sales ratio showed a significant rise between 1948 and May 1951, especially for the Fourth District; recent levels are also high compared with the 1935-39 average.



. . . for household appliances the stock-sales ratio in May 1951 was more than twice as high as in 1948 or prewar.

between the value of inventory at the beginning of a given month and the value of sales during that month. A few of such ratios are shown in the final series of bar charts. These confirm broadly the findings already given, but in addition they provide a prewar benchmark of the inventory-sales relationship, thus constituting a check on the previous use of the year 1948 as a benchmark.

Each of the bar charts shows the stock-sales ratio for United States department stores for the average of the years 1935-39 (an item which is not readily available for Fourth District stores) followed by the average stock-sales ratio during 1948 both for U. S. department stores and Fourth District stores, and finally the corresponding stock-sales ratios for May 1951, the latest date available for this particular type of information.

It is apparent from the first of the bar charts that the ratio of department store stocks to sales in May 1951 was higher than in the 1935-39 prewar period as well as higher than in the year 1948. The ratio for Fourth District stores climbed more than the national average.

Ratio charts are also shown for the three house-furnishings departments which were included in the previous set of charts.

The stock-sales ratio for *furniture and bedding* has been moderately higher than in 1948 or prewar. In the case of the national average, however, the rise since 1948 has been quite small.

For *floor coverings*, the stock-sales ratio showed a significant rise between 1948 and May 1951,

CONTINUED ON PAGE 9

Feed Grains--The Raw Material of Meat Production

THIS year's harvest of the four principal feed grains may be as great as that of the two preceding years, and not far from the all-time peak of 1948.

The amount of livestock on farms, however, has been increasing at an average rate of about 3.5 percent per year for several years. It is evident, therefore, that feed grain production is not keeping pace with the increasing animal population. Total supplies of feed per grain-consuming animal unit may decline for the second year. Production may fall short of requirements for the third consecutive year. The breach thus far has been filled out of carryover stocks.

Pressures exerted on the feed grain supply by the livestock population, and the price relationships which result therefrom, are highly influential in determining farmers' plans for expanding or cutting back on meat production.

This relationship between live animal prices and the cost per unit of the major feed they consume is commonly shown by the various so-called feeding ratios. They tell the amount of feed that a given weight of livestock, or livestock product, will buy. When these ratios are favorable, expansion usually occurs. Such an expansion is generally sparked by an abundant feed grain production and a high consumer demand for meat.

It has been demonstrated quite conclusively that people consume larger quantities of meat as their disposable incomes rise. Record-breaking incomes and an expanding population continually create the need for new records in livestock and subsequently feed grain production.

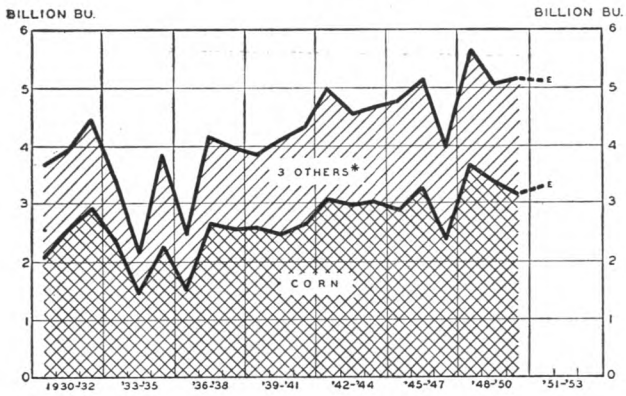
If present crop production prospects materialize, and expected high consumption rates continue, the feed grain supply will be somewhat tighter than last year, although not so extreme as in a deficiency year such as 1947 (see second chart).

Several factors could still enter into the picture to upset seriously the current supply and demand outlook. Grain as yet unharvested, is still subject to weather, especially in the case of corn. If exceptionally good, corn production could conceivably exceed requirements. Secondly, a general easing in world tension during the coming year could also serve to diminish demand for feed grains. On the other hand, the most dismal supply outlook would appear if larger scale war in the Far East or elsewhere, were accompanied by a serious corn crop failure in this country.

