

MONTHLY

Business Review

SEPTEMBER 1953

CONTENTS

The Industrial Scoreboard	1
Government Rubber Monopoly Nears End	5
Revision of Department Store Indexes	6
National Business Summary	10
New Frontiers for Mineral Exploration	12

FINANCE • INDUSTRY • AGRICULTURE • TRADE

FOURTH FEDERAL RESERVE DISTRICT

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Federal Reserve Bank of Cleveland

Cleveland 1, Ohio

The Industrial Scoreboard

BUSINESS activity continued on a virtual plateau during the second quarter of the year and exhibited only the usual seasonal let-down in July and early August. The pattern of activity in the Fourth District followed closely the national trend. Some evidence was accumulating, however, which suggests an easing in the fourth quarter from the record-breaking pace established in the first six months of the year.

The Federal Reserve index of industrial production averaged 241 (1935-39=100) during the second quarter as compared with a 239 first-quarter average. Production in the second three months, however, did not quite return to the 243 peak achieved in March. The nondurable goods industries turned in an especially strong second quarter, only a shade below the previous record established in the initial months of 1951. Durable goods output eased slightly.

Virtually full employment was experienced in the period, with the number of employees in nonagricultural establishments edging up slightly. In July the total reached 49.4 million (seasonally adjusted) to set a new record. Unemployment at the same time amounted to only 1.5 million persons which could be considered a minimum to take care of normal job turnover. Little further increase in the level of employment was foreseen by the major District industries in the third quarter.

The high rate of industrial activity raised the estimate of gross national product to an adjusted annual rate of \$372.4 billion, an increase of \$27.3 billion from the comparable period of 1952, and up \$9 billion from the first quarter. Much of the second quarter increase, however, was due to the marked rise in business inventories.

In the District, the principal soft spot continued to be the bituminous coal industry. The earthen dinnerware branch of the ceramic industry also experienced a private recession of its own.

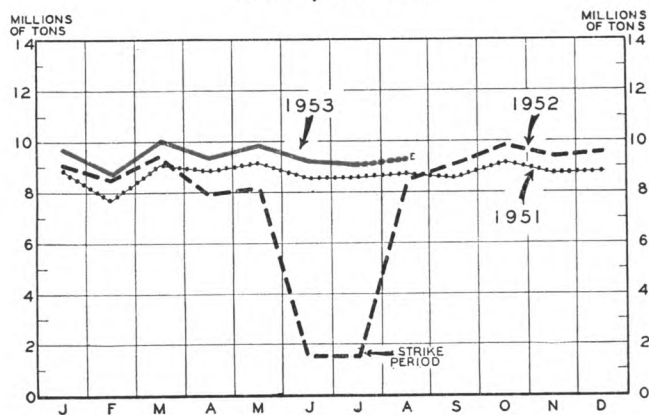
Steel For the second time since 1945, the steel industry has caught up with the demand for its products. The first such occurrence was in early 1949, but that easing in the market was soon followed by a lengthy steel strike, a recovery in consumer durable goods, and the Korean conflict, all of which combined to push demand above available supply until only recently.

First-half steel ingot production totaled nearly 58 million tons, the largest ever reported for a six-month period. July and August also established new monthly records, and barring any unforeseen upsets, the third quarter as a whole will be the best on record for that time period.

Behind these imposing figures, however, are definite signs of easing in both the pace of production and the demand for steel. Second-quarter operations were 99 percent of capacity, following two successive periods of 100 percent or better. The last week of capacity operation was the week ended June 6. Since that time, actual weekly production has never quite matched scheduled output. July production was 93 percent of rated capacity and August output is estimated at about 95 percent.

Part of the recent decline was due to summer vacations, and to an unusual volume of repair and maintenance work that had to be done at the mills. The remainder was due to a slackening in the pressure exerted by steel buyers for immediate delivery of finished steel.

STEEL PRODUCTION
Ingots and Steel for Castings
Monthly 1951-1953



... steel production has been at record rates since October 1952.

Source: American Iron and Steel Institute.
F.—Estimated

By the end of August, few products could still be reported as being in short supply. These would include some kinds of light plate, structurals, oil country goods and heavy forging rounds. Both hot and cold rolled sheets were easing rapidly, chiefly because of reduced auto production schedules. The hot rolled carbon bar shortage had virtually disappeared. Contributing to this result was the disastrous fire at an automatic transmission plant of a leading auto producer; the destroyed plant had been a major consumer of bars.

Steel orders for fourth-quarter delivery have definitely slowed down after an initial rush to get on the books. The reduced flow appears to be the result of many small factors, which added together, amount to a noticeable tonnage. Among these factors are the higher inventories of steel consumers, and slower demand for such products as passenger cars, trucks, farm equipment, major appliances, railroad equipment, and containers.

Lake Shipments New tonnage records for Great Lakes shipments of iron ore, coal, and grain have been established for the season through July. The combined tonnage of these three commodities transported during the first five months of the shipping season was 87.4 million net tons, or 5.6 million net tons above the previous record for the period established in 1944.

Lake ore carriers broke all records during August, setting new weekly and monthly tonnage records for shipments from Upper Lake ports. According to the Lake Superior Iron Ore Association, shipments during several August weeks exceeded the previous 1952 weekly record, while the total tonnage for the month was 15.2 million gross tons, or 5 percent above the

previous record established only the month before.

Tonnage records are foreseen for the year. Through August 31, nearly 66 million tons of ore had come down the lakes. Lake carriers recently revised upward an earlier estimate for the year, i.e., from 100 million tons to 105 million tons. About three months of navigation remain this year, and ore shipments are already 5 million tons ahead of schedule. The largest one-year total previously was the more than 92 million tons of ore hauled in 1942.

