

MONTHLY
*Business
Review*

DECEMBER 1952

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FINANCE • INDUSTRY • AGRICULTURE • TRADE

FOURTH FEDERAL RESERVE DISTRICT

Vol. 34—No. 12

Federal Reserve Bank of Cleveland

Cleveland 1, Ohio

Industrial Highlights of 1952

BUSINESS activity throughout the year in the nation as well as in the Fourth District was virtually the same as in 1951, despite the longest steel strike ever experienced.

Industrial production for the year is estimated to be but slightly below 1951. Declines in civilian output were almost entirely offset by rising deliveries of goods to the armed services. Construction activity was very high and the value of work put in place will likely set a new record. Employment advanced sharply to a new all-time high in late summer and early fall when unemployment reached the lowest levels since VJ Day. Retail trade was strong and improved irregularly as the year progressed. Wholesale prices continued to drift downward while the consumers' price index edged up a little further. A number of direct government controls over production, prices, and credit have been removed.

Industrial Production The Federal Reserve Index of Production averaged about 215 for the first 10 months of the year (1935-39 = 100), or about 2 percent below the same 1951 period. The fourth quarter, however, may average 227, or 4 percent above a year ago, to give an annual average within 1 percent of 1951.

The existence of very large steel inventories enabled most durable goods manufacturers to continue operations at a high level despite an almost complete shutdown of the steel mills during June and nearly all of July. During June, July, and August, the durable goods index averaged 248, or only a little more than 8 percent below the same 1951 months. Recovery from this dip was rapid and durable goods out-

put is now well above the 290 level. For the year as a whole the production of hard goods will be slightly above last year.

Production of materials and goods for the defense program constitutes an important prop under business activity and the Fourth District continued to share notably this year in the receipt of military contracts. To date, Ohio contractors alone have been awarded prime military procurement and construction contracts totaling \$4.6 billion, or 7 percent of the U. S. total.

Output of nondurable goods sagged steadily through most of the first half of the year with declines most noticeable for textiles and paper products. In the main, this was a continuation of a trend that had become apparent in the latter part of 1951. By mid-year, however, a marked recovery had set in. Whereas the first 10 months of this year show a decline of 4 percent from the same 1951 months, the final quarter will likely show a gain of 3 or 4 percent over the last quarter of 1951.

Employment at Record High October figures show nonagricultural employment of about 54.6 million persons in the United States

or the highest on record for the month. Factory employment has recovered from the sag experienced in the first part of the year and in October totaled 16.4 million persons, also a new record. At the recent level of 1.3 million, unemployment is the lowest since VJ Day.

Employment in Ohio's manufacturing industries has recovered completely from the shutdown of steel-producing and metalworking plants, and in October,

at 1,357,000, was 3 percent above a year ago. The rise in employment has also been accompanied by a lengthening of the work week and an increase in average hourly earnings. Labor markets throughout the District are fairly well in balance but a shortage exists with respect to most kinds of engineers, skilled workers of nearly every description, as well as stenographic and clerical help.

Construction Activity Reduced activity in industrial building, coupled with slackened activity in commercial, other nonresidential, and heavy engineering projects, apparently kept this year's total construction contract awards in the District slightly below 1951's peak level despite a gain in residential construction.

The dollar volume of contract awards for new manufacturing plants in the Fourth District as reported by the F. W. Dodge Corporation has been tapering off during the year so that 1952's dollar total will be substantially below 1951's postwar peak.

Most of the District's defense expansion under certificates of necessity has passed through the contract award stage and these rapid amortization rights will be of declining importance as a prop under industrial construction in the future. District manufacturers have received certificates covering facilities valued at \$2.2 billion, or more than 14 percent of the United States total. About half of the value of these new defense projects is already in place.

In addition the Atomic Energy Commission announced on August 12 that the country's largest gaseous diffusion plant would be located on the Scioto River about 20 miles north of Portsmouth. The project will cost an estimated \$1,219 million and take about five years to complete. Preliminary work has already begun at the site and large-scale contract-letting will begin in 1953.

The Fourth District's home builders received a record dollar volume of residential building contracts during the first ten months of 1952, and the year's total may be 12 percent above the previous peak year of 1950. Whether or not the industry will set a new District record in physical volume, will hinge upon final November-December figures. To date the floor area contained in the District's residential awards lagged 3 percent behind the comparable 1950 period and the number of dwelling units contained in the contracts was 9 percent below 1950 peak levels.

This year's residential activity, as measured by F. W. Dodge contract awards, centered in speculative building. The floor area of for-sale single-family units exceeded the peak 1950 rate by 11 percent whereas the volume of owner-built homes dropped 22 percent during the first ten months.

Contract awards for heavy engineering, commercial and other nonresidential building activity were all below peak levels through the end of October.

Because of material controls, commercial buildings awards were at their lowest postwar level, but awards for schools and the construction of passenger and freight terminals reached new peaks this year.

In the heavy engineering awards category, utilities expansion slowed down substantially from 1951's peak level. Public works contracts exceeded the year-ago figure but were below the 1950 high.

The District's brick producers manufactured and shipped somewhat less material this year than in 1951, and stocks are slightly above 1950-51 levels.

Shipments of the District's portland cement producers during the first 9 months of the year were 9 percent below the similar peak 1951 period but output dropped only 6 percent. Demand will be bolstered next year by the needs of the turnpike and the new atomic energy project.

Steel Output The steel production and supply situation this year was completely dominated and upset by two minor and one major work stoppage. Altogether, strikes cost steel producers close to 18 million tons of ingots and metal fabricators lost about 13 to 14 million tons of finished steel products. Wage negotiations began in November 1951 and were finally concluded on July 24, 1952.