Corn Prospects Corn production prospects were estimated at 3,295 million bushels by the U. S. Department of Agriculture on July 1. This one grain makes up about two-thirds of the

PRODUCTION OF PRINCIPAL FEED GRAINS

United States, 1930-51



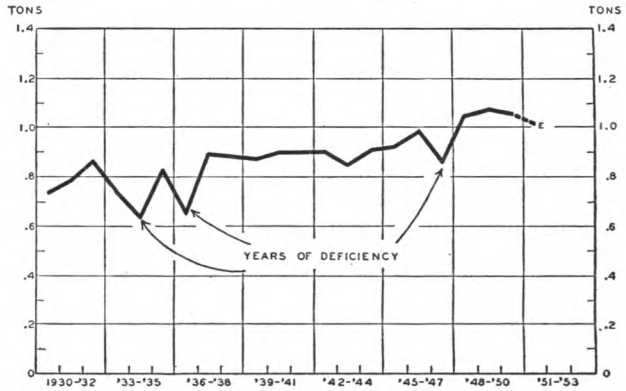
. . . feed grain production this year may be nearly the second best on record, solely because of an expected increase in corn.

* Oats, Barley, Sorghum Grain.

e July 1 estimate.

Source: Bureau of Agricultural Economics data.

FEED SUPPLY PER GRAIN-CONSUMING ANIMAL UNIT[1]



. . . a second-best feed grain year on record, however, will not necessarily be enough to cope with the constantly growing livestock population. In fact, the feed supply per animal unit may be the smallest since 1947. The deficiencies of 1934, 1936, and 1947 were serious enough to force liquidation of breeding stock.

1 Feed supply includes production, carryover stocks, imports, and wheat, rye and by-product feeds fed. Animal units are all grain consuming species of livestock weighted according to proportion of grain in their normal ration.

e July 1 estimate.

Source: : Bureau of Agricultural Economics data.

principal feed grain production. If a crop of this size is realized, it would be 5 percent above last year and the third largest on record. This 3.3 billion bushel crop, however, would probably not be sufficient to take care of total needs for the marketing year beginning October 1. Additional requirements will have to come from the already lower carryover stocks of old corn.

The probable supply and distribution of U. S. corn for the coming year is forecast and compared with recent years in this table:

Corn Supply and Distribution (U. S.)

	Year Beginning October 1			
	1948	1949	1950	1951
	(million bushels)			
Supply				
Carryover from previous year	125	825	860	742
Production	3,682	3,379	3,131	3,295
Imports	1	1	1	...
Total Supply	3,808	4,205	3,992	4,037
Utilization				
Livestock feed	2,617	2,968	2,850	3,000
Other domestic use	255	270	300	300
Exports	111	107	100	65
Total Used	2,983	3,345	3,250	3,365
Carryover to following year	825	860	742	672

A carryover of only 672 million bushels a year hence would be the smallest since the poor crop year of 1947. This could also prove to be a price strengthening factor for the crop to be harvested this fall.

Carryover stocks were at a record high 860 million bushels at the beginning of the feeding year now drawing to a close. As indicated in the table, it was those record high stocks which held the total supply, during the current 1950-51 year, above that estimated for the coming 1951-52 year.

About 90 percent of the total U. S. corn supply is used for livestock feed each year. It is therefore appropriate that the supply of this grain be evaluated in terms of the livestock population which depends upon it for growth. When reduced to terms of supply per animal unit it becomes apparent that the estimated 1951-52 corn supply may not be so favorable as the total figures would indicate. The expected total supply is little different from last year but the quantity available per grain-consuming animal unit may be down more than 3 percent. Similar calculations also indicate that the prospective total supply would be up 10 percent from the average of the past five years, but that on a per-animal-unit basis it may increase by only 1 percent.

Further comparison shows that the estimated 1951-52 total supplies, not adjusted for livestock population growth, are one-third above the years immediately preceding World War II. Supplies per animal unit, however, are only about one-tenth above this prewar period. This extra one-tenth which is actually available reflects great increases in feeding rates intended to produce more eggs per hen and more milk per cow. A 4-billion-bushel corn supply, for example, would have meant ruinous surplus in years before World War II; but in 1950 the same number of bushels failed to prevent wide comment about "the tight feed situation". It can be seen from these several comparisons that production or total supply figures are much more meaningful when they are stated in terms relative to need.

Other Feed Grains Oats, barley and sorghum grain production are all currently estimated to be below last year's level. This is in line with production guides suggested by the U. S. Department of Agriculture prior to planting time. Reduced acreage of these was desired to permit greater plantings of corn and soybeans.

The oats crop at 1.4 billion bushels, while above average, is estimated nearly 7 percent below last year. Owing to carryover stocks from last year, however, an ample supply is assured for the year ahead.

Most oats stocks are stored on farms. The farm stocks on July 1 of this year were about 265 million bushels—38 percent more than last year and the third largest since 1926 or earlier. This high carryover is due to the large 1950 production as disappearance has been above average throughout the marketing year just ended.