Increased steel capacity and a high rate of operations has kept the demand for iron ore at record levels. A number of new freighters added to the ore fleet has made it possible to fulfill this demand. The new ships not only carry more ore each trip than the older ones, but they move it faster. The shorter turn-around time further increases their annual haulage capacity.

This year's pick-up in lake coal shipments is a reversal of a two-year downward trend. More bituminous coal was loaded into vessels at Lower Lake docks during the first seven months than was shipped during the same 1952 and 1951 months. The first seven months' tonnage, however, was about four percent below that of the comparable 1950 months.

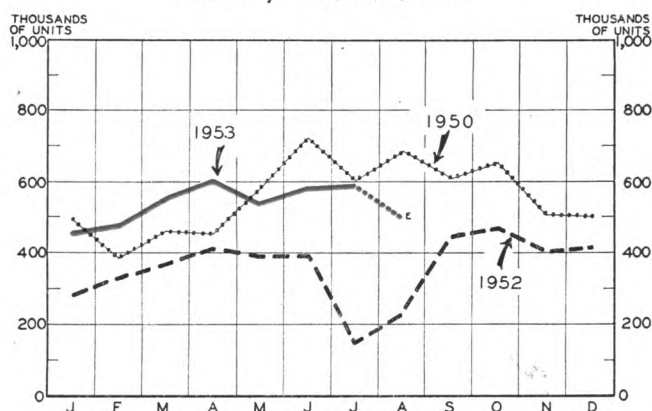
Autos Record automobile production in the second quarter of the year was a major contributing factor to the continuation of the nation's high-level business boom. The impact was felt by all the industries supplying raw materials and parts, and by financial agencies who were called up to finance the wholesale trade in cars and their final purchase by consumers.

Factory sales of passenger cars by United States producers totaled 1,735,000 units in the second quarter, a gain of 15 percent over the initial quarter and 42 percent above the year-ago period. For the first six months, auto output totaled 47 percent more than the same months of 1952. First-half sales were slightly above the previous record established in 1950.

The high rate of production, however, had some noticeable effects upon competitive conditions in the market. *Automotive News* estimated that new car stocks at the factory, in-transit, and in the hands of dealers rose from 412,000 on January 31 to 596,000 by July 31. This was the highest level since late summer of 1949, and represented more than a five-week supply at the July rate of sales. Stocks, however, were not evenly distributed. Several of the smaller producers in July stopped production altogether in order to work off excessive field stocks. On the other hand, a major producer still believed its dealer stocks were too low and was attempting to increase them.

The first-half production surge was achieved chiefly by the increased sales of the three major manufacturers. All but three of the smaller producers had lower sales than in the previous year. As a conse-

PASSENGER CAR PRODUCTION Monthly 1950, 1952, 1953



... first-half production topped the previous 1950 record by a small margin. Seasonal influences and recent production difficulties suggest a lower rate of output in the last half of the year.

Source: Ward's Automotive Reports, Inc.
E—Estimated

quence, their share of the total market diminished somewhat.

The high rate of new car sales to consumers also had a depressing effect upon used car values. Used car sales throughout the District, as well as the nation, were generally sluggish; reported sales barely kept pace with year-ago performance. Inventories were high.

Consumers continued to rely heavily upon installment credit to finance car purchases. Automotive instalment-credit outstandings reached \$9.6 billion at the end of June, for an average monthly rise of about \$250 million for the first half of the year. Automobile credit outstanding on June 30 amounted to about 3.9 percent of disposable personal income as compared with 3.5 percent at the end of 1952.

Seasonal factors appear to be again exerting an influence upon the automobile industry and July-August production was somewhat below the second-quarter level as shown in the accompanying chart. The destruction of an automotive transmission plant in early August may cause some unanticipated loss of production in both August and September. Makes using this device accounted for about 15 percent of July production. Because of emergency measures taken, production losses should be substantially less than what this proportion would seem to indicate.

Rubber Tire manufacturers, according to the Rubber Manufacturers Association, produced 44.4 million passenger-car casings in the first six months of the year, to beat the 1947 record by 12 percent and to score a gain of 21 percent over the first half of 1952.

Second quarter output was pointed slightly downward to check an inventory buildup that had been

taking place continuously since October 1952. Monthly output receded from the record March level of 7.9 million casings to 7.3 million units in June.

Demand for passenger car tires exhibited a strong tone throughout the first six months of the year. The new car market required 17.7 million units, a rise of 45 percent. The replacement market took 24.8 million casings, or a gain of 10 percent over the corresponding period of 1952.

Factory inventories at the end of June were down 6 percent from May to 12.9 million units, but were 49 percent above the year-ago level. Manufacturers apparently are not concerned over the level of inventories which are appreciably higher than in previous years. Larger stocks are deemed advisable to service adequately the rising replacement market and also to help level out manufacturing schedules.

Truck and bus casing production weakened slightly in the second quarter as new truck output slackened, and replacement demand continued below manufacturers' expectations. Output in the first half of the year totaled 8.3 million units, down 3 percent from 1952.

Total shipments of truck and bus tires, according to the Rubber Manufacturers Association, rose 6 percent in the first six months. Sales to the replacement market rose 19 percent to 4.7 million units while sales for original equipment were down 7 percent to about 2.7 million tires.

Manufacturers' truck and bus tire inventory at the end of June had climbed to 3.4 million casings and were 13 percent above the year-ago level. Stocks amounted to nearly three-months' supply at the June rate of shipments.

