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FINANCE • INDUSTRY • AGRICULTURE • TRADE

FOURTH FEDERAL RESERVE DISTRICT

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Federal Reserve Bank of Cleveland

Cleveland 1, Ohio

## Recent Trends in Business and Banking

**W**HETHER the state of the economy in the present phase of the rearmament program should be termed one of unstable equilibrium or stable disequilibrium is perhaps a less purely semantic question now than was the case three months ago.

So far this year developments have indicated generally a continued movement toward a better balance between the forces of inflation and deflation, prices and production, supplies and purchases, investment and saving. Yet the pundit who would aver that the resulting equilibrium could no longer be disturbed by numerous elements, both known and unknown, would be foolhardy in the extreme.

**Decline in Prices** Prices of basic commodities resumed their decline in January, and are currently only 14 percent above the pre-Korean level and 23 percent below the all-time high registered in February last year. Weakness in the prices of commodities such as print cloth, wool tops, hides, and tallow, which are used extensively in the production of "soft goods", were largely responsible for the return of the sensitive index of 28 basic raw materials to more familiar ground. (See the March issue of this *Review* for a more detailed analysis of commodity prices.)

Prices of the much broader group of commodities and products covered by the wholesale price index also entered the twelfth month of almost continuous decline in March. The reduction in prices remains much less spectacular than the dip in raw material values, as noted in the Annual Report of this bank for 1951. The index of wholesale prices in March was only 4 percent less than the all-time high regis-

tered a year earlier, and still more than 11 percent above the immediate pre-Korean level.

Perhaps more significant than the decline in wholesale prices of raw materials and products was the dip in retail prices as indicated by the consumers' price index in February. The recent dip was the first in more than two years, and followed a steady, if slow, rise throughout 1951 under the impetus of food prices and rent. Since it is virtually impossible in indexes of this type to take fully into account the effect of premiums above, or sales below, the list price, it is probable that the alert shopper recently found price comparisons with the months of late 1950 and early 1951 more favorable than are apparent from the index. For many people the easing of living costs resulting from an improved demand-supply relationship may well have occurred somewhat earlier, and in greater degree, than the overall statistics show.

**Divergent Production Trends** Production and employment, meanwhile, continued in the early months of this year on a high plateau, with a continuing drift from production of non-

durable goods provoking virtually no change in the over-all volume of output. Problems of relatively severe local unemployment, such as resulted from the partial switch-over from fun to firearms in Detroit, should be alleviated somewhat by the more generous metal allocations recently announced by the N.P.A., and by an anticipated increase in the viscosity of Defense Department schedules and blueprints.

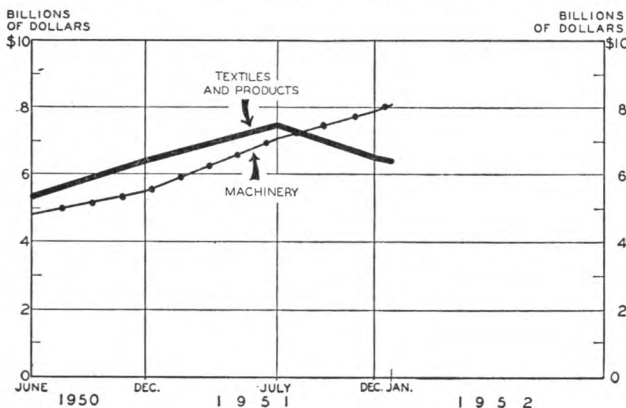
The curtailment in production of the three types of textiles and their products, as well as of leather

goods, which became evident more than a year ago, and which was contrasted with iron and steel output in this bank's Annual Report to show the uneven impact of the defense program, has created problems of greater magnitude and more widespread ramifications. It is vastly more difficult, and frequently impossible, to transfer the human skills, the productive equipment, and the capital resources of the textile industry from peace to war production than is the case in the automobile industry, at least in the absence of an enormous purchase program such as was required for the 11-million-man armed forces in World War II.

Nor is the slump in textiles confined to the United States alone. Output has declined and unemployment has risen in this industry in Britain and Belgium also. In Egypt, minimum prices for medium staple cotton were abolished in mid-February because of oversupply. And at the end of January, South Africa imposed restrictions on the import of textile piece goods from hard currency countries such as the United States, because of the very high level of stocks of such goods which had accumulated.

While there is no definite evidence that the domestic textile market has "bottomed out", and competition for cotton and wool from synthetic fibers is continually increasing, improved inventory positions may lead to a reversal of the downtrend in production in the near future. Both at the retail and the manufacturing level, inventories of textile products reached a peak in July last year. (See chart below.) Since then, they have been reduced substantially, and at the end of January, after six consecutive months of shrinkage, were 15 percent below the peak.

**INVENTORIES OF TEXTILES AND MACHINERY**  
June 1950 - January 1952  
Book Value, Seasonally Adjusted



... inventories of textiles and textile products have been declining since last July. Inventories of machinery, on the other hand, have continued to rise to new record levels.

NOTE: Textile Inventories include those of apparel stores, as well as of manufacturers of textile mill products, apparel and related items. Machinery inventories are of manufacturers only.

**Inventory Adjustment** The movement of textile inventories offers one of the more extreme examples of the adjustment of available supplies to demand in recent months. The over-all inventory picture shows the value of manufacturers' stocks leveling off at record values early this year, while retail inventories of both durable and nondurable goods continued the gradual shrinkage which began last June. At the end of January the book value of all retail inventories was estimated at \$18.1 billion, 12 percent below the May 1951 peak. Manufacturers' inventories, on the other hand, at \$42.0 billion, were virtually the same as at the end of 1951, and 23 percent above the year-ago level. The increase in manufacturers' inventories continued throughout last year in spite of a moderate decline in stocks of nondurable goods, and for the past eight months was concentrated chiefly in finished items and durable goods in process of production.

The divergent movement between retail and manufacturing inventories during the past nine months reflects, in part, the reduction in volume of consumer expenditures from the very high levels of early 1951, in contrast to rising demands for defense and defense-supporting equipment.