The probable supply and distribution of oats during 1951-52 is indicated and compared with the past two years in this table:

Oats Supply and Distribution (U. S.)

	Year beginning July 1		
	1949	1950	1951
	(million bushels)		
Supply			
Carryover from previous year	295	220	298
Production	1,329	1,465	1,368
Imports	20	20	25
Total Supply	1,644	1,705	1,691
Utilization			
Livestock feed	1,263	1,253	1,275
Other domestic use	145	139	140
Exports	16	15	15
Total Used	1,424	1,407	1,430
Carryover to following year	220	298	261

In terms of bushels, oats account for over 25 percent of the total production of the four principal feed grains. In tonnage it is somewhat less. About three-fourths of the total oats supply, including carryover and imports, is used as livestock feed each year.

Barley showed the greatest percentage change in production, from both last year and average, for the three feed grains for which estimates are available. This crop, at 263 million bushels, is down about 14 percent from last year and average. The drop is due almost entirely to the smaller acreage planted. Yields were practically the same as last year, averaging 26.8 bushels per acre for the United States.

Official estimates of the sorghum grain crop are not yet available. Acreage of all sorghum is down about 6 percent but yield prospects are very good so the crop may not be far short of the 237-million-bushel record of last year.

Sorghum grain and barley together make up less than 10 percent of the total feed grain production. Of the two, barley is the more important and only about half of it is used as livestock feed.

In the Fourth District, feed grain production will show a greater increase over last year than in most other areas of the country if July 1 estimates are realized.

Fourth District Feed Production Prospects

	1950	1951*	% Change from 1950-51 4th Dist.	U. S.
	(millions)		(%)	(%)
Corn, bu.....	219	256	+17%	+5%
Oats, bu.....	54	61	+13	—7
Tame hay, tons.....	6	7	+ 5	+6

* July 1 estimate.

The corn crop may show a percentage increase nearly 3½ times as great as the average over the country. The majority of this is probably due to the all-out effort of farmers in the corn belt area of western Ohio. Yields in Ohio are expected to run about 58 bushels per acre compared with 52 bushels last year. Acreage in this state is up about 7 percent.

July 1 oats production estimates for the Fourth District are in sharp contrast to the national average. Planted acreages were probably above that suggested by the U. S. Department of Agriculture and yields are at least as good as last year over most of the District.

Barley acreage and production estimates are generally lower in each of the four states included in the Fourth District.

Hay and Pasture Conditions High production of good quality hay and pasture greatly decrease the feed grain requirements of much of the so-called grain consuming livestock, thereby decreasing costs of production throughout the year. It is thus good news to farmer and consumer alike that the expected hay crop will break all records and that pastures are unusually abundant with conditions the third best in 24 years for early summer.

All major types of hay produced will likely exceed average production during this summer. Lespedeza may be the only one which will not be above last year's production. The total crop will probably be near 113 million tons, over 4 million tons above the previous high crop harvested in 1945. Acreage and yields per acre may be equal to or above both last year and the 1940-49 average for most varieties. Acreages of wild hay and clover-timothy mixtures may give some exception to this as they are being replaced with more nutritious varieties.

Production of alfalfa promises to set a new record. Both yields per acre and acreages are above last year. Part of this increase is due to greater use of alfalfa in mixtures.

Pasture conditions in general were good to excellent throughout the Fourth District on July 1. An abundance of moisture which contributed to the favorable pasture growth, however, has interfered with haymaking over much of this area. Drying difficulties will result in some low quality hay. Production of alfalfa, clover-timothy mixtures and the total of all hay is expected to be above last year and average for all Fourth District states except Kentucky. The increase in production of tame hay within the District as pointed out in the production table, is about 5 percent. This is slightly below the average rate of increase for the United States as a whole.

Prospective Feed Price Factors Price support levels for this year's harvest (determined and announced several months ago) were geared to encourage larger plantings and to reduce the risk of low prices should this larger production be in excess of demand.

As of May 31, the Commodity Credit Corporation had $4.1 billion of its $6.75 billion statutory borrowing authority available for price support operations.

The market price for corn, the key feed grain, was only 93 percent of parity on July 15. A harvest of the size indicated on July 1 could force the market price below the support level. Corn prices will be supported at 90 percent of the October 1 parity, or at a national average price of $1.54, whichever is the higher.

Oats and barley prices dropped much more than

seasonally during June. Further decline will likely be small unless the corn crop is much larger than now estimated. Both are eligible for price support at 75 percent of the January 15 parity price. July 15 average market prices were at 80 percent of parity for oats and 77 percent of parity for barley.