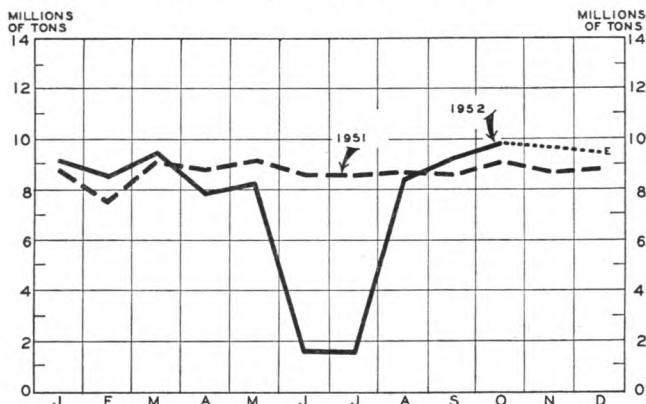
The new labor agreement gave a wage increase, retroactive to March 1, of 12.5 cents an hour plus a 1/2-cent increase in job class increments (averaged out to equal a 16-cent-an-hour increase); reduced geographical wage differences by 5 cents an hour; increased shift differentials; provided double-time wages for holidays worked and longer vacation periods; and provided a union security clause which, however, enables new employees to drop out of the union within stated time limits. The new contract expires on June 30, 1954, and provides for one wage reopening on June 30, 1953.

On August 19, the Office of Price Stabilization permitted an increase in steel prices by an average of \$5.20 a ton or about 4.7 percent. Individual product price changes were based on the number of man hours per ton so that increases ranged from 25 cents a ton for tin plate to \$31.00 a ton on wire rope.

The effect of the labor dispute upon ingot production is shown by an accompanying chart. Total output through October amounted to only 74 million tons as compared with 87 million tons for the same 10-month period of 1951. As a consequence, the substantial easing in supply which had been generally anticipated for the second half of this year was pushed further into the future.

The ability of steel fabricating and processing industries to maintain production at relatively high levels through most of the 8-week strike period, or to resume full scale operations soon after the mills reopened, amply demonstrated that a vast amount of steel had been accumulated in inventories during

U. S. STEEL PRODUCTION 1952 As Against Previous Years



... production recovered swiftly from the strike and the fourth quarter may establish a new ingot record of close to 29 million tons.

E Estimated.

Source: American Iron & Steel Institute.

the previous 18 months. This was a period in which steel supply had been generally depicted as severely deficient.

At the present time the chief shortages of steel products are largely confined to heavy plates, seamless tubing, large structurals, and large size carbon bars. Accelerated shipments to the military and defense contractors had almost entirely cleaned up their strike-accumulated arrearages by November 1, or some 30 days ahead of schedule.

Steel ingot production during October was pushed up to more than 2.2 million tons a week, or an annual rate of 116 million net tons. The rate may approach 117 million net tons by the end of the year as additional new facilities are placed in service. This would indicate an expansion in capacity of about 8.5 million tons this year, since installed capacity on January 1, 1952 was estimated at 108.6 million net tons.

Despite the increased flow of steel and some definite hints of easing in the supply of several steel products, first-quarter 1953 allocations of steel for most civilian-type products are only one-third the pre-Korean level of steel consumption, or 60 percent of third-quarter 1952 allocations. Uncashed fourth-quarter tickets will carry over to the initial 1953 quarter, which will help some manufacturers to augment supplies. The National Production Authority, in early November, announced that an additional 1.5 million tons of the most plentiful types of steel would be made available in the first quarter for civilian-type products.

Pig iron production was also sharply reduced by the steel labor dispute. Output for the first ten months dropped to 49.4 million tons as compared

with 59.3 million tons in the same 1951 period. Nevertheless, supplies were considered adequate for both steel-making and foundry purposes.

Demand for pig iron by gray iron foundries slumped sharply in 1952. In the early part of the year, the demand for castings by most types of producers of consumer durable goods fell sharply as manufacturers curtailed production and worked off inventories. In the latter half of the year, demand was held down by the aftereffects of the steel strike and inability of producers of civilian-type goods to obtain all the steel desired. A recent slump in demand for farm machinery—a major consumer of gray iron castings—has also affected new orders.

The chronic shortage of steel scrap that had prevailed since late 1950 largely evaporated this year. Even before the steel strike, supplies had begun to improve as the drives to root out dormant scrap from industry and automobile junk yards took hold. In fact, the latter effort was so successful that cast iron motor blocks almost became a drug on the market and exports were again permitted.

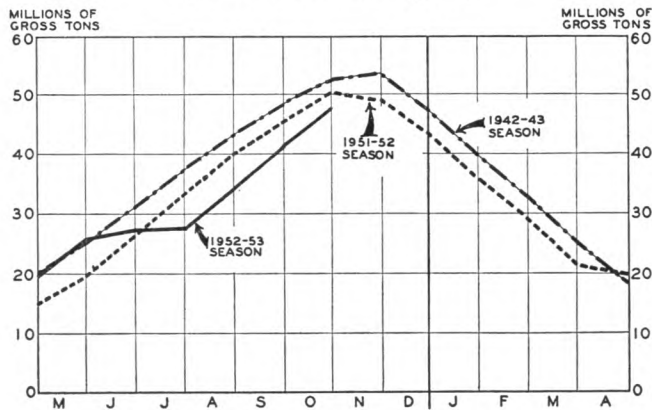
The generation of industrial scrap continued at a high rate through most of the steel strike, when of course, the mills were unable to accept shipments and consumption in the open hearths was sharply curtailed. As a consequence, mills are now carrying at least a normal 60-day supply of scrap and are confident that the scrap supply will continue adequate in the foreseeable future.

Ore Supply The Lake Superior iron ore shipping season opened on April 2 this year—more than a full week ahead of 1951—with carry-over stocks of 19.6 million tons, or nearly 30 percent larger than at the beginning of the previous season. The objective of the 1952 season was to move a record 98 million gross tons of iron ore from Upper Lake ports, an increase of about 9 million tons from 1951. This boost in the supply of Lake Superior iron ore was deemed essential to meet anticipated capacity operation of existing blast furnaces, to take care of the new furnaces that would be brought into production, and to provide an adequate carryover for the spring of 1953.

Subsequently the 54-day steel strike, which also disrupted ore shipments, caused grave concern as to the ability of the lake fleets to move enough ore in the few remaining months to maintain steel-making operations next spring.