**Sales Steady at Below-Peak Levels** Sales by nearly all types of retail outlets for both durable and nondurable goods this January were below the exceptionally high levels of January 1951. An extreme case was provided by dollar sales of motor vehicle dealers, which were nearly 25 percent less than a year ago, largely as a result of compulsory curtailment in production. The only important exception to the shrinkage was in sales of food stores, drug stores, restaurants, bars and similar establishments, where a moderate year-to-year gain was reported in January.

The most current data available for this District offer no evidence of a renewed upsurge in the rate of consumer spending so far this year. Department store sales declined slowly during February and March after allowing for seasonal fluctuations, remaining close to the comparable 1950 volume.

**Personal Savings Strong** A natural corollary of the leveling off in consumer expenditures during the past twelve months, while disposable personal income continued to climb to record levels, was a high rate of personal saving. In addition to heavy contractual savings resulting from previous borrowing on homes, consumer durables and similar items, or from still expanding holdings of insurance, a reassessment of the desire for liquidity was evidenced by the rapid inflow of savings at banks and savings and loan associations since March last year.

Privately owned time deposits at banks in the

Fourth District continued to rise early this year, and at the end of February were at an all-time high, nearly 5 percent above the year-ago level. Although the expansion was not maintained in March, this probably reflects seasonal influences such as tax payments. Savings and loan associations in both urban and rural areas of the District also reported a net inflow of private funds at record, or near-record, levels for the months of January and February. The expansion in individuals' holdings of withdrawable shares in these associations this year continued at a more rapid rate than the increase in savings at commercial banks in the District.

**Offsets to Savings** The deflationary impact of the high rate of personal saving over the past twelve months was reinforced by a rising trend of corporate saving in the form of depreciation allowances. However, higher taxes were financed in large part by reducing the volume of retained profits so that substantially more external financing was required in 1951 than in the previous year.

The major need for capital funds last year derived from record expenditures on new plant and equipment by firms in the United States, which totaled more than \$23 billion. The rise in these expenditures, which was most pronounced in durable goods, chemical, rubber, petroleum and coal industries, was a major factor in maintaining aggregate industrial output and employment on a high plateau, and in offsetting the deflationary impact of a high rate of saving. Expenditures on new plant and equipment are estimated to have continued at very high levels in the first quarter of this year, providing a mainstay of prosperity.

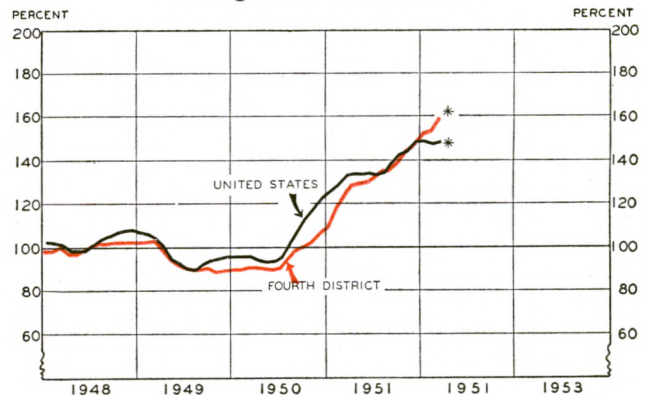
**External Financing** External financing of these expenditures last year was achieved largely through the placement (net) of a near-record volume of securities, both stocks and bonds, with private investors. Issuance of new securities continued at a high level in the early months of this year, providing additional outlets for the active employment of savings.

Bank loans also supplied businesses with a near-record volume of additional funds last year. The bulk of these loans, however, were short-term, and were more significant in meeting inventory and working capital requirements than in financing fixed capital outlays.

The reduction in retail inventories during the past ten months, and the slight decline in stocks of wholesalers since last July, lessened the demand for money for business stockpiling purposes. In fact, loans to retailers and wholesalers at reporting banks throughout the country showed virtually no net change from May to December last year. In the early months of 1952, inventories of manufacturing concerns leveled

## INDEX OF BUSINESS LOANS

Fourth District and U. S. — Weekly Reporting Banks  
Average 1948 — 1949 = 100



... in the nation as a whole, commercial and industrial loans at reporting banks have held steady near record levels for three months, presumably in response to seasonal influences. In this District, however, such loans continued into new high ground.

\* March 1952 estimated. Data plotted are monthly averages of weekly figures.

off, after rising continually for nearly two years. At the same time, a substantial reduction, partly seasonal in nature, occurred in outstanding bank loans for inventory and working capital purposes in non-defense industries.

**Business Loans** The changed inventory situation is mirrored in the trend of commercial and industrial loans at weekly reporting banks.

At the nationwide sample of banks in major cities, these loans reached an all-time high in December last year, after a nearly continuous expansion since May 1950 which increased the total by more than 50 percent. In the first three months of this year, they have held steady at near-record levels, in contrast to the rapid increase in the early months of 1951. The normal operation of seasonal factors usually produces a moderate decline in business loans in the early months of the year, and it is probable that such a reduction would have occurred in the absence of borrowing to meet the 35 percent corporate tax payment due in March, or in the absence of continued borrowing for defense and defense-supporting purposes. In fact, in the eleven-week period immediately preceding the March 15 tax deadline, nondefense loans declined continuously, and more than offset the further expansion of loans to defense and defense-supporting industries.

Substantial net repayments by sales finance companies, commodity dealers, manufacturers of food, liquor and tobacco products, retailers and wholesalers, were the main factors in the shrinkage of nondefense loans. Heavy borrowing by producers of metals and metal products, and by the petroleum,

coal, chemicals and rubber group, continued to spark the increase in loans to defense and defense-supporting industries.

### Importance of Defense Borrowing

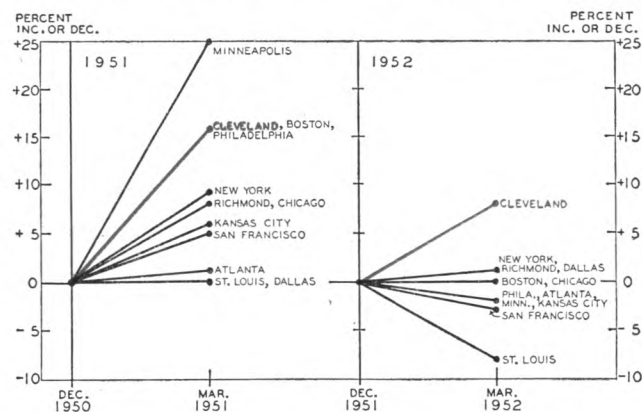
The prominence of the latter type of activity in this District, as well as the existence of a different seasonal pattern in business loans from that of the country as a whole, help to explain the continued rapid expansion of loans to commerce and industry at reporting banks locally in the first quarter of 1952. Such loans at Fourth District banks typically exhibit a very slight upward movement in the early months of the year. Evidence that this seasonal pattern may be changing somewhat, particularly in March, as a result of higher tax rates and the forward shifting of the incidence of tax payments under the Mills plan, is apparent from the very high volume of new loans reported in the week covering the first-quarter tax deadline. Nevertheless, the increase in business loans appears to have exceeded seasonal expectations even if substantial allowance is made for higher and earlier tax requirements.