Employment in Ohio's rubber manufacturing plants in July averaged 86,000 workers, or 6 percent more than a year ago. The number of employees in July, however, was 2.6 percent lower than in June. The trend may continue downward somewhat during the second half of the year since tire production traditionally slacks off in this period.

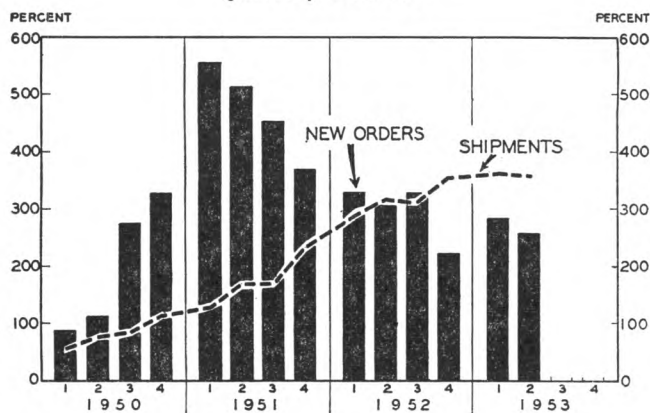
New rubber consumption in the United States totaled 730,000 long tons in the first six months, or 16.6 percent above the same 1952 period. The gain was not distributed evenly as between the natural and synthetic products. Natural rubber consumption was up 33 percent, but synthetic rubber use increased less than 8 percent.

Elimination of Federal controls on rubber usage and the declining price of natural rubber have been the chief factors in these trends. Stocks of synthetic rubber are large, and some reduction in output is anticipated in the fourth quarter of the year.

Machine Tools Shipments of machine tools appeared to have finally turned down in the second quarter, thus ending a continuous rise that began in February 1950.

The second quarter shipments index, as compiled

MACHINE TOOLS
Index of New Orders and Shipments
(1945-1947=100)
Quarterly 1950-1953



... the peak of machine tool shipments appears to have been reached in the first quarter of this year. Both orders and shipments have declined in the past four months.

Source: National Machine Tool Builders Association.

by the National Machine Tool Builders Association, averaged 357 (1945-47 = 100), or 2 percent lower than in the first three months. The decline throughout the quarter, however, was progressive so that June shipments were off 9 percent from March.

New orders in the past quarter were off 8 percent from the initial three months and averaged 265. As a consequence, backlog of orders amounted to only little more than seven months of production at mid-year. A year ago, the machine-tool backlog was about thirteen months.

The industry reports a good inflow of orders from the automobile industry in recent months, as the latter prepares for 1954 model production. Orders from other industries have not been so promising, and inquiries have slowed down. Military orders are at a very low ebb. Hopes have dimmed for any large-scale procurement of defense tools in the remainder of 1953 for stand-by military production facilities.

Major Household Appliances

Consumer takings of big-ticket household appliances have not fulfilled manufacturers' expectations so far this year. Inventories were built up early in the year, and production was curtailed. Stocks are now being worked off, and output may rise moderately from current levels if buyer interest is maintained.

Results of the 1953 Survey of Consumer Finances indicated that a substantially larger proportion of the spending units planned to purchase major household appliances during 1953 than so planned early

in 1952. The proportion planning such purchases was, however, only a little larger than the percentage found by the 1950 Survey (which was conducted before Korea).

Production of major household appliances during the second quarter, after allowance for seasonal movements, was about 6 percent below the relatively high first quarter and roughly one-eighth less than the near-record output of the second quarter of 1950. The only major exception to this general slackening of production was the assembly of home freezers which reached a new peak in May. In June, however, output of this appliance also declined from very high levels.

The sharpest second-quarter cutbacks, ranging up to 40 percent, were made by the manufacturers of ironers, driers and refrigerators. Drier output, although more than half again the second-quarter 1950 rate, was more than one-third below the peak rate of November 1952. Second-quarter production, by major products, is compared with that of the first quarter and of the near-record second quarter of 1950 in the table.

Production of radio and television sets has dropped sharply this year. The seasonally adjusted index of television output dropped 37 percent between January and June while radio set production dipped 24 percent.

Indications are that the downtrend continued into July in most lines, but not much more than seasonally.

OUTPUT OF MAJOR APPLIANCES, RADIOS AND TELEVISION SETS

Adjusted for Seasonal Variation
(1947-49 = 100)

Product	Index 2nd Quar. 1953	Percent Change From	
		1st Quar. 1953	2nd Quar. 1950
Major household appliances	121	- 6	- 12
Cooking stoves.....	102*	+ 2	- 18
Driers.....	589	-25	+ 53
Freezers.....	282	+ 2	+112
Ironers.....	36	-40	- 58
Refrigerators.....	103	-15	- 36
Vacuum cleaners.....	88	- 8	- 14
Washing machines....	118	- 7	-0-
Radios and television ..	188	-27	- 9
Radios.....	61	-16	- 29
Television.....	450	-30	- 1

Source: Board of Governors of the Federal Reserve System.

* April-May average. June data not available.

(CONTINUED ON PAGE 7)

Government Rubber Monopoly Nears End

THE important rubber manufacturing industry in this District has long been a strong advocate of the sale of government-owned synthetic rubber producing plants to private industry. That goal is now, after long and sometimes bitter negotiations, in sight.

On August 7, the President approved the rubber producing facilities disposal act of 1953, providing the way for the Government to step out of the synthetic rubber-producing business. Because of the importance of this war-born industry to national security, and because production of synthetic rubber to date has been a Government-controlled monopoly, any disposal plan has had to be contemplated in the light of its effect on both the foreign and the domestic policy of the nation.