Through a variety of circumstances these fears of inadequate ore supplies have now been largely dissipated. Although the lake carriers lost from 23 to 25 million gross tons of ore in shipments during the strike, this was offset to a large extent by about 13 million tons of ore "saved" because the blast furnaces also were almost completely shut down.

STOCKS OF LAKE SUPERIOR IRON ORE
at Furnaces and on Lake Erie Docks
(First-of-the-month figures)



... despite the virtual stoppage of ore shipments for nearly eight weeks, stocks of ore will be adequate this winter.

Source: Lake Superior Iron Ore Association.

Since July, ore movement has been expedited to the maximum extent possible. Split-second timing has speeded up both loading and unloading of vessels. The unusually high level of the lakes has permitted heavier loading, and the 1952 fleet has been augmented by new, larger, and faster ships nearly every month. As a consequence, ore shipments in September established a new all-time record of nearly 14.4 million tons which was 1.7 million tons more than handled in September 1951. If moderately good weather holds through early December, the fleet may move 75 million tons of ore. Heavy all-rail movement of ore will also add to supplies so that total stocks—as shown in the chart—should enable blast furnaces to continue capacity production.

The vigorous shipbuilding program launched in 1951 by lake shipping companies began to bear fruit this year. Through October, 10 new bulk ore carriers had been placed in service adding 174,500 tons to the fleet's trip capacity and one new self-unloading limestone carrier with 19,000 tons capacity.

Motor Vehicle Production

Motor vehicle manufacturers, early this year, had anticipated a steady increase in raw material allotments and rising output, especially in the second half of the year. The extended steel strike, however, cut third-quarter production far below the quota initially set by the National Production Authority and seriously unbalanced inventories. Nevertheless, the recovery from the loss of steel was rapid and by mid-September the auto companies were producing above the pre-strike rate. The industry has been very successful in obtaining delivery of fourth-quarter steel orders. This will enable producers to recoup most

of their third-quarter production losses but poses the threat of production cutbacks in the initial 1953 quarter.

Comparison of production totals with registration data indicate that passenger car sales exceeded output throughout the first nine months of the year with dealers' reducing their new car inventory. Production for the year will be about one-third below 1950's all-time high and 16 percent under 1951's total if production plans for the final quarter are realized.

Rubber Industry This was another milestone year for the rubber industry. It progressed with almost startling speed from its position in 1951 of being the most extensively regulated and controlled major industry to a position of almost complete freedom of action. Supplies of both raw materials and finished goods are now available in abundance and the industry has fully returned to the competitive struggle for markets that prevailed prior to June 1950.

The relaxation of Government controls began on January 1, when allocation of GR-S rubber was terminated and tire manufacturers were permitted to produce all the tires desired, provided they didn't exceed their natural rubber allotments. In the following months the National Production Authority wiped out practically all controls, including: specification controls on rubber products; inventory controls; allocation of butyl rubber; and the ban on white side-wall tires. In addition the Government monopoly in the purchase of crude natural rubber was ended and trading in the rubber futures market was restored. Manufacturers, however, are still required to report on their rubber consumption, stocks, production of tires, tubes and camelback, and latex imports.

The rapid removal of controls during the first half of 1952 was made possible by the steady improvement in the supply of both natural and synthetic rubbers, virtual completion of the natural rubber stock-piling program, and reduced demand for tires during 1951 and early 1952 as consumers of all classes used up tires accumulated earlier in anticipation of shortages.

On the basis of the trend during the first eight months of 1952 it is estimated that the new rubber supply for this year will reach the unprecedented total of 1,700,000 tons, exceeding the 1951 record by almost 8 percent. Roughly half of the supply consisted of natural rubber. The remaining half was derived from the reactivated and somewhat expanded Government-owned synthetic rubber producing facilities.

Industry sources have estimated consumption for the year at 1,230,000 tons, only a little below the record consumption in 1950 but still well under the

(CONTINUED ON PAGE 8)

Agriculture During 1952

IN terms of gross income, the passing year was the best in agricultural history. But in order to realize \$37½ billion of gross receipts, farmers had to spend more than \$23 billion which also is a record figure. The margin between the two aggregates, or realized net income to farm operators, was slightly smaller than in 1951 and as much as 16 percent below the 1947 high. Moreover, inflation has reduced the purchasing power of agricultural net income to virtually the level which existed when this country entered World War II.

In spite of the reduced net, however, agriculture's position on the whole appears sound. A strong demand prevails for farm products. The valuation of farm assets is at a record high. Debt does not appear to be generally burdensome. Prices for some products are declining in response to a greater supply, but the adjustments had been anticipated and therefore are orderly.

Price Movements Prices received by farmers for their produce during 1952 on the average were about 3 percent below a year ago but still substantially above pre-Korean levels.

Price weaknesses were not experienced by all farm commodities. Milk prices, for example, have been consistently above year-ago levels as have prices of butterfat, potatoes, hay, buckwheat, rye, barley and

apples. Corn, wheat, soybeans and oats were also above year-ago levels through much of the year. As an offset, price declines have been considerable for beef, pork, wool, poultry, eggs, veal, lamb and sheep.

In total, livestock prices have not fared so well as have crop prices, primarily because of the heavier beef marketings. The average farm price for livestock and livestock products was 8 percent below 1951 for the first 11 months of this year compared with an increase of 2 percent for crops.

Both categories of farm output were marketed at prices above those which prevailed at the outbreak of the Korean War although some individual commodities were not. Beef cattle prices, for example, have recently dropped below those of 1950. Competition from the heavier beef output has also been instrumental in forcing the prices of hogs, veal calves, lambs and sheep below 1950 levels. Wool is likewise below pre-Korean levels as defense needs have declined.

Demand for Farm Products Consumer demand for farm products has generally remained very strong during 1952. Food expenditures will probably be at a record high for the year, although some of the increase has gone to cover increased costs in the marketing channels. Ultimate demand in terms of physical quantities did not increase enough to clear heavier market supplies completely without some price adjustment. Nearly all of the adjustment took place at the farm level as indicated.