Sorghum grain price prospects cannot be clearly appraised until supply estimates become more definite later this year. Demands for feeding Korea may add some strength to the price in future months. The price support level for this grain has been set at 75 percent of the January 15 parity. It had previously been placed at 65 percent but was raised to encourage planting in abandoned wheat land. Although it is not grown for grain on farms in the Fourth District, sorghum provides a considerable amount of feed for livestock in many western states, thus easing the pressure on corn supplies.

Factors indicating strength in feed grain prices during the coming year are the prospects of a continued high level of employment and the consequent relatively high demand for meat and other livestock products. These would bolster the livestock feeders' demand for feed grains.

Foreign Situation Foreign trade does not make a substantial contribution to the supply or distribution of United States feed grains. Exports of these grains during the highest of the past ten years was equivalent to only about 3 percent of the tonnage in our total supply. Imports, at the highest point during those years, accounted for roughly only 1 percent of the annual supply. Corn is the leading feed grain exported whereas oats now accounts for most of the imports.

Trade Inventories and Sales

(CONTINUED FROM PAGE 5)

especially for the Fourth District. Recent levels are also high compared with the 1935-39 average.

For *household appliances,* as shown in the final chart, the stock-sales ratio in May 1951 was more than twice as high as in 1948 or prewar.

NOTE ON SOURCES

The first two charts, i.e., those for retail trade and wholesale trade, are drawn directly from seasonally-adjusted dollar estimates published by the United States Department of Commerce.

The six charts showing department store inventory and sales indexes by departments are based on Federal Reserve data for the Fourth District. Responsibility for all seasonal adjustments, and for the use of 1948 as base period, is with this Bank.

The final set of bar charts showing stock-sales ratios is based on two sources. The 1935-39 averages, as well as the 1948 averages in the case of the national series, are derived from data on stock turnover by departments from the National Retail Dry Goods Association. Data for the Fourth District for 1948, and for both the district and national series for May 1951 were obtained by direct computation from Federal Reserve data, by means of dividing beginning-of-month (dollar) inventory by (dollar) sales during the month, for identical samples of stores. An independent check of the results obtained from these two sources for identical time periods indicates that the two types of material yield comparable results.

ANNOUNCEMENT

On July 25, the National Voluntary Credit Restraint Committee released Bulletin No. 6 for the purpose of clarifying its position with regard to new credits secured by stocks and bonds, as follows:

The original Statement of Principles of the Program for Voluntary Credit Restraint provided that "The foregoing principles (*the anti-speculative provisions*) should be applied in screening as to purpose on all loans on securities whether or not covered by Regulation U or T."* The first amendment to the Statement of Principles deleted the phrase "whether or" from the statement. This provision has been the subject for a number of inquiries. For example, the question has been raised as to whether a loan on securities not covered by Regulation U or T must be screened as to purpose even though the amount of credit advanced might be permissible under these regulations. Such an interpretation would appear to treat the loans secured by unlisted stocks more severely than those on listed (i.e., "registered") securities. In order to cure this ambiguity, the following principles are recommended for your guidance by the National Committee:

(1) Loans on securities covered by Regulations U or T are basically for the purpose of purchasing or carrying listed securities. It is recommended, therefore, that all loans on securities for purchasing or carrying unlisted securities be presumed to be for a proper purpose if the amount of credit extended is no greater than that permitted in the case of listed securities by Regulations U or T.

(2) Loans on securities, whether or not listed, but *not* for the purpose of purchasing or carrying securities should be made only for purposes consistent with the principles of voluntary credit restraint.

* The Statement of Principles also provides that "loans to securities dealers in the normal conduct of their business or to them or others incidental to the flotation and distribution of securities where the money is being raised for any of the foregoing *(proper)* purposes" should be classified as "proper".

SUMMARY OF NATIONAL BUSINESS CONDITIONS

By the Board of Governors of the Federal Reserve System

(Released for Publication July 30, 1951)

Industrial production in June was at about the same level as during the first five months of this year, but a somewhat more than seasonal decline is indicated in July. Prices of raw materials have decreased further in the first three weeks of July owing in part to prospects of near record crops. Consumer buying of automobiles and department store goods has been maintained, however, for this season of the year. The rate of Federal defense expenditures has continued to rise considerably.

Industrial production

The board's index of output at factories and mines in June was 222 per cent of the 1935-39 average, and 12 percent greater than a year ago. Preliminary indications are that the index may decline to around 215 in July owing mainly to vacation shutdowns in nondurable goods industries, which are not currently allowed for in the index, and a further restricted volume of auto assemblies.