From the point of view of national security, the primary requisite of a disposal plan is that it ensure that synthetic rubber will be available for defense purposes, should the need arise. To this end, the present Act requires that the facilities may be sold only to financially responsible persons with the "technical competence (but not necessarily experience) necessary to operate a rubber-producing facility," who actually intend to produce rubber or its component materials. A national security clause is to be written into all sales contracts which will guarantee prompt availability of the rubber-producing facilities for a period of ten years.

On the purely domestic side, the Act is chiefly concerned with preventing any person or group from obtaining or creating a monopoly of rubber production. The announced purpose of the Act, aside from its national security aspects, is to develop a "free, competitive, synthetic rubber industry." The present antitrust laws are to prevail, regardless of the terms of any sales contract, in the operation of any of the facilities. There are, of course, restrictions preventing any person with a private interest in the rubber industry from serving or being employed by the Government in negotiating contracts.

However, beyond the above requirements, no specific terms for ensuring a free and competitive industry are laid down: rather, each prospective purchaser is to outline his plans for making his rubber output "available for sale to small business enterprises." The opportunity which would thus be provided for small users to obtain a "fair share" of production at "fair prices" is to be one of the criteria to be used in selecting purchasers.

The negotiation of sales is to be placed in the hands of a commission made up of three disinterested persons appointive by the President, but all contracts are to be reviewed by, and may be rejected by, the Congress. According to the timetable set forth in the Act, January 31, 1955, (or about 18 months from the date of the Act itself) is the final date set for the commission to submit, to both Houses of Congress simultaneously, a full report on all sales contracts it has negotiated, along with its recommendations. Congress will have two months (60 days) in which to disapprove the recommendations of the commission. Therefore, the ultimate date by which sales may be concluded under this Act would be about April 1, 1955. Barring further acts of Congress, any facilities not disposed of under this legislation are to be taken out of production and placed in standby condition. They may not be sold subsequently for a period of three years.

Involved in the disposal plans are about 25 separate facilities with an original cost of approximately \$500 million and a maximum annual output of 950,000 long tons of synthetic rubber. Actual 1952 production was about 700,000 long tons, or about the same as natural rubber imports.

Only a little over half of the plants actually produce rubber itself, the rest of the facilities being designed to turn out feedstock for the rubber-producing plants.

Five of the for-sale plants are either in the Fourth District, or located in adjacent parts of West Virginia and Kentucky. Four are rubber-producing facilities having 22 percent of the national synthetic rubber capacity; the other is one of the largest producers of alcohol butadiene, a component of one of the higher-cost processes which may not be of practical value in peacetime. All but one of the remainder of the Government-owned facilities are located in the Southwest — Louisiana, Texas, and California.

Up to the present, synthetic rubber under Government management has quite consistently undersold natural rubber. At times, the price difference has been spectacular, with natural rubber in periods of scarcity costing as much as four times the price of synthetic. More recently, however, natural rubber has approached the current synthetic price of about 23 cents per pound. There has been much discussion pro and con as to whether private operators could profitably run the synthetic plants and maintain the current price, or whether private operations will necessitate a price increase.

Revision of Department Store Indexes

IN ORDER to take account of the latest available information on seasonal patterns of monthly changes in sales and stocks, a revision has been made in the seasonally adjusted indexes of sales and stocks of Fourth District department stores. The revision is of moderate extent and applies to certain monthly values from January 1950 to the present. Concurrently, revisions are being made in the seasonally adjusted department store indexes of several other Federal Reserve districts as well as in the United States totals. (See Federal Reserve *Bulletin*, August 1953.)

The tables below show the indexes of sales and stocks of Fourth District department stores from January 1948 to date, incorporating the revisions applying to months beginning with January 1950.

Accompanying charts portray the character of changes involved. Seasonal patterns are plotted before and after the revision, with the broken lines

indicating the revised values. The seasonal patterns are expressed in terms of monthly seasonal-adjustment factors. (Such "factors" are indicators of typical seasonal variations in relation to an average monthly performance taken as 100. Thus, the December sales factor of 166 indicates that sales in that month have been found ordinarily to exceed the average monthly sales of the year by 66%. An unadjusted index of sales for December of a given year is, therefore, multiplied by the fraction 100-166 in order to obtain the seasonally adjusted index for that particular month.)

Previously published *unadjusted* indexes of sales and stocks remain unaffected by the current revision.

It will be noted from the chart showing the seasonal pattern of *sales*, that the January adjustment factor has been raised by two points while the factor for May has been reduced by two points. Likewise, the September factor has been lowered by one point,

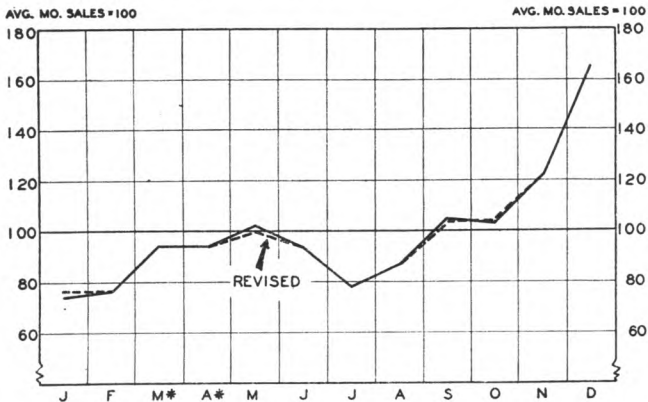
SALES
FOURTH DISTRICT DEPARTMENT STORES
Revised Index of Average Daily Sales
1947-49 = 100
(Adjusted for Seasonal Variation)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1948.....	99	104	103	102	103	106	108	107	105	113	103	102
1949.....	107	103	100	106	100	98	97	95	94	93	95	98
1950.....	96	98	98	100	102	103	126	116	112	105	88	112
1951.....	132	120	104	108	106	106	107	108	110	110	114	109
1952.....	112	108	106	104	106	112	105	113	106	115	113	117
1953.....	113	115	116	105	115	118	114					