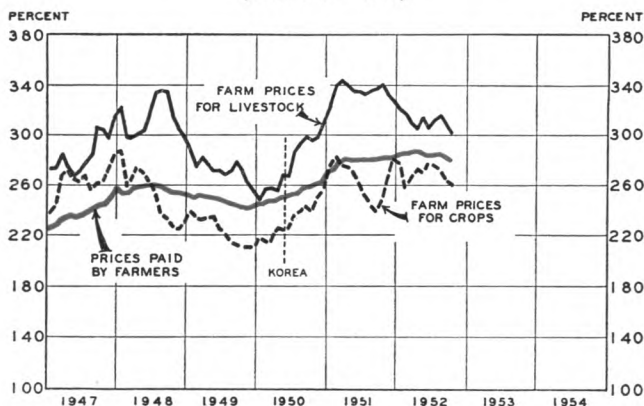
Maintenance of a high level of food and fiber purchases has been due primarily to continued growth in consumer incomes. Disposable personal income is up 3 percent for the year as a result of slightly higher average employment and wages, and longer hours of work. The gains have been supported by increased expenditures by consumers, private industries, and the federal government as well as state and local governments.

Over one-fourth of the disposable income of the nation was spent for food in 1952 or approximately the same as the other postwar years. About 90 percent of the food was purchased by the civilian population with the remainder going to the military or entering into foreign trade.

Foreign demand for products from American farms reached a record dollar volume during the 1951-52 year. However, some slackening has appeared in recent months in response to the increased production and scarcity of dollars in importing countries. The export market is particularly important to domestic producers of cotton, wheat, and tobacco. These three products make up from ½ to ⅔ of the

PRICES PAID FOR GOODS USED BY FARMERS AND PRICES RECEIVED FOR CROPS, LIVESTOCK AND LIVESTOCK PRODUCTS

(1910-14 = 100)



... livestock prices at the farm are down considerably from a year ago, but 14 percent above pre-Korean levels, whereas crop prices are 20 percent above the relatively low pre-Korean levels. Prices paid by farmers declined somewhat during the third quarter of this year but are still well above those of early 1950.

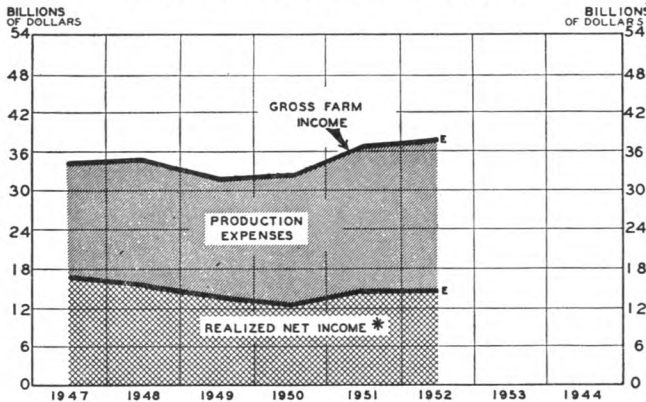
Source: Data from Bureau of Agricultural Economics.

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Federal Reserve Bank of St. Louis

INCOME OF FARM OPERATORS



... gross farm income rose to unprecedented heights in 1952. But production costs also reached a new high with the result that net income remained nearly unchanged at a level 16 percent below the 1947 record.

E 1952 Estimated.

* Includes allowance for non-money income and government payments, but does not reflect net change in inventories of goods held for sale. Source: Data from Bureau of Agricultural Economics.

total agricultural exports. Roughly 1/3 of the domestic output of these crops is marketed abroad.

Costs Against Receipts

Most major crops fell short of the high production goals set up by the USDA last spring, but some year-to-year gains were realized for corn, wheat, soybeans, and potatoes. Additional volume was also evident for beef, chickens, eggs, turkeys, lamb, and mutton, although goals were not established for these. Total farm marketings were of sufficient volume to offset the average 3 percent decline in prices and still bring a 3 percent gain in total cash receipts.

Cash farm income totaled about \$33.5 billion nationally in 1952. An allowance for home-grown food and rental of the farm home boosted the total gross income to \$37.6 billion. On the debit side, costs of production reached a record high, \$23.4 billion. Net income thus declined slightly to \$14.2 billion from the \$14.3 in 1951, in contrast to the record high net of \$16.8 billion which was reached in 1947.

Cash farm receipts and costs of production have both trended sharply upward since a few years before this country's entry into World War II. Costs have increased more rapidly, however, and now consume a larger share of cash receipts than at any time since 1940. This proportion amounted to about 70 percent during 1952 in contrast to low points of 56 percent reached in 1943 and 1918. Costs took a proportionately larger bite, however, during most of the 1920's and through the mid-1930's. At the depth of the 1930 depression, about 96 percent of the very low cash receipts would have been needed to offset production costs.

The increased cost of farm production is due both to larger quantities of "factory made" goods used by farmers and the higher prices paid for them. Total costs have risen every year since 1938 with the exception of 1949. New records have been set in nine of the past ten years.

There are indications that cash costs per unit of output have risen even more than that which can be attributed to price increases alone. Although the significance of this is not completely clear, it perhaps stems largely from the substitution of capital for labor without adequate consideration of balance among all factors of production.

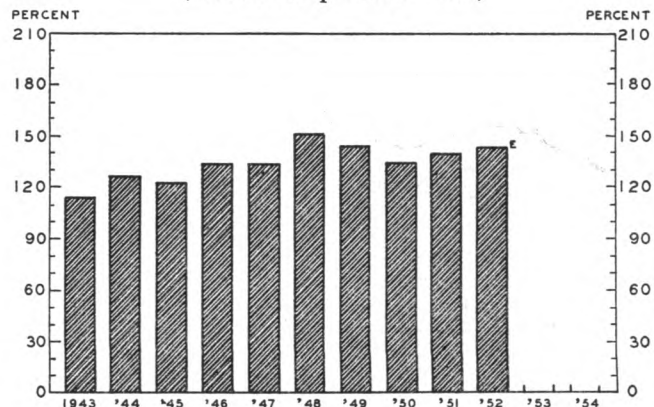
Small Gain in Net Worth

Total assets of agriculture may reach \$172 billion by the end of this year for an increase of only about 2 percent as compared with a 9 percent increase in 1951 and 12 percent in 1950.