Total durable goods output was maintained in June as further increases in industrial and military equipment offset additional curtailments in output of furniture and other household goods. Although increasing only moderately in recent months, machinery output has risen more than 25 per cent in the past year. Output of aircraft and ordnance has practically doubled since last June. Reflecting capacity limitations, production of basic metals has changed little in recent months.

A slight decline in nondurable goods production reflected largely a further easing in demand for textile and paper products. By June, output of these and some other nondurable goods was only moderately below earlier peak rates but larger than seasonal declines are indicated in July.

Output at mines was at a record level in June, reflecting an increase in coal in anticipation of the vacation period for miners in July, and a slight further expansion in crude petroleum.

Construction

Construction contract awards, which rose to an unprecedented total in May as a result chiefly of almost 1 billion dollars of publicly financed atomic energy awards, declined in June to about the April total. Private awards also fell off following a marked rise in May. Private housing starts in June remained substantially below last year's high level, but because of an exceptionally large volume of publicly financed units started, the total was only moderately below a year ago.

Employment

Employment in nonagricultural establishments in June, after adjustment for seasonal variation, was maintained at the record May level. The workweek in manufacturing industries continued to average close to 41 hours; average hourly earnings advanced further by about 2 cents to $1.60 per hour. Unemployment this June was at the lowest level for any June since 1945.

Agriculture

Crop production, based on July 1 conditions, was officially forecast to be close to the 1948 record and 7 per cent above last year. Cotton acreage was indicated to be three-fifths greater, and somewhat larger hay and grain crops were forecast. Milk and egg production in June was at last year's level. Marketings of meat animals, however, in June and the first three weeks of July have fallen about 5 per cent below year-ago levels.

Distribution

The seasonally adjusted total value of retail sales has continued to show little change from the reduced level reached in April. Durable goods sales were somewhat lower in June owing largely to a further decline in sales of building materials and hardware. Department store sales showed somewhat less than the usual seasonal decline from June to the first three weeks in July. Value of department store stocks declined moderately further in June, but was still about 30 per cent above a year ago.

Commodity prices

The general level of wholesale commodity prices has declined since mid-June to a level about 3 per cent below the high reached in mid-March. As during earlier months, the recent decline has reflected chiefly decreases in prices of industrial materials. Spot cotton prices, which had held at ceiling levels until July 3, dropped rapidly following the release on July 9 of the government acreage report, which indicated a crop even larger than had been anticipated earlier. Wholesale prices of most finished goods have been maintained, although reductions have recently become more numerous reflecting reduced inventory demands and further declines in prices of some materials.

Consumer prices eased slightly in June but the index was 9 per cent above June 1950. Only rents increased slightly further.

Bank credit and the money supply

Business loans outstanding at banks in leading cities increased in June but declined somewhat in the first half of July. Loans for defense-supporting activities, including principally loans to metal manufacturers and public utilities, expanded further, while loans to processors of agricultural commodities were reduced further.

Deposits and currency held by businesses and individuals increased somewhat during June but showed little further change in early July. In June, the rate of use of demand deposits at banks in leading cities outside New York, on a seasonally adjusted basis, remained at the high May level.

Average interest rates charged by commercial banks on short-term business loans rose slightly further from March to June in all areas of the country.

Security markets

Yields on government securities generally declined slightly in the first three weeks of July. The treasury increased the bill offering by 200 million dollars each week. On July 12 the Secretary of the Treasury announced the offering of an 11 month 1-7/8 per cent certificate of indebtedness to holders of the treasury notes maturing August 1.

FINANCIAL AND OTHER BUSINESS STATISTICS

Time Deposits at 55 Banks in 12 Fourth District Cities

(Compiled July 6 and released for publication July 7)

City and Number of Banks	Time Deposits June 27, 1951	Average Weekly Change During: June 1951	May 1951	June 1950
Cleveland (4)	$ 877,893,000	+$1,520,000	+$ 750,000	+$394,000
Pittsburgh (9)	494,318,000H	+ 1,673,000	+ 342,000	+ 46,000
Cincinnati (8)	175,742,000	— 164,000	— 58,000	— 506,000
Akron (3)	99,821,000	+ 46,000	+ 168,000	— 83,000
Toledo (4)	107,851,000H	+ 242,000	+ 11,000	+ 40,000
Columbus (3)	86,756,000	— 2,000	+ 87,000	— 70,000
Youngstown (3)	62,192,000	+ 101,000	+ 24,000	— 54,000
Dayton (3)	45,591,000	+ 79,000	+ 87,000	— 54,000
Canton (5)	42,142,000	+ 62,000	+ 82,000	— 9,000
Erie (3)	41,201,000	+ 42,000	+ 20,000	+ 22,000
Wheeling (5)	26,356,000	— 10,000	— 34,000	— 11,000
Lexington (5)	11,015,000H	+ 58,000	+ 11,000	+ 5,000
TOTAL—12 Cities	$2,070,878,000H	+$3,647,000	+$1,490,000	—$280,000

H—Denotes new all-time high.