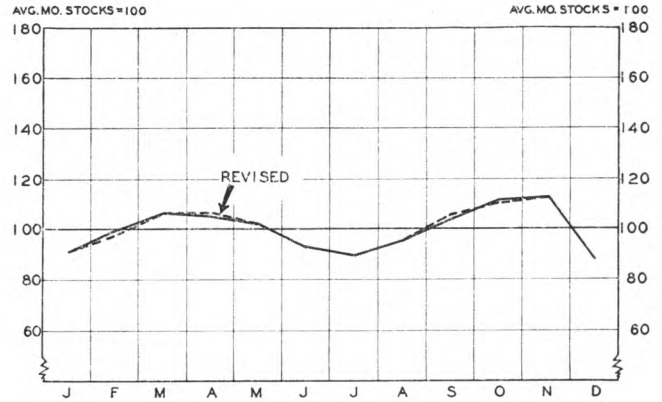
STOCKS
FOURTH DISTRICT DEPARTMENT STORES
Revised Index of Month End Value
1947-49 = 100
(Adjusted for Seasonal Variation)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1948.....	103	103	105	108	106	108	110	110	107	105	109	108
1949.....	103	101	103	98	103	102	100	98	99	99	96	98
1950.....	99	99	97	99	101	100	99	106	111	117	121	123
1951.....	126	128	135	136	137	136	136	130	124	118	114	118
1952.....	114	112	110	110	109	107	113	109	111	112	113	112
1953.....	114	115	113	114	117	122	124					

SALES
 Monthly Seasonal Pattern
 Fourth District Department Stores



STOCKS
 Monthly Seasonal Pattern; End-of-Month Values
 Fourth District Department Stores



* Factors shown for March and April are "basic"; in computing the index these two factors are varied each year depending on the date of Easter.

while the October factor has been raised by one point.

In the case of the seasonal pattern of *stocks*, the February factor has been reduced by one point, while the April factor has been raised by one point. Also, the September factor for stocks has been raised by

one point, while the October factor has been lowered by one point.

These are the only changes involved.

The adjustment factors shown in the charts will be used henceforth, until further notice, in computing the adjusted indexes of sales and stocks of Fourth District department stores.

INDUSTRIAL SCOREBOARD

(CONTINUED FROM PAGE 4)

Paint and Varnish The paint and varnish industry continued to operate at satisfactory levels throughout the second quarter. Sales for this period, nationally, averaged 4 to 5 percent higher than a year ago. The increase was due solely to improved industrial business which was up about 16 percent while trade sales held about even or were slightly lower.

Retail paint dealers reduced inventories somewhat as consumer sales were reported to be excellent. Dealer stocks are believed to be near minimum levels. There has been no let-up in sales of paint to home owners who do their own work, a volume which is probably considerably greater than that now provided by professional painters.

Ceramics and Glass The earthen dinnerware branch of the ceramics industry, largely centered in this District, experienced a very poor second quarter, perhaps the worst since 1945. Retailers were reported to be reducing inventories; new orders have been very slow. As a consequence, dinnerware plants closed from two weeks to a month

to take care of vacations and lack of orders. Some plants have continued to operate at slow schedules, but have piled up considerable inventory as a consequence. Such stocks should be worked off with the seasonal increase in business that ordinarily takes place in the second half of the year.

Glass container manufacturers, however, came within one percent of equaling the record second-quarter production of 1951; shipments were only three-tenths of one percent below that same record period. Compared with the second quarter of 1952, production this year was up 8 percent and shipments gained nearly 3 percent. Inventories at the end of June totaled 10.3 million gross containers and were the largest ever for that month. Stocks, however, amounted to less than one month's supply at the June rate of sale, and did not appear excessive.

Demand for flat glass — both plate and window — continued very strong for District producers, as the building boom continued unabated. Replacement demand was likewise strong as it usually is in a period of high or rising incomes. Automotive glass producers likewise shared the auto-production boom, plus a

little more, as the amount of glass used per vehicle continued to rise.

Bituminous Coal Output Coal mining continues to be out of step with the over-all march of activity. Bituminous coal output at Fourth District mines was little changed from last year's low levels during the first seven months of 1953. During this period, monthly output averaged 14.3 million tons—the same as the very low monthly average for the entire year of 1952 which included the low production months during the steel strike.

The coal picture is slightly better locally than it is nationally. Sustained high demand by electric utilities and steel mills in the District, coupled with a slight pick-up in coal shipments up the lakes, has boosted the District's share of national output to 39 percent for the first time since 1947. Last year it had dropped to a new low of 37 percent.

During the first seven months, an estimated 100.2 million tons of soft coal were taken out of the District's mines. This compares favorably with last year's strike-reduced total of 98.7 million tons for the same seven-months period, but is 11 percent below the same 1951 months when 112.4 million tons were mined.