An accompanying chart indicates that the first-quarter expansion in commercial and industrial loans at reporting Fourth District banks was faster than in any other District. In the same period of 1951, business loans in several other Districts—Minneapolis, Boston and Philadelphia—rose with equal or greater rapidity than in the Fourth District. Nowhere did increases in commercial and industrial

## CHANGES IN BUSINESS LOANS

by Federal Reserve District

December-March 1951 and 1952—Weekly Reporting Banks



... thus far in 1952 commercial loans at reporting banks have risen more rapidly in the Fourth District than elsewhere in the nation. In the same period last year several other Districts also reported large gains. Purely seasonal influences account for some of the divergence among Districts.

NOTE: Data used for computing percent changes are monthly averages of weekly figures. March 1952 partially estimated.

loans in the first three months of this year approach the spectacular performances of early 1951. In six of the twelve Federal Reserve Districts, seasonal factors were strong enough to produce a reduction in commercial and industrial loans in the past three months.

The mainspring of the loan expansion in this District continued to be producers of metals and metal products, as was the case nationally. Reporting banks here, with only 6 percent of commercial and industrial loans of all reporting banks, still accounted for more than 10 percent of the first-quarter gain in loans to firms in the metals group. Borrowing by the petroleum, coal, chemicals and rubber group, and by public utility companies also accounted for a substantial part of the increase.

**Loan Outlook** If the defense program progresses according to plan, it seems probable that the divergent movement of business loans in this District as compared with the country as a whole will gradually become less pronounced. There is little reason to believe that a renewed upsurge in manufacturers' inventories will occur, except perhaps in military end items and goods in process of production. Improved sales-stocks ratios should be conducive to stability in retail inventories. Production, rather than inventories, would probably derive the greatest impetus from any substantial increase in consumer spending. Certainly it seems unlikely that the sharp contrast between the movement of inventories and production of textiles, as opposed to inventories and production of machinery, will continue in the same degree. Such divergent movements presumably were important factors in the stability of commercial and industrial loans in the Boston District early this year, in contrast to the expansion at a rate equal to the Fourth District gain in the first quarter of 1951.

### Consumer Financing Neutral

Consumers as a whole appear to have been able to finance their investment in homes and durable consumer goods almost entirely out of current contractual savings during the year to date. The inflationary pressure created by the extension of real estate and consumer credit continued to diminish as was the case throughout most of last year. Real estate loans at reporting banks throughout the country declined nominally for the first time in three years, although the value of residential construction contracts awarded in January and February was higher than in the comparable period of any other year except 1951. Moreover, this slight shrinkage occurred in spite of a step-up in the volume of FHA and VA insurance and guarantee activity.

The recent decline in the importance of real estate credit as an inflationary factor resulted primarily

(CONTINUED ON PAGE 10)

## Ohio's Inter-Regional Trade

**T**HE amount of freight traffic and trade that flows between a major industrial state such as Ohio and the neighboring states has long been a subject of conjecture among economists, marketing men, and others interested in the inter-regional flow of trade and balance of payments problems. Until recently, however, published data on the problem have been virtually unobtainable except in the most fragmentary forms.

Part of this gap in statistical information is now being filled by the Interstate Commerce Commission as it releases the results of its continuous one percent sample of audited railroad waybills representing carload terminations. From this study it is possible to estimate the tonnage of railroad freight that originates in any given state and to trace its movement to the state of destination. In addition the freight movement is also broken down into the familiar commodity classifications used by the I.C.C., so that it is possible to estimate the tonnage of the more important kinds of goods that flow into and out of the several states.

The total tonnage figure for a given state, however, is not available. Missing from the picture is the less-than-carload railroad freight as well as the important tonnages handled by truck, pipeline, waterway, and airplane. The latter transportation agencies, on a national basis, are estimated by the I.C.C. to handle about 41 percent of the total ton-miles of intercity freight traffic. This generalization as to the relative importance of the nonrail carriers cannot be carried safely to a particular state owing to the wide variation in the availability of their services. The Central Industrial States, for example, with access to both the Great Lakes and the Ohio river undoubtedly have a much larger share of their commerce borne on inland waterways than do states not located adjacent to water. On the other hand, their share of pipeline traffic may be much lower than that of the states located in the major oil producing and refining sections of the country.

Ohio's role as one of the principal manufacturing states in the nation, as a large producer of mineral and agricultural wealth, and as the center for iron ore and lake coal shipments is confirmed by the I.C.C. study. Approximately 10 percent of all carload freight carried by Class I railroads either originated or terminated within the borders of the state of Ohio in 1950. Data are not available for fragments of states so that no estimate can be made for the entire Fourth Federal Reserve District which would include (in addition to Ohio) the western third of Pennsylvania, the Panhandle of West Virginia, and the eastern half of Kentucky.

### Ohio's Imports

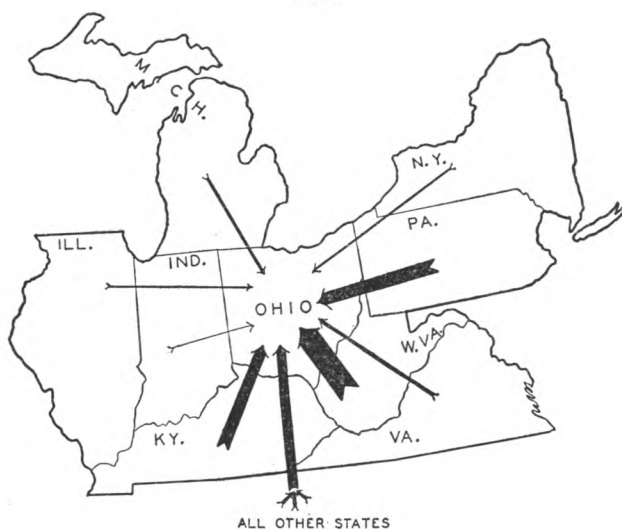
Based on railroad carloadings, Ohio is in the same position as many foreign nations. It imports about one-third more than it exports to other states in the Union. This seeming imbalance has not, however, resulted in a "dollar shortage" and can be largely explained in terms of the Lake Erie coal trade, which is discussed in more detail later in this article.