Time deposits at reporting banks in 12 Fourth District cities increased for the third successive month during June at an average weekly rate of $3,647,000 to reach a new all-time high. This marked the first time this year that the total of such accounts exceeded the year-ago figure. The expansion was in sharp contrast to moderate declines in time deposits in June 1950 and 1949, and was substantially greater than in the same month of earlier postwar years.

Each of the twelve cities contributed, directly or indirectly, to the relatively large increase in savings balances during June. A majority of cities reported actual gains; moreover, in the three cities where net withdrawals occurred, the shrinkage was less than in June last year.

Pittsburgh registered the ninth successive month of increase, and the sharpest gain since February 1950 in establishing a new record level of time deposits. However, the bulk of the June inflow represents corporate deposits of the proceeds of new financing, rather than savings from current income. Also reaching new all-time highs were **Toledo** and **Lexington** where there has been a net gain in savings accounts in almost every month this year.

In **Cleveland,** the average rate of increase of $1,520,000 per week, although more rapid than in any other June on record, still left the total of time deposits below the comparable 1950 or 1949 figures.

Shrinkages in time deposits during June, as reported by **Cincinnati, Columbus,** and **Wheeling,** have been typical of this month at these cities.

Adjusted Weekly Index of Department Store Sales*

Fourth District

(Weeks ending on dates shown, 1935-39 average = 100)

1950r		1951		1950r		1951	
Jan. 7	278	Jan. 6	425	July 1	327	July 7	314
14	310	13	412	8	322	14	330
21	320	20	443	15	354	21	325
28	308	27	398	22	388	28	
Feb. 4	293	Feb. 3	287	29	418	Aug. 4	
11	308	10	359	Aug. 5	374	11	
18	279	17	354	12	344	18	
25	255	24	365	19	330	25	
Mar. 4	258	Mar. 3	302	26	323	Sept. 1	
11	279	10	293	Sept. 2	295	8	
18	264	17	266	9	324	15	
25	263	24	251	16	345	22	
Apr. 1	285	31	293	23	318	29	
8	279	Apr. 7	297	30	335	Oct. 6	
15	262	14	311	Oct. 7	297	13	
22	283	21	323	14	307	20	
29	334	28	358	21	287	27	
May 6	299	May 5	336	28	298	Nov. 3	
13	296	12	312	Nov. 4	280	10	
20	299	19	313	11	281	17	
27	295	26	312	18	288	24	
June 3	295	June 2	309	25	221	Dec. 1	
10	314	9	311	Dec. 2	195	8	
17	309	16	304	9	328	15	
24	306	23	312	16	334	22	
		30	325	23	314	29	
				30	342		

* Adjusted for seasonal variation and number of trading days. Based on sample of weekly reporting stores which differs slightly from sample reporting monthly.

Bank Debits*—June 1951 in 31 Fourth District Cities

(Compiled July 12 and released for publication July 13)
(In thousands of dollars)