Farm real estate assets are up slightly because of higher values per acre, but in the case of machinery and motor vehicles, crops, household furnishings and equipment, the increase stems primarily from the gain in physical quantities. Livestock numbers are up but prices have declined to the extent that the inventory value will be substantially lower.

Financial assets of farmers probably will also show some increase during 1952. These include bank deposits, currency and United States Savings Bonds. It does not seem likely, however, that financial assets have increased as much as have farm debts, which rose about \$1.7 billion during the year. Debt secured by farm mortgages rose less than \$1/2 billion, and much of this was incurred for purposes other than buying land. Collateral debt, or debt not secured by land, rose about \$1 1/3 billion, or over 16 percent.

FARM CROP OUTPUT (1935-39 Crop Years = 100)



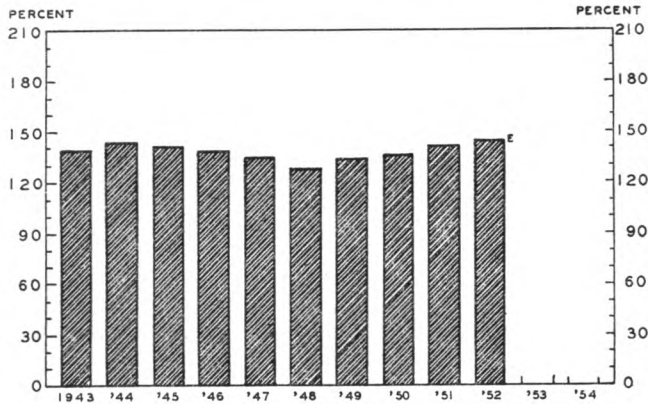
... crop output is nearly equal to the second highest year on record but somewhat short of the 1948 peak.

E 1952 Estimated.

Source: Bureau of Agricultural Economics. Series on "Volume of Production for Sale and Home Consumption."

FARM OUTPUT OF LIVESTOCK AND LIVESTOCK PRODUCTS

(1935-39 Calendar Years = 100)



... farm output of livestock and livestock products established a new record high this year, exceeding the former (1944) high by a small margin.

E 1952 Estimated.

Source: Bureau of Agricultural Economics. Series on "Volume of Production for Sale and Home Consumption."

Increases in indebtedness have occurred because of rising operating expenditures, need for larger working balances, and continued new investment in land, livestock and farm and home improvement.

Total indebtedness is nearing \$16 billion nationally. The short-term debt at somewhere over \$9 billion is in excess of the real estate debt which now stands at slightly under \$7 billion. Prior to 1949, the real estate debt was always the larger of the two. In the aggregate, farm debt is perhaps not high relative to the current value of farm assets and farm income. Some farmers, however, particularly those getting started in farming, have incurred heavy debt and are increasingly vulnerable to any significant drop in income. Repayment difficulties have been minor in 1952 and were confined largely to the drought areas.

In balance, agricultural assets increased slightly more than liabilities during 1952. Consequently, the farmers' equity gained, perhaps by 1 percent. This equity now amounts to 91 percent of the total assets or approximately the same ratio as has prevailed throughout the postwar period.

In 1940, owners' equity amounted to 81 percent of the assets. Most of the increase since that time has been due to the effects of a rising price level on the valuation of the assets. Total debt has increased less than \$6 billion, or 59 percent, whereas assets have increased over \$118 billion, or 220 percent. Aside from price increases, the assets have probably shown a slower rate of gain than has debt.

New Developments

Keeping up with a growing population necessitates the constant building up of reserve "know-how" for larger and more economical farm output. New devices and processes become known to the public each year. Some are put to immediate use, others lie dormant until their utility is demonstrated or their usage appears more economic.

One such new type of product which swept the country early this year was known as a "soil-conditioner." Similar products are now marketed under various trade names. Many claims are made concerning the ability of this chemical to promote soil aggregation thus improving aeration, drainage and cutting down on erosion. Although this product remains to be proven definitely, it appears possible that it may some day fill a need in the nation's agriculture. At present, the cost is still too high for general farm use.

Many new uses for chemicals in agriculture seem to be in the process of discovery. The fullest economical use of commercial fertilizers has not yet been realized nor have the many new weed killers like 2,4-D, 2,4,5-T, and pesticides like DDT, ENP, and TEPP been fully explored.

Antibiotics, like terramycin, penicillin, bacitracin and thiolutin have recently been found to increase the rate of growth for corn and other plants. Bacitracin and other antibiotics have also been found to increase rapidly the growth rates for pigs, turkeys, broilers, and calves. Other drugs have been found to increase the number of lambs a ewe will have in a year and to cure sterility among other types of livestock.

Only a few of these new products have demonstrated their worth. Some perhaps never will. Others may eventually be helpful in boosting future food output by 10, 20 or 30 percent just as has commercial fertilizer. With the supply of farmable land quite rigidly fixed, the food needs of future generations may well depend upon some remote product introduced in 1952.

A Look Ahead

In general, the 1952 trends are expected to continue into next year. Prospects for a high level of employment and further growth in disposable personal income provide the basis for a strong consumer demand for food and fiber. If farm output holds steady or shows some growth, then farm prices may ease off at about the same rate as they did in 1952. Farm costs have trended upward for well over a decade and no reversal is in sight for the near future. Prices paid for non-farm goods may average a shade higher. The ratio between prices received and prices paid during 1953 may average slightly below 100 for the second time in thirteen years.

In view of declining prices, and assuming no major change in output, it does not appear that cash farm

income will show any gain next year and may possibly even drop a little. Under these assumptions, rising costs would reduce net income to the lowest since 1950. Farm indebtedness is likely to continue to rise.