Electric Power The expansion program undertaken by the electric utilities during the past few years is being reflected in the statistical measurements of power output. Stimulated by heavy industrial demand, utilities in Ohio, Pennsylvania, and Kentucky followed the national pattern by setting records for the output of electric power in each of the first six months of 1953. First-half totals for the combined output of the three states show an increase of 8.5 percent over power generated in the corresponding 1952 period, although part of the margin is ascribable to last year's slowdown due to the steel strike. United States production of electric energy by electric utilities for the same period was up 11.4 percent from a year ago. Substantial expansion of capacity in the relatively underdeveloped South and Pacific Coast areas helped to account for the bulge in total United States output.

Construction Contract Awards Construction activity in the Fourth District, as measured by F. W. Dodge contract award data, will set new records this year. Due mainly to the large volume of contracts let for the Pike County atomic energy plant and for highway construction, the aggregate dollar volume of contracts awarded during the first seven months was 37 percent above the same 1952 months. Although activity has remained high in nonresidential and public works construction, home builders recently have eased up from the fast pace of the first four months.

Nonresidential building contracts let during the January-July months totaled over \$687 million, topping the twelve-month totals for all previous years except 1951. In addition to the A-plant awards, which have pushed the dollar volume of manufacturing building contracts to new record levels, contracts for school buildings awarded through July exceeded the record dollar total of the similar year-ago months by 24 percent, and commercial building awards were near 1951 peak levels. Other nonresidential building activity was at high, but below record, levels.

Public works awards, paced by highway contracts, were 64 percent above the comparable year-ago period during the first seven months. With the bulk of the Ohio Turnpike awards yet to be let, activity in this segment of heavy engineering construction should be sustained at current record levels for some months to come.

Since May, the dollar volume of residential building contract awards in the District has fallen short of the record year-ago pace, but the sustained high level of awards during the first four months of the year helped keep the year-to-date total at the beginning of August slightly ahead of a year ago. More dwelling units were put under contract in the first seven months than in any other comparable period except 1950. However, the units were larger on the average, and the total floor area of residential buildings put under contract through July topped the previous record 1950 period by one percent. The easing of activity by speculative builders in recent months will leave the 1950 record unbroken by year-end, however, if the downtrend continues for the remainder of the year. Speculative building of single- and multi-family units, as indicated by contract awards, has dropped below 1952 levels the past several months, while construction of one-family houses for owner occupancy (which normally account for less than a third of the total) has continued at record levels.

Public and private utility awards in the Fourth District make up the only major group where contracts were not let in greater dollar volume than a year ago. Through July, District utility awards were 9 percent below the same 1952 months, and only about half the 1951 volume.

Cement Portland cement production at Fourth District mills averaged 7 percent above the comparable 1951 period during the first six months, setting a new output record for the first half of 11.2 million barrels. Output during the second quarter held relatively steady at the 2-million-barrel-a-month level, nearly a third above the year-ago rate but only about 86 percent of capacity as estimated at the beginning of the year.

Through the first six months, shipments of finished cement were running 12 percent above the compara-

ble year-ago period and one percent above the similar 1951 months. (Shipments last year were affected by the steel mill strike which closed down several cement mills affiliated with steel companies and also slowed some construction projects because of the temporary shortage of steel.) Mill stocks of finished cement at the end of June were considerably above those of recent years, standing 27 percent above the June 1951 total and 16 percent above the same 1952 month.

The more than a month's supply of cement in stock, together with operations at less than capacity, would seem to indicate an adequate supply of cement in the District for the balance of the construction season.

Business Failures Although still at relatively low levels, the number of industrial and commercial failures in the Fourth District increased during the first seven months of the year, reversing a downward trend that has persisted since 1950. The increase in the number of business failures in the District this year parallels the rise in business mortality nationally.

The trend of the aggregate dollar volume of liabilities of the concerns involved in court proceedings or voluntary actions, likely to end in losses to their creditors, has diverged from that of the number of failures, according to the information compiled regularly by Dun and Bradstreet, Inc. In the Fourth District and nationally, liabilities dropped sharply in 1950 but have risen each year since, including early 1953. It is hard to tell just how much of this upward trend is due to changing price levels.

In the Fourth District, 209 business failures with liabilities totaling \$10,650,000 were recorded during the first seven months of the year. This compares with 313 failures with liabilities of \$15,485,000 in all of 1952, and 679 failures with liabilities of \$21,852,000 during 1949, when failures were at the top rate of the postwar period.

Commodity Prices With the exception of some weakness in June, the 22-commodity daily index of spot market prices has remained relatively stable since mid-April. Prices of individual products have been divergent.

Farm-product prices have been generally depressed by the weight of high production and shrinking export demand, despite a continued strong demand from domestic industry and consumers. However, prices of commodities experiencing even minor supply problems have been quick to turn up again. Cocoa, beans, hogs, lard, and domestic sugar are examples.

The growing list of commodities selling at or below prices prevailing before the beginning of the Korean War suggests that the correction from the

speculative surge of prices after that event has been fairly well accomplished. Nearly half of the 22 sensitive commodities comprising the index have now receded to pre-Korean levels. Of these, tin, rubber, steers, and wheat have displayed consistent weakness in recent months. Burlap, hides, tallow, cotton, cottonseed oil, and zinc have been holding relatively steady.

The general wholesale price index remained virtually stationary during the first half of the year, varying only from 109.4 to 110. The slow upward movement of the prices of most manufactured products was largely offset by declining farm prices. Increases in steel, oil, aluminum, appliances, and chemicals were notable, while beef cattle and grains have led farm and food prices downward.

The offsetting industry-farm relationship appeared to end in July when commodity prices generally, and farm prices in particular, staged a decisive rally. The wholesale price index advanced 1.3 percent, the largest monthly rise since February 1951. The full effect of the June advances in steel prices was apparently registered in July. In August, prices again appear to have leveled off.