In 1950, Ohio was the nation's leading import state. About 95 million tons of railroad freight were terminated in the State, or 13 percent of the total interstate traffic originated in the other 47 States. Seven-eighths of this volume came from the eight neighboring states shown on the map and nearly three-quarters originated in the three states of Kentucky, Pennsylvania, and West Virginia. In other words, the vast majority of in-bound tonnage came from adjoining states and moved relatively short distances.

**Mine Products** Imported products are classified by major categories in the accompanying table.

Products of mines account for 76 percent of the terminations and manufactures for slightly more than 17 percent. The remaining 7 percent is divided among products of agriculture, forests, animals and animal products.

INBOUND INTERSTATE FREIGHT SHIPMENTS  
BETWEEN OHIO AND SURROUNDING STATES  
1950



... about seven-eighths of Ohio's inbound railroad shipments originates in eight neighboring states. The bulk of this traffic is coal and coal products.

Source: Derived from Interstate Commerce Commission data.

**Interstate Carload Freight  
Terminated in Ohio—1950**

Classification	Tons	Percent of Total
Products of Mines.....	71,765,000	75.6%
Manufactures and Misc.....	16,391,000	17.3
Products of Agriculture.....	3,904,000	4.1
Products of Forests.....	2,371,000	2.5
Animals and Products.....	484,000	0.5
<b>Total .....</b>	<b>94,915,000</b>	<b>100.0%</b>

Source: Derived from Interstate Commerce Commission data.

More than 86 percent of the products of mines classification, or 62 million tons, was made up of a single commodity—coal. To this could be added another 2 million tons of coke, so that nearly 67 percent of all inbound railroad freight tonnage was made up of coal and coal products. In the light of this information, it becomes easier to understand the vigorous stand taken by the railroads in opposition to the proposed construction of a coal belt-conveyor from the Ohio river to Lake Erie.

The area composed of Ohio, Pennsylvania, Kentucky, and West Virginia is the greatest coal producing and consuming section of the country. In addition, Ohio lake ports handle the bulk of the bituminous coal loadings that are destined for Canada and the Upper Lake ports so that much of the coal which apparently was terminated in Ohio, was actually dumped into vessels on Lake Erie and continued on its way to ultimate markets. In 1950, Lake Erie coal shipments amounted to about 48 million tons. Not all of this coal was imported, however, since a substantial proportion came from Ohio mines and was not included in interstate railroad carload figures.

A relatively small amount of iron ore, 1,500,000 tons, entered Ohio by rail during 1950. In ordinary years, the amount of iron ore coming into Ohio by rail is probably much smaller, as nearly all Lake Superior and Canadian iron ores are moved in by lake freighters. In 1950, however, iron ore stocks were considered low due to both a short lake shipping season and the Korean crisis so that extensive all-rail shipments were undertaken to supplement stocks. This type of emergency shipping continued last year, but an early end is in sight as the current lake shipbuilding program begins to bear fruit and new or converted carriers are put into service this year.

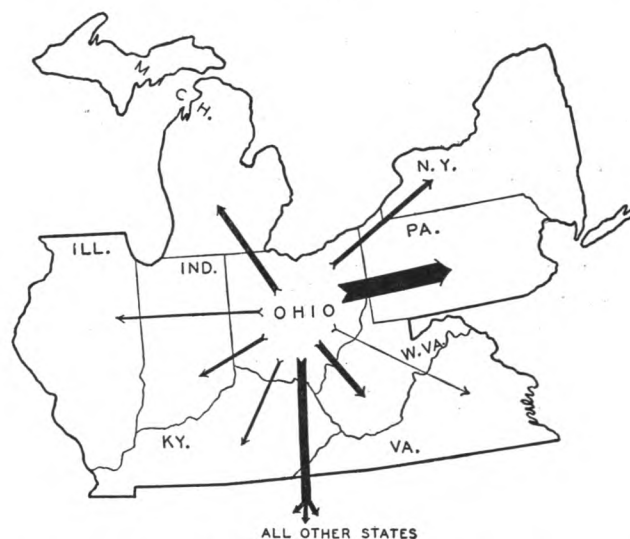
Other mine products which were transported to Ohio by rail during 1950 included sand, gravel, salt, nonferrous ores, and some petroleum. The vast majority of petroleum products arrive by pipeline and in recent years an increasing amount by river barge and lake steamers and barges.

**Manufactured Goods** Manufactures and miscellaneous accounted for more than 16,000,000 tons, or 17 percent of the interstate freight terminated in Ohio. Metals and metal products predominated with iron and steel, manufactured iron and steel products, and scrap iron accounting for more than one-third of the tonnage in this classification. Other important commodities imported into Ohio included chemicals, paper and paper products, and rubber. While it would be possible to make tonnage estimates of individual products, this has not been done due to the possibility of a wide margin of error arising from the small sample available.

The use of only carlot rail shipments of manufactured products results in a serious understatement of the amount of such trade. For example, the Boston Federal Reserve Bank recently conducted a survey among New England firms to determine the relative importance of truck shipments in inter-regional trade. The results indicated that 29 percent of total tonnage of all commodities shipped to and from New England was carried by truck. For manufactures and miscellaneous products, however, about 42 percent was estimated to move by truck. It is reasonable to assume that a somewhat similar proportion would exist in Ohio.

The remaining three classifications, namely products of agriculture, products of forests, and animals and products represented but 7 percent of total freight terminations in Ohio. In each of these three major groups, one commodity or type of product exceeded

**OUTBOUND INTERSTATE FREIGHT SHIPMENTS  
BETWEEN OHIO AND SURROUNDING STATES  
1950**



... about four-fifths of Ohio's outbound shipments terminates in the adjacent states shown. Iron ore, coal, and steel products are the chief exports.