One completely unpredictable element in the farm outlook is the weather. Drought conditions have created a serious problem in many areas of the country this year. Although the corn belt "breadbasket of the nation" came through the summer with

relatively little harm, dry conditions did extend to the corn belt for a period early this fall and created some concern over pastures and wheat seedings. Should this situation exist next summer, it could bring drastic adjustments in the agricultural economy and its effects would reach into the pocketbooks of every consumer. In view of this, no new positive government action is in sight in reference to restricting output. A smaller wheat acreage may be suggested but it will not be enforced by marketing quotas.

INDUSTRIAL HIGHLIGHTS OF 1952

(CONTINUED FROM PAGE 4)

estimated supply for the year as a whole. Two-thirds, or approximately 800,000 tons, was synthetic rubber. There was, then, an apparent surplus of between 450,000 tons and 500,000 tons during the year. The greatest part of this excess supply consisted of natural rubber, the bulk of which was presumably placed in the strategic stockpile. (Purchases for the stockpile declined earlier in the year, but deliveries continued heavy for several months.)

The increased supply of rubber during the year was also reflected in a sharp increase in industry stocks. Holdings of both natural and synthetic rubber rose to almost 240,000 tons, the highest since the beginning of 1949, and more than 100,000 tons above the low of 1951.

The final downward adjustment from the post-Korean peak took place as the price of natural rubber dropped nearly 50 percent. During the first half of the year, the Government reduced the price in three steps from 52 cents to 38 cents per pound. After the resumption of private trading on July 1, quotations promptly slumped to about 32 cents and declined gradually thereafter to a low of 27 cents by November. Synthetic rubber was reduced from 26 cents to 23 cents in March when production at some of the high cost plants was suspended. The latter quotation has been maintained since then.

Passenger car tire production was pushed hard in the first quarter of the year, averaging about 6.2 million units per month. It was the largest first-quarter output since 1947 when the industry was striving to make up the war-born shortages. A substantial part of production was in second-line brands which had been prohibited since late 1950 by Government order.

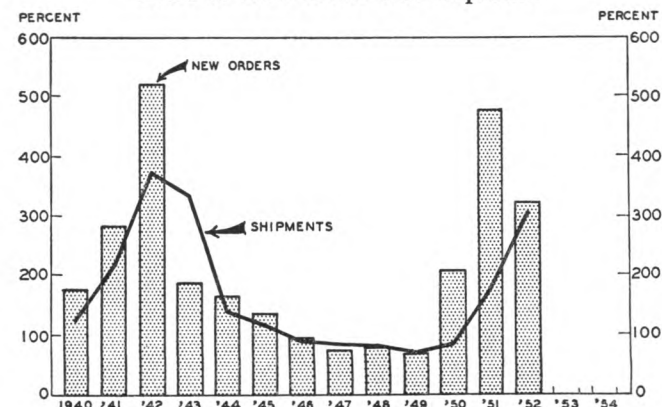
Consumer demand for replacement tires in this period continued below expectations so that factory inventories increased about 2.5 million units to 10.6 million casings. Although this stock was the largest since 1949, it was about in line with normal requirements to meet the seasonal summer sales peak. Total passenger car tire output for 1952 is expected by the industry to reach 73 million casings or 12 percent above 1951.

In contrast to the favorable showing of passenger tire distribution, the sales of truck and bus casings—especially to the replacement market—have been disappointing to producers. For the first 9 months of the year, replacement sales were 16 percent below the same 1951 months and original equipment volume was off 8 percent.

The slackening in demand this year is generally attributed to the overbuying in 1950 and 1951 (which manufacturers had underestimated), a higher rate of recapping of worn tires, and a tendency for both dealers and users to cut their inventories to very low levels.

Machine Tools The machine tool industry during 1952 substantially reduced the enormous backlog of orders that had accumulated in the initial stages of the post-Korean defense program. The peak of the backlog was reached in September 1951 when it amounted to nearly 24 months of the then-prevailing production rate. By October 1952, unfilled orders were a little more than 11 times the current rate of output.

MACHINE TOOLS
Index of New Orders and Shipments



... wars, and end of wars, bring feast and famine to machine tool builders. Since April, new orders have lagged behind shipments. Is another 1943 at hand?

Source: National Machine Tool Builders Association. Data are quarterly average figures. Average Shipments 1945-47 = 100.

The reduction in backlog was achieved through the operation of several different factors: a rising rate of production; a falling off in new orders; and cancellation of existing orders.

Production and shipments of machine tools continued to rise steadily from month to month this year. The shipments index of the National Machine Tool Builders Association advanced from the 265 level at the beginning of the year (1945-47 = 100) to 358 in October, or an annual rate of about \$1.3 billion. The expansion in production was achieved through an increase in sub-contracting, hiring of additional workers and use of some new production facilities.

While production has been rising, new order volume has been slumping noticeably. The N.M.T.B.A. new order index dropped from a level of around 375 at the close of 1951 to 244 in October. Since April, the machine tool industry shipments have been above the rate of incoming orders.

In addition to the drop in new orders, the industry has been plagued with a heavy volume of order cancellations. For the first eight months of the year, order cancellations were equal to 28 percent of new orders. In September, cancellations still amounted to 12 percent of new orders received that month. The chief reasons advanced for this development are the "stretch-out" of the defense program, original excessive orders at the beginning of the defense program, and continuing indecision as to tooling requirements for new defense projects.

As a result of these factors, order backlogs among the various machine tool builders vary from only a few months to as much as two years. Some producers fear that production will soon have to be curtailed and workers laid off unless new order volume increases substantially.

The domestic supply of machine tools has also been augmented by means other than increased domestic production. Imports of foreign made tools may reach \$50 million in 1952, or a four-fold increase over last year. At the same time, N.P.A. regulations have made it most difficult for American producers to export machine tools so that volume this year may be no more than 5-7 percent of production as compared with a "normal" proportion of 25 percent.

The problem of declining orders and the need to maintain a strong machine tool industry in connection with the defense program is being actively studied by the industry as well as defense agencies. At the present time, the most promising proposals to stimulate new orders are to relax as much as possible the restrictions on exports and at the same time loosen regulations so as to permit better handling of non-rated domestic orders. For the longer term, overhauling of income tax regulations to permit accelerated depreciation of machine tools has been sug-

gested as a means of stimulating replacement and modernization of existing production facilities.