Consumer prices have risen steadily since February to reach a new all-time peak in July. In spite of lower prices received by farmers, retail food prices have continued irregularly upward. Rent and housing costs have also risen, partly as a result of the general abandonment of rent ceilings. The number of complaints as to rent increases in major District cities, however, has been very small, and reported rent increases have been generally moderate.

Inventories The value of business inventories, paced by rising stocks held by manufacturers of durable goods, have continued to establish new monthly records. The Department of Commerce estimated manufacturers' stocks at the end of July as \$45.7 billion, after seasonal adjustment. Heavy inventory investment accounted for much of the second-quarter gain in gross national product, as previously noted. Yet while inventories are large, they do not appear to be excessive unless confronted with a sudden drop in business sales.

A-Plant's First Year On August 12, the first anniversary of the \$1,219 million gaseous diffusion plant near Portsmouth, an estimated 8,800 workers were employed on the plant site. The tempo of construction activity was increasing daily, moving rapidly towards the 30,000-worker peak expected in early 1954.

The 3,700-acre plant site in Pike County has already been transformed from a farming area into an industrial site. Many temporary buildings have been erected, and iron workers are putting up the

framework of the permanent structures. Miles of roadway have been built within the area. Power lines emanating from the plant's own switching station carry electricity where it is needed. Freight cars are moved into the area to unload tons of building materials near the job. Several classes at the training school for permanent plant-operations personnel are already under way.

Business activity in the four-county A-plant area

has mushroomed. Many new businesses have been started, and many large concerns supplying labor and materials to the plant have opened local offices. During the first ten months of the project, payrolls at the plant site topped \$9 million. Practically every merchant in the area has benefited. Department store sales in Portsmouth, the area's largest metropolitan center, increased 23 percent in the first year, for about three times the rate of gain of department store sales throughout the Fourth District.

SUMMARY OF NATIONAL BUSINESS CONDITIONS

Released by the Board of Governors of the Federal Reserve System

Industrial production in July and August showed about the usual seasonal changes from the advanced June level. Crop prospects have improved and as of August 1 output was forecast as equal to last year's large volume. Total retail sales in July continued substantially above a year ago; sales at department stores in July and August have been moderately below earlier high levels. Consumer prices rose further in July; wholesale prices also rose in July but have changed little in August.

Industrial production

The Board's seasonally adjusted index of industrial production in July was 233 per cent of the 1935-39 average as compared with 240 in June. The dip in July was due to plant-wide vacations in important manufacturing industries and in coal mining which are not adequately reflected in the present seasonal adjustments for the production index. In August the index is expected to recover to 238.

While activity in most consumer and producer durable goods industries declined seasonally in July, passenger auto assembly was maintained at the high second quarter rate and truck output recovered sharply. In August auto output has declined moderately but has remained at a very high level for this period of the year. Production of household goods, after allowance for seasonal changes, has continued near the reduced May level. Farm machinery output has apparently been reduced further. Steel output has been about 95 per cent of January 1 rated capacity in August, as compared with 93 in July and 97 in June.

Output in nondurable goods industries generally recovered in late July and early August, following sharp seasonal curtailments in the first half of July. Paperboard production in early August was at a new peak rate.

Minerals production apparently recovered in August to about the high June level, as coal output recovered sharply after the vacation shut-down in early July and crude petroleum output rose further to new record levels.

Construction

Value of construction contracts awarded in July increased sharply from the reduced June total, reflecting in part many large awards for business properties. New housing starts declined slightly further in July to 96,000 units compared with about 103,000 in the preceding month and also in July 1952. Value of construction work put in place increased less than seasonally in July but continued appreciably larger than a year earlier.

Agriculture

Crop prospects improved during July, especially for cotton, and as of August 1 total crop production this year was officially forecast as equal to last year's large volume. Quotas limiting wheat plantings this autumn and next spring were approved by farmer vote on August 14.

Total meat production in the first part of August, seasonally adjusted, increased from the May-June level, with a gain in pork more than offsetting a small decline in beef. Total meat output in the first 3 weeks of August was 15 per cent above the year ago level. Egg production in July showed a smaller decline than usual and exceeded the year ago level by 5 per cent.

Employment

Seasonally adjusted employment in nonagricultural establishments rose further to a new peak of 49.7 million in July, reflecting moderate gains in most lines. Average hourly earnings in manufacturing industries advanced one cent further in July to \$1.77, while average weekly earnings declined slightly reflecting a small reduction in the workweek. Unemployment at 1.5 million in early July was little changed from June and 400,000 below the level of a year ago.

Distribution

Seasonally adjusted department store sales in the first three weeks of August remained near the mod-

erately reduced July level. In July sales of automotive dealers and most other retail outlets showed little change, and total retail sales continued close to the advanced June level and substantially above a year ago. Stocks at department stores are estimated to have increased slightly further in July after seasonal adjustment.

Commodity prices

Following an advance of 1.3 per cent in July to the highest level since October 1952, the average level of wholesale prices has changed little. After mid-July steer prices declined slightly while prices of most other grades of livestock lost all the earlier sharp advance. Wheat prices declined temporarily in early August reflecting uncertainty over prospects for restrictions on next year's plantings. Following a rise in July, average prices of industrial materials have been maintained. Prices of copper, tin, and paperboard have strengthened recently and lead prices have continued firm. Markets for scrap metals have weakened somewhat.

Consumer prices rose somewhat further in July, reflecting mainly continued gains in rents and services. Retail food prices changed little.