Source: Derived from Interstate Commerce Commission data.

all others in tonnage shipped. The principal products of agriculture were grains and grain products. Lumber, shingles and lath accounted for nearly three-fourths of the products of forests, and livestock and meats predominated in the classification of animals and animal products.

**Ohio's Exports**

Ohio's "export" shippers originated 62,941,000 tons of interstate railroad carload shipments in 1950 to put the state in third place in the nation. It was overshadowed only by West Virginia and Pennsylvania, the two leading coal producing states.

An overwhelming proportion of the freight which originates in Ohio is terminated in neighboring states as shown in the map. Pennsylvania was Ohio's best customer, taking over 42 percent of the tonnage, while Michigan and West Virginia each received about 10 percent. The other five states shown took about 20 percent of the total.

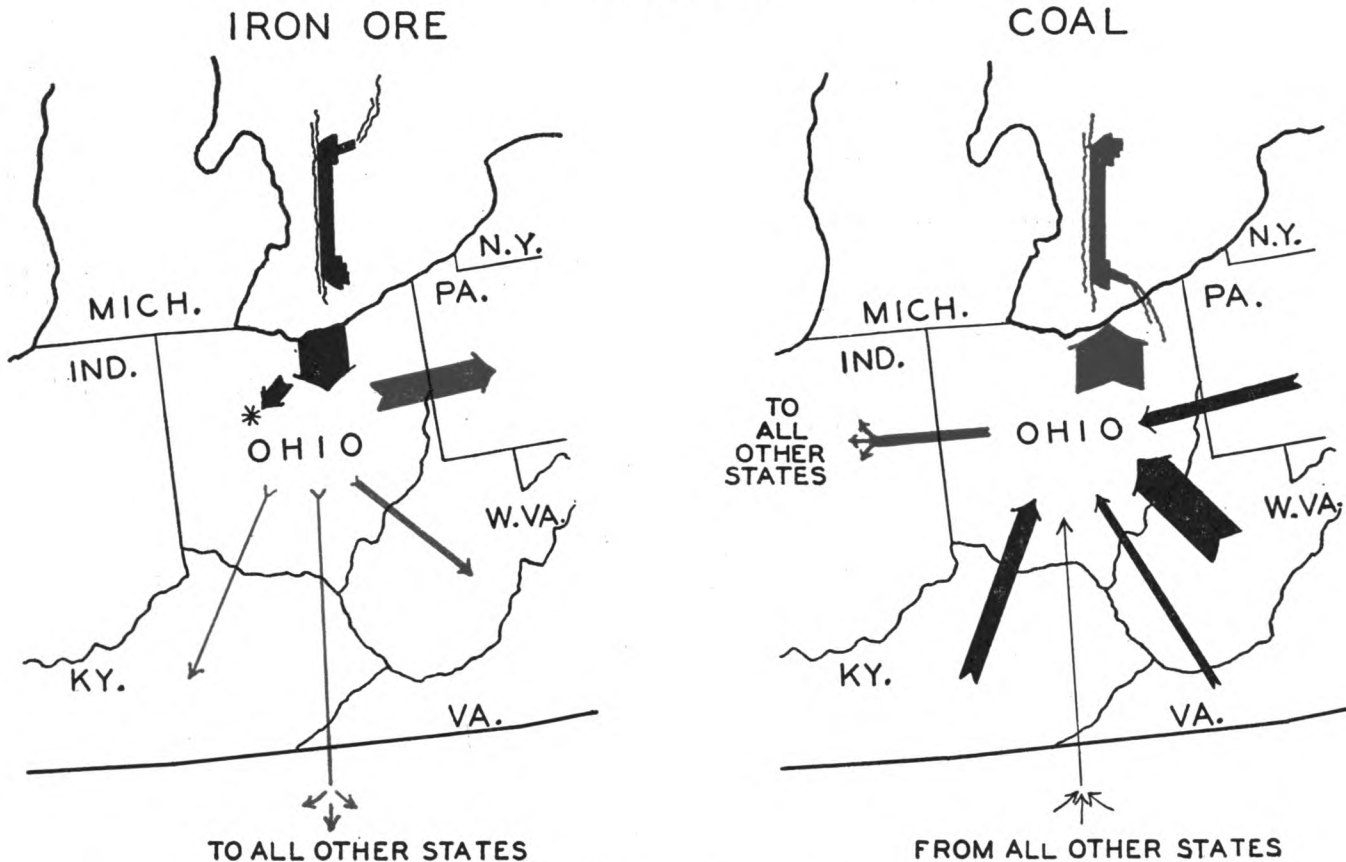
**Iron Ore and Coal** Among the five major classifications, products of mines again led but not by so wide a margin as in the case of inbound shipments. Three-fifths of the total outbound freight consisted of mine products as compared with three-fourths of inbound.

**Interstate Carload Freight Originated in Ohio—1950**

Classification	Tons	Percent of Total
Products of Mines . . . . .	37,253,000	59.2%
Manufactures and Misc. . . . .	22,327,000	35.5
Products of Agriculture . . . . .	2,864,000	4.6
Animals and Products . . . . .	348,000	0.6
Products of Forests . . . . .	149,000	0.2
Total . . . . .	62,941,000	100.0%

Source: Derived from Interstate Commerce Commission data.

**INTERSTATE RAIL AND LAKE COAL AND IRON ORE MOVEMENTS  
In Ohio, 1950**



. . . three-fourths of the coal shipments terminated in Ohio in 1950 was loaded into freighters for transport to the upper lakes area and more than two-thirds of the iron ore brought to Ohio by lake transportation was sent by rail to furnaces in Kentucky, Pennsylvania, and West Virginia.

\* Consumed within Ohio.

Source: Derived from Interstate Commerce Commission data, and Ore & Coal Exchange.

Although Ohio does not mine any iron ore, this was the leading export commodity. The explanation is not difficult to find. Lake Superior district iron ores are dumped at the principal ports on Lake Erie, not only for Ohio's blast furnaces, but for transshipment to furnaces in Pennsylvania, West Virginia, and Kentucky. The bulk of this trade is handled by docks at Huron, Toledo, Cleveland, Ash-tabula, and Conneaut. In 1950, some 33,000,000 tons of iron ore were unloaded at Ohio docks and, of this, some 24,500,000 tons were carried by rail on to other states. This accounted for two-thirds of the products of mines total.