Glass and Ceramics Glass container producers in the District as well as elsewhere in the nation continued to experience a high volume of business. Shipments for the first three-quarters of the year were only 3 percent below the same 1951 period.

Production of glass containers, however, eased nearly 6 percent below last year. The net result was some reduction in inventories which were of record proportions in the first half of the year. Glass container manufacturers have benefited from the restrictions on the use and output of metal cans and containers which have been in force since January 1951. The threatened shortage of tin cans as a result of the steel strike further lifted the demand for glass products so that August shipments of 11.3 million gross were the highest for any month on record. The expected easing of metal supply in 1953—particularly tin plate—may have considerable effect upon glass container producers next year.

Window glass and plate glass manufacturers have also had a good year as a result of continued high new construction activity and high level replacement and modernization programs. The modern trend toward more glass area in new buildings of all types and the increased use of double-pane type windows have had a stimulating effect upon glass consumption. An important District flat glass producer reopened a plant in October that had been shut down since January for repair and lack of sufficient orders. Capacity operation is now anticipated.

Auto safety glass manufacturers' business was adversely affected by the cutback in new car production. Currently, however, the inflow of new business is good and producers are benefiting from the increased use of one-piece windshields and wrap-around rear windows. Fiberglass production is steadily increasing as this versatile new material is finding its way into a wide variety of new uses and products.

Makers of handmade glassware experienced a very poor first half year and variously attributed it to severe competition from imports or inventory liquidation at both retail and factory levels. By the beginning of the fourth quarter, however, principal Fourth District producers had received a very strong inflow of orders and expected operations, as a result, to be near capacity for at least the balance of the year.

The dinnerware branch of the ceramic industry will have only a fair year in 1952 when considered as a whole. The usual summer low period for District manufacturers was decidedly below par, largely as a result of order cancellations from areas adversely affected by the long steel strike. Beginning in September, there was more than the usual seasonal

pickup in orders, and operations through mid-December should be 80 to 90 percent of capacity. In some cases, shortages of skilled labor may make it impossible to fill all orders. As in the case of hand-made glassware, the ceramic dinnerware manufacturers have received an unusually large proportion of "rush" orders in recent weeks indicating low retail inventories.

Foreign competition continued to increase in 1952 (as in recent years) and the domestic industry is pressing for more tariff protection. Sales of off-grade ware are particularly affected by Japanese competition.

Paints and Varnishes Sales of the paint, varnish, and lacquer industry in the first 8 months of 1952 fell nearly 5 percent short of the same 1951 period. Industrial sales were down nearly 12 percent while sales to the trade (dealers and retailers) were off less than one percent.

The decline in industry takings were the result of both N.P.A. restrictions on production of civilian type durable goods and reduced output of domestic appliances due to slack consumer takings and heavy inventories. The steel strike had some effect in June, and particularly in July, on the consumption of industrial finishes. Manufacturers report that subsequent to the strike, new orders have been heavy and production in the last three months of the year should exceed year-ago volume.

On the other hand, sales of paint to dealers were very slow in the first quarter of the year (down 11 percent) as retailers cut inventories. Subsequently, volume picked up markedly and has been well ahead of year-ago levels in every month. This undoubtedly is a reflection of high consumer incomes and spending to maintain, redecorate, or to paint new homes. Sales of latex-type base paints have been very strong all year.

Coal Production of bituminous coal in the District declined about 15 percent during the first ten months of the year to 140,000,000 tons. At this rate, output for the year as a whole is virtually certain to be the second smallest of the past twelve years, exceeding only 1949's strike-reduced total. A similar situation exists in the case of total U. S. production which, through October, amounted to 380,000,000 tons, or 14 percent below the like 1951 period.

Consumers' stocks at the beginning of September were well above a year ago, suggesting that consump-

tion had fallen even more than production. Stocks averaged 72 days' supply for all consumers on September 1 and varied from 37 days for railroads to 133 days for electric utilities.

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SUMMARY OF NATIONAL BUSINESS CONDITIONS

By the Board of Governors of the Federal Reserve System

(Released for Publication December 1, 1952)

Industrial production in October and November was slightly above the sharply advanced September level. Average wholesale prices of industrial commodities remained steady, while prices of farm products and foods eased further. Consumers' prices showed little change in October at a level slightly below their summer high. Bank loans to business increased sharply after mid-October.

Industrial production

Reflecting mainly continued gains in durable goods industries, the Board's index of industrial production rose 1 point further in October to 227 per cent of the 1935-39 average. In November a similar gain is likely. Since September, output at factories and mines has averaged about 3 per cent above the levels prevailing during 1951 and early 1952.

Steel ingot production in October and November was at a new record rate of 106 per cent of rated capacity as of the beginning of this year. Activity in most metal fabricating industries also advanced further. Television production rose to the near-record annual rate of about 10 million sets in late October and continued at this level in early November. Passenger automobile assemblies were maintained at the high September-October rates until mid-November but subsequently declined owing mainly to model changeovers. Aluminum production was reduced further in October as a result of electric power shortages and was about 9 per cent below the very high August level.

Nondurable goods production showed a slight decline in October, as textile mill activity was reduced somewhat following marked recovery in the summer and early fall. Output of paper and paperboard, however, advanced further. Meat production was maintained in October and the first 3 weeks of November at levels well above those in the corresponding period a year ago. Output of most other nondurables continued at about the levels of the preceding month.

Minerals output declined in October and rose again in November, owing mainly to fluctuations in coal output. Crude petroleum production rose throughout the period and output of metals was maintained in large volume.

Construction

Value of new construction work put in place, seasonally adjusted, during October was larger than in other recent months. Value of contract awards was below the near-record September total, which included a large volume of atomic energy awards, but was about one-fourth larger than in October 1951. Housing starts in October rose to 101,000, as compared with 98,000 in September, and were at a seasonally adjusted annual rate of 1,156,000.