Bank credit and reserves

Total loans and investments at banks in leading cities declined moderately in late July and the first three weeks of August, reflecting primarily a reduction in holdings of U. S. Government securities. Bank loans to businesses increased as the seasonal credit expansion, particularly to food processors, began; loans to public utility concerns also rose. Real estate loans increased further, and banks added to their holdings of corporate and municipal securities. The rise in "other" loans, largely consumer, slackened appreciably.

Member bank reserve positions were somewhat tighter throughout most of August. Gold and currency outflows drained reserve funds, and Treasury deposits at the Federal Reserve Banks were maintained at generally high levels. The Federal Reserve purchased a small volume of Treasury bills, in part under repurchase contracts with dealers.

Security markets

Yields on high-grade securities were generally stable during the first three weeks of August. The Treasury offered a 1-year $2\frac{5}{8}$ per cent certificate in exchange for 2.9 billion dollars of certificates maturing August 15.

New Frontiers for Mineral Exploration

By CLYDE WILLIAMS, Director, Battelle Memorial Institute



About twenty-three hundred years ago, Alexander the Great, as the legend goes, sat down and wept because he had no new territories to conquer. However, beyond the obvious limits of territories explored during his time, we all know that more than half of the earth's lands were uncharted and unknown.

In the conquest of the earth's minerals, the modern prospector is not the weeping kind. Unlike Alexander the Great, he is breaking beyond the confines of the obvious. He is thinking more of searching for deposits that are lower in grade, buried deeper below presently mined surfaces, unknowingly obscured through association with other materials, or hidden in areas previously considered impractical for prospecting.

Over the past quarter-century, we have been experiencing a Technological Revolution through which our economic system has changed from one based primarily on rich natural resources to one based primarily on science and technology. A vast storehouse of new knowledge has been built up in physics, chemistry, metallurgy, and in their engineering applications. The application of this knowledge to prospecting will continue to open new frontiers for mineral exploration.

One of the greatest hopes for progress in modern prospecting lies in fundamental and applied research in geophysics, the science that treats the use of physical instruments to detect geological features which are not directly visible. For example, fundamental research is needed in seismic and electrical methods of exploration to increase the accuracy and detail-recording power of present instruments. One possibility for increasing this power in the seismograph exists in the development of a controlled energy source. The dynamite now used has such variable energies and frequencies that it is difficult to compare the energy received with that released at the source. Recent advances in electrical engineering indicate that large-force transducer types of motors can be constructed that may provide a controlled energy source, although only at relatively shallow depths. Such motors might make possible more detailed studies of how sound waves are affected by various rock properties as, for example, porosity, water content, and density. This knowledge would enable a more detailed geological interpretation of the rocks traversed by sound waves. In turn, the chances of locating hidden or disseminated ore bodies would be greatly enhanced.

A number of other opportunities exist for improvements in present instrumentation. The miniaturization of commonly used geophysical instruments might lead to useful information in bore-hole analyses. If the power sources used in electrical prospecting instruments could be provided with more output voltage, these instruments might be useful in obtaining information at greater depths.

"Electronic brains" might also be adapted to the recording of geophysical data to provide more rapid interpretation of this information. If a truck-mounted, total-field, continuous-reading magnetometer could be developed, it would facilitate magnetic prospecting.

In addition to geophysics, another great hope is geochemistry, the science that treats the distribution and relationships of the elements making up the earth's crust. Although still in its infancy, geochemistry is likely to grow rapidly as an exploration technique in mineral prospecting. One use of this approach is to find clues to the presence of valuable hidden ore bodies by chemical analysis of soils, apparently barren rocks, the waters of lakes and streams, and even the leaves and stems of plants. When minute quantities of useful metals are found and their locations are plotted on detailed base maps, careful evaluations sometimes reveal a "hot spot" or "halo" worthy of further exploration by surface trenching or diamond drilling.

However, to make more intelligent estimates of where geochemical surveys might most profitably be carried out, more basic information is needed on the chemical and physical relationships of minerals and aggregates of minerals or rocks. From accumulated observation and study, it is known that some natural iron sulfides contain cobalt and nickel, that some natural zinc sulfides contain cadmium and germanium, and that some natural lithium silicates contain rubidium. The metals cited do not form definite compounds of their own in these occurrences, but are hidden in the atomic structure of relatively common minerals. It is also known that concentrations of chromium and titanium may be associated with heavy, dark igneous rocks called gabbros, that concentrations of tin, tungsten, tantalum, and columbium may be found in or near light-colored igneous rocks called granites, and that germanium may be present in certain coals. These typical observations, however, provide only rough ideas about the distribution and relationship of elements in the earth's crust. More basic laboratory research in mineralogy and crystal chemistry would bring a better understanding of such relationships. This knowledge could explain why ore is where it is and, indirectly, aid in selecting the most promising areas for geochemical surveys.

Since the end of World War II, new thinking has been applied to minerals exploration. The need for new thinking has become evident by the extensive depletion of known mineral deposits. Mining companies have devoted time, energy, and large sums of money to the development and use of new methods for geophysical and geochemical prospecting. The Geiger-Mueller counter and the scintillation counter have proved valuable tools for discovering radioactive minerals. The possibilities for greater use of colored aerial photography and the helicopter have taken on increased significance in the exploration of areas previously considered impractical for prospecting. Important advances being made in the processing of low-grade ores have been encouraging the search for low-grade mineral deposits. An ever-widening interest is being shown in the necessity for more fundamental studies on the origin and formation of ore bodies. Thus it appears that the unlocking and economic winning of the earth's undiscovered mineral treasures will be limited only by the extent to which man applies science and technology to the development of new methods of discovery and treatment.

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.