The second-ranking product of mines export was coal with rail exports of 6,300,000 tons. Presumably the exported coal was the product of Ohio mines and not re-loadings of coal brought in from other states. The following rough computation indicates the importance of coal as a traffic item as well as its importance as a source of power and heat for industry and consumers in the state.

**Ohio Coal Trade  
1950**

	Tons
Ohio Coal Mine Production.....	37,000,000
Interstate Railroad Carload Termination.....	62,000,000
<b>Total Supply</b> .....	<b>99,000,000</b>
Less:	
Ohio Lake Port Loadings.....	48,000,000
Interstate Railroad Origination....	6,300,000
<b>Total Export</b> .....	<b>54,300,000</b>
<b>Apparent Ohio Consumption</b> .....	<b>44,700,000</b>

At best, the foregoing is a very rough approximation. It does not take into account the movement of coal by truck or river barge in and out of the state, or changes in the amount of coal in transit (which is about one week's production), or changes in year-end inventories which may vary widely.

The remainder of the outbound products of mines shipments consisted of such things as gravel, sand, salt, and stone.

**Manufactures** The manufactures and miscellaneous classification is the only major group for which freight originations exceeded terminations in 1950, a fact that reflects Ohio's importance as a manufacturing state. The principal commodities making up this type of rail freight were iron and steel forms and products, building materials, chemicals, animal and poultry feed, and vehicle parts.

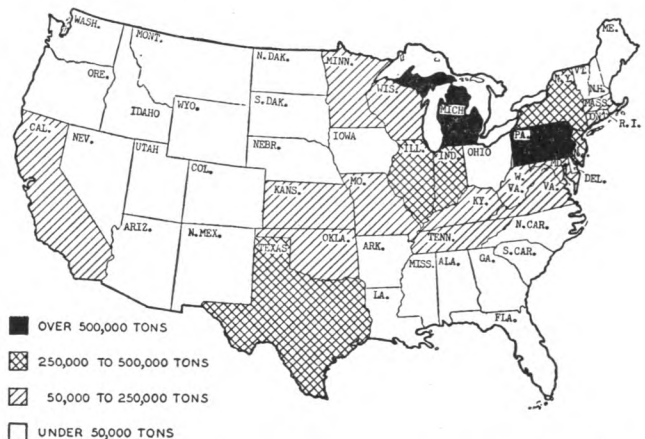
Close inspection of the 10 major commodity classes listed in the table indicates that at least half of Ohio's manufactured exports are iron and steel products or items for which ferrous metals are the basic raw material.

**Manufactures and Miscellaneous Freight  
Originated in Ohio—1950**

Product	Tons	Percent of Total
Iron and Steel Forms and Products..	7,023,000	31.5%
Cement and Other Building Materials	2,780,000	12.5
Chemicals (including fertilizers).....	2,272,000	10.2
Animal and Poultry Feed.....	1,220,000	5.5
Vehicle Parts.....	1,089,000	4.9
Pig Iron.....	803,000	3.6
Iron and Steel Scrap.....	772,000	3.5
Household Equipment and Appliances	712,000	3.2
Agricultural Implements, Machinery, R. R. Equipment and Parts.....	700,000	3.1
Other.....	4,956,000	22.2
<b>Total</b> .....	<b>22,327,000</b>	<b>100.0%</b>

The geographic market for steel products differs markedly according to the nature of the product. An adjacent map shows the density pattern of the market for iron and steel forms and products shipped from Ohio. These are essentially semi-finished products such as sheets, strip, bars, structurals, pipe and tubing. For the most part, such products are processed further—stamped, bent, cut, or turned—into the form desired for incorporation into an end product and so subject to considerable waste or scrapage in the fabricating processes. Iron and steel forms are also relatively standardized and low

**IRON AND STEEL FORMS AND PRODUCTS  
SHIPPED FROM OHIO  
by Terminating State, 1950**



... shipments of producers' durable equipment and manufacturing raw materials from Ohio have gone mostly to nearby states where industrial activity is concentrated.

Source: Derived from Interstate Commerce Commission data.



valued so that freight is an important cost. As a result of these characteristics, it would be expected that the market for the output of Ohio steel mills would tend to be limited to nearby areas and to the heavily industrialized areas where the mills enjoy a freight advantage or are at least on a competitive basis with steel mills located at other major producing centers.

The map illustrates the general truth of this proposition. Michigan and Pennsylvania were Ohio mills' best customers with receipts of over 500,000 tons each, and the heavily industrialized states of Illinois, Indiana, New York, and New Jersey took shipments of between 250,000 and 500,000 tons each. It seems entirely possible, however, that with the completion of the huge new steel mill on the Delaware river, much of the present market in Pennsylvania, New York, and New Jersey as well as the New England states may be lost because of a freight disadvantage.

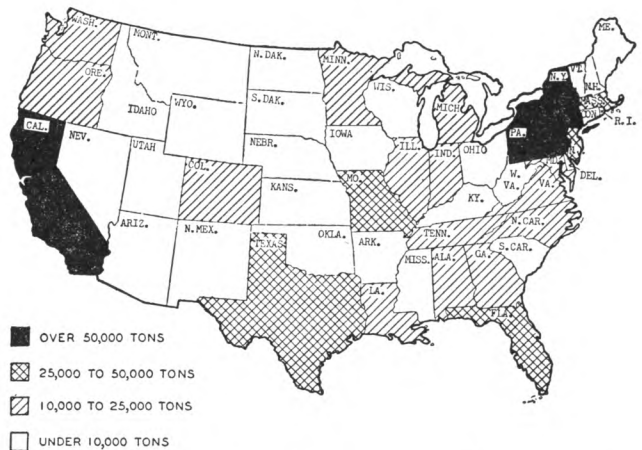
It will also be noted from the map that the large oil and gas producing states of Texas, Oklahoma, Kansas, and California were major Ohio customers. Northeastern Ohio is the domicile of the world's largest pipe and tube mill so there is a heavy flow of these products to oil producing regions for well casings and pipelines. In addition, relatively large tonnages of steel are used for drill pipe, couplings, fittings, storage tanks and the like. A large part of the shipments to coastal states such as Texas and California and to states along the Ohio-Mississippi waterway now move by barge and so of course are not included in these railroad carload figures.