No. of Reporting Banks		June 1951	% Change from Year Ago	3 Months Ended June 1951	% Change from Year Ago
184	ALL 31 CENTERS	$9,977,006H	+22.3%	$28,840,748H	+28.3%
	10 LARGEST CENTERS:				
5	Akron, Ohio	$ 400,535H	+56.2%	$ 1,126,305H	+55.3%
5	Canton, Ohio	153,537	+22.0	439,339	+22.0
15	Cincinnati, Ohio	1,181,310	+16.2	3,405,663	+21.5
10	Cleveland, Ohio	2,605,286H	+25.7	7,552,033H	+34.1
7	Columbus, Ohio	602,906	+ 0.9	1,857,442	+ 7.4
4	Dayton, Ohio	301,653	+16.9	891,014	+23.3
6	Toledo, Ohio	475,863	+20.5	1,353,433	+23.2
4	Youngstown, Ohio	225,462H	+25.6	636,712H	+25.7
6	Erie, Pa.	127,715H	+26.4	350,605H	+24.5
45	Pittsburgh, Pa.	3,062,115	+24.7	8,840,069	+33.8
106	Total	$9,136,382H	+22.5	$26,452,615H	+29.2
	21 OTHER CENTERS:				
9	Covington-Newport, Ky.	$ 47,899	+ 6.2%	$ 135,767	+ 7.4%
6	Lexington, Ky.	62,334	+ 6.8	186,712	+ 2.9
3	Elyria, Ohio	28,783	+31.4	81,732	+30.5
3	Hamilton, Ohio	52,530H	+23.4	151,005H	+24.5
2	Lima, Ohio	61,357	+26.1	177,060	+29.8
5	Lorain, Ohio	21,550	+16.9	63,759H	+21.7
4	Mansfield, Ohio	59,287	+19.7	170,553	+21.9
2	Middletown, Ohio	53,546H	+35.1	146,602H	+28.5
3	Portsmouth, Ohio	24,808	+14.3	73,029	+15.2
3	Springfield, Ohio	56,471	+19.3	166,227	+21.7
4	Steubenville, Ohio	29,041H	+17.3	83,790H	+19.2
2	Warren, Ohio	58,680H	+32.9	161,869H	+30.4
3	Zanesville, Ohio	33,530	+14.8	97,583H	+12.5
3	Butler, Pa.	40,214H	+15.9	114,554H	+20.7
1	Franklin, Pa.	8,590	+ 8.4	24,964H	+16.3
2	Greensburg, Pa.	27,154	+13.5	76,351H	+17.8
4	Kittanning, Pa.	13,367H	+33.1	38,035H	+27.5
3	Meadville, Pa.	16,402H	+ 4.8	46,947H	+13.8
4	Oil City, Pa.	22,091	+ 4.7	60,274	+ 6.2
5	Sharon, Pa.	39,013H	+30.9	103,563H	+22.9
6	Wheeling, W. Va.	83,977	+24.8	227,757	+19.0
78	TOTAL	$ 840,624	+19.8	$ 2,388,133	+19.4

*Debits to all deposit accounts except interbank balances.
H—Denotes all-time high.

Debits to deposit accounts (except interbank) in 31 Fourth District cities rose seasonally in June to establish a new all-time high volume of $9,977,006,000, 6% more than in May, and 22.3% above the figure for June last year. Quarterly income tax payments are a significant factor in the June debits total. Aggregate debits for the second quarter of this year also registered a new record, 28.3% in excess of the second quarter total for 1950.

With deposits showing little change during the month, the rate of turnover rose to a new postwar high of nearly 14 times per year in contrast to the annual rate of turnover of 12 in June last year.

TEN LARGEST CENTERS

Debits at the large centers posted new all-time highs both for June and for the second quarter. Although the year-to-year margin for June, 22.5%, was the smallest in almost a year, the movement in debits over the spring months was about the same as in the comparable period of 1948.

For the fourth month this year, **Akron** reported a gain of more than 50% over year-ago debit volume, establishing a new record for the fourth consecutive month. Other large cities also posting new all-time highs for both June and the second quarter were **Cleveland, Youngstown** and **Erie** all with year-to-year gains for the month of more than 25%.

TWENTY-ONE SMALLER CENTERS

Debit volume at the smaller centers in June was the highest on record with the exception of the seasonal peak registered in December last year. The 19.8% margin over the June 1950 figure was virtually the same as in the two preceding months and more closely approached the year-to-year expansion at the large centers than in any month this year.

Middletown again led in year-to-year comparisons with an increment of 35.1% followed closely by **Kittanning, Warren, Elyria** and **Sharon** all with gains of more than 30%. For the second quarter as a whole, all-time highs were established by a majority of the smaller centers, with only three centers registering gains of less than 10%.

Indexes of Department Store Sales and Stocks

Daily Average for 1935-1939 = 100

	Adjusted for Seasonal Variation			Without Seasonal Adjustment		
	June 1951	May 1951	June 1950	June 1951	May 1951	June 1950
SALES:						
Akron (6)	306	322	295	287	312	277
Canton (5)	400	409	369	384	405	354
Cincinnati (8)	280	319	293	261	319	272
Cleveland (11)	280	297	269	266	288	255
Columbus (5)	315	345	314	302	328	301
Erie (4)	381	362	366	347	344	333
Pittsburgh (8)	283	272	283	275	272	275
Springfield (3)	279	283	271	271	283	263
Toledo (6)	291	299	280	270	290	260
Wheeling (6)	247	257	252	227	252	232
Youngstown (3)	366	360	324	344	349	304
District (98)	306	309	299	287	306	281
STOCKS:						
District	354	380	265	360	383	261

Probing Into The Unusual Metals

by CLYDE WILLIAMS, *Director, Battelle Memorial Institute*

The unusual or uncommon metals such as zirconium, germanium, molybdenum, uranium, titanium, and vanadium are in increasing demand to fill industrial and military needs. They will not alleviate the present tight supply situation of aluminum, copper, zinc, and other common metals. They will, however, continue to serve as added tools to do a job better than some other material is now doing, or to do a job that some other material is unable to do.