Employment

Seasonally adjusted employment in nonagricultural industries in October was maintained at the record September level of 47.2 million. Employment in manufacturing rose slightly to a new postwar peak of 16.2 million, and average hours of work and hourly

and weekly earnings increased further. Unemployment declined again in October, to a new postwar low of 1.3 million.

Distribution

Retail sales rose sharply further in October to a level 9 per cent above a year earlier. Both durable and nondurable goods shared in the October advance, with the rise in automobile sales especially marked. Department store sales in the first half of November were running below their high October level, on a seasonally adjusted basis. Stocks at department stores are estimated to have continued little changed through October after seasonal adjustment.

Commodity prices

Wholesale prices continued to decline in November largely reflecting further decreases in prices of cotton, livestock, and meats. Cotton has declined to about 34 cents per pound since release in early November of a substantially larger crop estimate, and is now 8 cents below a year ago and 2 cents above the Federal support level. Prices of some industrial materials strengthened and prices of finished goods generally changed little.

The consumers price index was about unchanged in October. Small decreases in foods and textile products were offset by advances in rents, fuels, and services.

Bank credit

Business borrowing from banks expanded sharply in late October and the first three weeks of November. This expansion was more widely distributed than the earlier rise which had been concentrated in such industries as food processing, commodity dealing, and trade where loans normally increase at this season of the year. Consumer and real estate loans also continued to rise. The Treasury's issue of 2.5 billion dollars of tax anticipation bills in October was bought at first largely by banks, but subsequently was purchased in substantial volume by corporations. Most of a second issue of such bills amounting to 2 billion dollars in mid-November was also taken up initially by the banking system.

Member bank reserve positions tended to be fairly tight during the mid-October to mid-November period. Reserve drains resulted principally from a currency outflow and an increase in Treasury balances at the Reserve Banks. In addition, Federal Reserve System holdings of Government securities were reduced somewhat. The average level of member bank borrowings exceeded 1¼ billion dollars over the period.

Security markets

Common stock prices rose steadily in the first three weeks of November. Yields on high-grade corporate bonds receded to the levels of early September. Yields on Treasury bills and other short-term Government securities increased substantially. In addition to tax anticipation bills the Treasury announced the offering of an additional amount of 2 per cent certificates of indebtedness maturing August 15, 1953 in exchange for the 1.1 billion dollars of 1⅞ per cent certificates maturing December 1, 1952.

Electronics Aid Management

by CLYDE WILLIAMS, Director, Battelle Memorial Institute



From time to time, the newspapers report the development of huge, costly electronic "brains" for use in solving complex mathematical problems in astronomy, atomic energy, aviation, logistics, ordnance, and allied subjects. Less publicized are the intensive efforts being directed toward the development of similar type data-processing machines for business use. Much work remains to be done before these machines can create a widespread

revolution in business data-processing methods. Much progress, however, is being made. In some special cases, computers have already been adapted to do the work of a small army of accountants and clerks. Insurance companies and department stores are showing particular interest.

Sound planning and more efficient conduct of business is the constant aim of management. One of the greatest problems executives face in this task is to have vast quantities of business data processed into a form that will reveal facts on which to base decisions. Another problem is to improve existing methods of handling such laborious, time-consuming accounting jobs as billing and making up the payroll. It is now technically possible to engineer electronic data-processing systems for such purposes.

Electronic computers will make it possible for management to make a spot check today of yesterday's trends in production, sales, inventory, and related business activities.

The principal advantage of electronic computers is the fantastic speed at which they operate. Machines that will add two 24-digit numbers in eight-millionths of a second are no longer considered exceptional. These machines can completely process a given set of data in accordance with a prescribed program. They usually consist of the following functional units:

| Unit | Function |
|------------------|---|
| Input | Inserts original data and instructions into the system |
| Storage (Memory) | Stores original data, intermediate results, instructions, function tables, etc. |
| Arithmetic | Performs actual computations |
| Control | Sequences the various operations of the computer |
| Output | Records the results of the computation |

These computers will take much of the guesswork out of knowing how one's business is doing. The cost account-

ant's analysis, for example, may be a useful management tool but may lose much of its value during the month required for its preparation. Electronic data-processing systems can be specially adapted for such a job. They can thus greatly reduce the time lag between the work of the accountant and the decision of the executive.

Intensive research is now being done on developing output or "read-out" devices that will represent an improvement over the recording of results by electronic computers. For some applications, results cannot be recorded fast enough to accommodate the terrific speed of electronic computations. Faster, easier-to-read output devices will encourage wider business usage of automatic data-processing systems.

Information-processing systems for business are, in a sense, more complex than those for scientific research. Scientific computations are characterized by a relatively small amount of original data that requires numerous arithmetical operations to process. The business problem, on the other hand, may involve vast quantities of original data to set up or to "program" for the input unit. This programming may take as much as six months to organize before the computer can be put to effective use. Changes in business methods and procedures, furthermore, constantly require re-programming.

The task of programming could be greatly streamlined. What is needed most is a methods expert of a new type trained to supervise automatic data-processing systems. This man should have a detailed knowledge of his company's business. At the same time, he should have a working knowledge of electronic computers. The methods expert, with this combined knowledge, could then speed up the job of adapting his company's business problems to the machines. He could also work with business machine manufacturers in adapting computers to the particular business operations of his company.

Methods experts of this type, almost nonexistent today, could be invaluable in securing the maximum productive efficiency from computers that may range in cost from \$50,000 to \$1,000,000. In turn, their services could extend the economic benefits of automatic data-processing systems to more business concerns where the investment in electronic computers might not appear economically worth while.

With increasing tempo during the past 50 years, the volume of accounting work has increased enormously. Executives, furthermore, have learned to rely heavily on accurate, up-to-date management reports to guide their business. An evolution has already begun in the handling of such jobs through automatic data-processing systems. More efficient conduct of business and elimination of much of the drudgery of office work must surely result. The speed of the evolution will depend largely on the success of technical improvements now in progress. Perhaps more important, it will also depend on the ability of methods experts and business machine manufacturers to make electronic computers economically worth while to smaller scale business operations.

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.