The out-of-state market for household equipment and appliances is shown on another map and follows quite a different pattern from that for iron and steel forms. These are products made almost entirely from steel but they are in finished form for the consumer. The market for such items is determined in large part by density of population, new residential construction activity, population shifts, and family purchasing power.

As evidenced by railroad carloadings, the largest sales were made in Pennsylvania, New York, and California and the second-ranking group included Massachusetts, New Jersey, Florida, Texas, and Missouri. Large shipments were also made to the Pacific Northwest as well as to the Southeastern and Gulf Coast states.

The distribution of household appliances as shown by this map is subject to at least two important qualifications. The first is the importance of truck transportation which must account for a very high proportion of shipments of appliances to states immediately adjacent to Ohio. This market is thus substantially underestimated by using only railroad carloadings. The second qualification has to do with export shipments. These would be reported as carload terminations in states having major seaports

### HOUSEHOLD EQUIPMENT AND APPLIANCES SHIPPED FROM OHIO by Terminating State, 1950



... consumer goods demand has attracted large quantities of Ohio-made household equipment and appliances to distant states such as California and Texas which have experienced very large population growths since the second World War.

Source: Derived from Interstate Commerce Commission data.

(such as New York) and so overstate shipments into such regions.

#### Nonmanufactured Exports

Grains and grain products accounted for about three-fourths of the products of agriculture shipped from Ohio. Lumber, shingles and lath made up the majority of the forest products and most of the animals and products transported by rail from Ohio were the common meat animals, swine and cattle, and their meats. These three groups together accounted for less than 6 percent of the total railroad interstate carload freight originated in Ohio in 1950.

#### Intrastate Traffic

Products of mines led the four other major classifications in tons of freight shipped in intrastate traffic in Ohio in 1950 as well as in interstate shipments. Nearly three-fourths of the goods transported by rail within the state of Ohio during that year were products of mines. Almost one-fourth of the intrastate freight consisted of manufactured and miscellaneous products and the other three major classifications all together accounted for less than four percent of the total.

Eight commodities or types of products made up almost four-fifths of all the 1950 intrastate traffic in Ohio. Bituminous coal was by far the leading type of freight, accounting for more than one-third of the total.

The majority of these commodities are heavy and bulky and particularly well adapted to shipment by

rail. Up to the present time, the railroads have been supreme in their ability to handle this traffic and to meet successfully the competitive threat of other carriers while losing ground in other directions.

**Leading Commodities in Intrastate Traffic  
in Ohio—1950**

Commodity	Tons	Percent of Total
Bituminous Coal.....	17,192,000	35.1%
Iron Ore.....	10,779,000	22.0
Iron and Steel Forms and Products..	3,530,000	7.2
Fluxing Stone.....	3,471,000	7.1
Scrap Iron.....	2,122,000	4.3
Coke.....	1,422,000	2.9
Gravel and Sand*.....	1,287,000	2.6
Furnace Slag.....	1,233,000	2.5
Other.....	7,913,000	16.2
All Commodities and Products.....	48,949,000	100.0%

\*Does not include industrial sand.

Source: Derived from Interstate Commerce Commission data.

New competitive transportation agencies, however, are making an appearance and are aimed at the

traffic which is at present the lifeblood of the railroads in Ohio. One company proposes to link Lake Erie and the Ohio River with a continuous belt conveyor to handle iron ore in one direction and coal in the other. The state legislature, so far, has refused to grant the enterprise the right of eminent domain so that it could obtain a right of way more cheaply for the belt.

Another company, however, successfully obtained common carrier status (and thus the right of eminent domain) for a proposed coal pipeline. It is proposed to pulverize coal, mix it with water to form a slurry, and then pump it from the coal preparation plant near the Ohio River to a drying plant near Lake Erie. Experiments carried on in the past year with a short experimental pipeline point toward the economic feasibility of the project. If the pipeline should succeed, it could pose a serious threat to the lucrative railroad coal traffic.

This abbreviated report on Ohio's "foreign" trade does not pretend to present the whole picture. It is designed, rather, to stimulate interest and more research on the subject as well as to publicize more generally the availability of the new carloading data.

## Recent Trends in Business and Banking

(CONTINUED FROM PAGE 4)

from the rising volume of repayments which accompanied the prolonged postwar expansion of this type of credit. Regulation X may also have induced a more rapid rate of repayment on loans granted since late 1950.

In this District, real estate loans of reporting banks advanced into new high ground in the early months of the year at approximately the same pace as in the comparable period of 1950, though less rapidly than last year. Data from savings and loan associations in this area show extensions of new credit at record or near-record volume for the months of January and February.

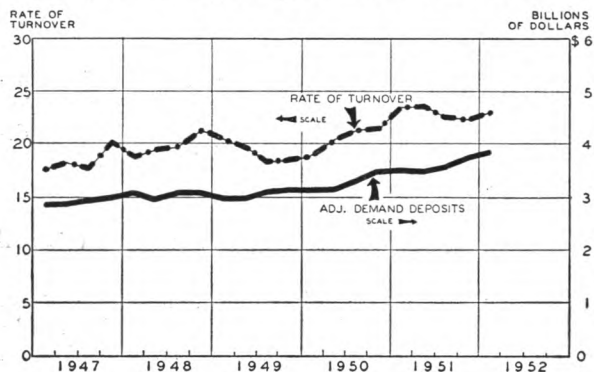
Consumer instalment credit presents a similar picture with the volume of new loans granted in January and February higher even than in the same period of 1951, but equalled or exceeded by repayments. The volume of consumer instalment credit outstanding at commercial banks throughout the country declined seasonally early this year following a six-month period of stability. These loans were the only major type of bank credit which was lower in the early part of this year than on the comparable dates of 1951.

**Deposits and Turnover** The moderation of inflationary pressure during 1951 was reflected in a leveling off in the rate of turnover of demand deposits, in contrast to the increasingly rapid use of money balances throughout the previous year. In the first quarter of this year, although the actual rate of deposit turnover rose, this was attributable largely to seasonal factors such as tax payments. For the first time since Korea, the rate of turnover in the first quarter of this year was slower than in the year-ago period, as indicated in an accompanying Fourth District chart.