Of the 98 elements reported so far, over two-thirds are metals. Scarcely more than a dozen of these are really common. There is, therefore, a substantial reserve of uncommon metals for scientists to draw upon for those unique properties which scientific advances are always demanding. These properties include high strength at high temperatures, high strength and light weight, electrical and atomic characteristics, and resistance to severe corrosion.

Volume production of the unusual metals so far is small and prices are high compared with the common metals. This has been due either to the scarcity of ores, difficulties of extraction, or fabrication costs, or some combination of these factors. Price is a good yardstick of production problems. Molybdenum sheet, for example, sells for from $25 to $50 per pound, depending on thinness. On the other hand, the common metal, aluminum, is priced from 30 to 45 cents per pound in sheet form. Titanium is the only metal now classified as "uncommon" which shows definite promise of reaching production and price levels comparable to those of the common metals. Output of titanium, at a current annual rate of about 1,000 tons, may increase 100 or even 1,000 times during coming years. Its price in sheet form may fall from around $15 per pound at present to about $1.00 per pound.

Fortunately, in the majority of cases, a large quantity of an unusual metal is not needed to do its job. As one example, a few tenths of a per cent of columbium added to stainless steel will stabilize it so corrosion will not take place after welding or slow cooling. As another example, a thousandth of a per cent of tellurium will noticeably increase the depth of "chill" in cast iron.

Each of the uncommon metals has properties that fit it for specific applications in which it is better than anything else. Germanium has been found especially useful as an electric current rectifier in electronic devices. The extraordinary ability of tantalum and zirconium to combat corrosion indicates that they will be applied increasingly to corrosion-resisting equipment. When alloyed with steel, vanadium strengthens the steel and serves to remove oxygen and possible nitrogen. Molybdenum, widely employed at present in low-alloy steels, is expected to have a great future in high-temperature uses, if properly protected against oxidation. One of the biggest uses for cerium is in the carbon arc light for movie projectors, where it enhances the brightness of the light. Prospects of greatly increased available supplies of cerium may boost its usage for alloying with magnesium and various alloy steels. A small percentage of beryllium added to copper provides greater strength without excessive loss of electrical conductivity. Beryllium-copper thus becomes useful for springs in electrical applications, for non-sparking tools, aircraft instrument controls, and for various needs of atomic energy development. Chromium alloyed with steel is the unique ingredient which makes possible non-rusting or stainless steel.

Some of the unusual metals are used as coatings to protect metals against corrosion and scaling at high temperatures. Silicon perhaps is one of the most notable examples. Steel and molybdenum, coated with silicon, can be used at high temperatures without fear of chemical attack or corrosion. Siliconized molybdenum is particularly useful for very high temperature uses. Potentially valuable applications for silicon are also seen as a coating for materials used in making rocket nozzles and exhaust tubes.

Uranium, of course, is well-known as the "magical" metallic element which has made possible the major new atomic energy development. It is one unusual metal that has risen phenomenally in importance during the past ten years. Prior to that, it was a by-product of radium operations. Practical applications were largely confined to the ceramic industry where it was used as an ingredient for making the amber glass of railroad and street traffic signals.

It seems only a question of time until titanium will attain the position of a major new industry. (See *Monthly Business Review,* December, 1950). The fundamentals for its successful development are present. Ample raw materials are available from extensive United States and Canadian deposits of ilmenite, the most common titanium ore. Intensive research is now being conducted to reduce costs of production and fabrication. Promising markets in aircraft, chemical, and other industries are assured because titanium's high strength and low weight, excellent resistance to corrosion, and high melting point offer a unique combination of properties.

What is not yet known about the uncommon metals will be vastly more important than what is known. Scientists are constantly probing into the properties of these materials, many of which are difficult to prepare in pure form. Progress has been rapid recently, however, in recovering some of the pure metals. A frequent result is to give an entirely new field of usefulness not realized from the impure metal of the past. This trend toward making purer metals to give novel properties and to widen alloying possibilities is certain to continue. Only the future can tell just what is around the corner for the unusual metals, but it is sure to bring significant improvements in our present living standards.

Editor's Note—While the views expressed on this page are not necessarily those of this bank, the *Monthly Business Review* is pleased to make this space available for the discussion of significant developments in industrial research.