The volume of demand deposits owned by private businesses and individuals declined seasonally from the record level at the turn of the year, but during the first quarter as a whole, these balances were above the average level for the last three months of 1951. The continuation of a moderate expansion in demand deposits, while the rate of turnover leveled off, indicates the desire of businesses and individuals to build up their cash balances to re-establish a more typical relationship with the current level of operations than has been the case since Korea.

An important factor retarding the growth of the money supply in recent months has been the decline in commercial bank holdings of U. S. Government

**ADJUSTED DEMAND DEPOSITS AND TURNOVER**  
 Quarterly Averages 1947-1952  
 (Weekly Reporting Banks, Fourth District)

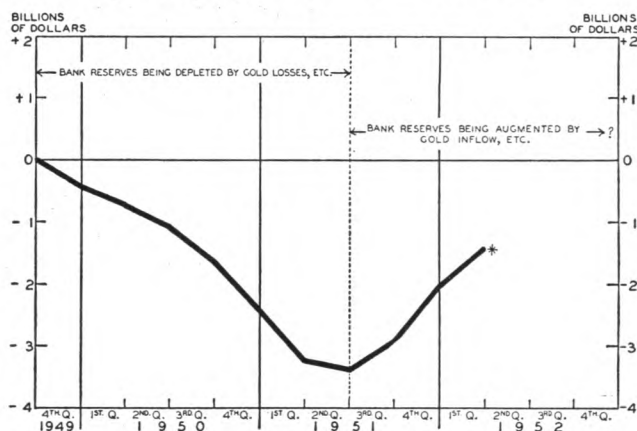


... the rate of turnover of demand deposits began to level off in the second half of 1951, and in the first quarter of this year was below the year-ago rate for the first time since Korea. Demand deposits were higher, on the average, in the first quarter of this year than in the last three months of 1951.

securities since January. This reduction is in accord with the usual shrinkage in such investments in the early part of the year, and contrasts sharply with the expansion of this type of bank credit in the second half of last year. Net sales of Treasury bills to non-bank investors accounted for part of the recent shrinkage, and presumably included some of the special issues of bills for presentation in payment of taxes. Holdings of Treasury bonds were also reduced, reflecting in part the unattractiveness for some commercial banks of the 7-year, 2 $\frac{3}{8}$  percent bonds offered in exchange for a called issue on March 1.

**Federal Reserve Policy** General credit policy by the Federal Reserve System this year continued to exert a deflationary influence as has been the objective since Korea. Holdings of U. S. Government securities by the Federal Reserve Banks declined more than \$1 billion from the December 1951 peak in the first quarter of the year, despite substantial purchases made in order to facilitate the Treasury's March 1 refunding operation. The decline was concentrated in short-term issues, and by the end of January all the bills

**EFFECT OF GOLD AND FOREIGN ACCOUNT TRANSACTIONS ON BANK RESERVES**  
 Quarterly September 1949 - March 1952



... the inflow of foreign funds during the past nine months has erased roughly one-half the losses incurred earlier in 1950-51. Further belt-tightening abroad, however, may soon curtail this external source of reserve funds.

NOTE: 1st quarter 1952 partially estimated.

in the System Account had been sold or redeemed. The reduction in the System portfolio of Governments in effect mopped up most of the reserve funds which would otherwise have been available to banks as a result of the seasonal return of currency from circulation and the continued inflow of gold.

The inflow of gold has been an important factor in providing banks with reserves for the past nine months, as depicted in an accompanying chart. It seems probable, however, that this will cease to be a significant source of such funds in the near future as import restrictions imposed in recent months by numerous countries abroad result in reduced purchases from this country.

Yields and prices of Government securities fluctuated mildly this year in a generally firm and tight market around levels similar to those of late 1951. At no time have rates on short-term money risen to the high levels which obtained during the temporary excessive market stringency in late December. The System was able to remain out of the bond market except for a short period of support for the March refunding operation. The high level of savings apparently provided adequate funds for the light supply and demand for long-term Treasury bonds to be balanced at stable prices without System support.

# Synthetic Detergents

by CLYDE WILLIAMS, Director, Battelle Memorial Institute



Although soaps are used in large quantities in industry, as well as in homes, the cleaning property of soaps is not fully understood.

Chemists, however, have learned to use unconventional materials for constructing or synthesizing soap-like products which have greater versatility than soaps made from natural fats and vegetable oils. In many cases, as in hard-water usage, the synthetics also have greater effectiveness.

This knowledge has already brought more than a thousand different brands of synthetic detergents to the world. In the United States, at least, a virtual revolution in the consumption of detergents has been taking place.

Consumption of synthetic detergents increased nearly twenty-four fold between 1940 and 1950, from 70 million pounds to 1,600 million pounds. During this same period, consumption of all detergents (including soaps and synthetic detergents) remained fairly constant at about 30 pounds per capita. The percentage of synthetic detergent consumption, about 3 per cent in 1945, rose to 27 per cent by 1950. According to some predictions, the total detergent market by 1960 will be equally divided between synthetic detergents and conventional soaps.

This outstanding achievement of the research chemist is part of the same activity that has brought us synthetic fibres, synthetic rubber, and plastics in recent years.

The development of methods for producing chemicals from petroleum afforded an opportunity to broaden the raw materials base for detergents. Previously, the soap industry had been completely dependent on natural fats and vegetable oils. The industry knew from experience that its supply of these raw materials was always jeopardized in times of war or other national emergency. In comparison, synthetic detergents now represent major uses for some chemicals derived from petroleum, and the supplies of these are relatively stable.

As a result of the saving of fat from soap manufacture and its replacement by synthetic detergents, it is estimated that fifteen pounds of additional shortening are potentially available annually for every American family.

The chemist knows that an effective cleansing agent must have three main properties. First, it must have wetting ability. That is, the cleansing agent must cause water to come into intimate contact with the dirt or contamination, and with the surface to be cleaned. Second, it must be able to separate the dirt or contaminating particles from the surface. And, third, the cleansing agent must cause the dirt or contamination to be suspended in the water so that removed dirt will not be redeposited on the cleaned surface.

With this fundamental knowledge, the chemist compounds his product with groups of chemical "building blocks", or molecules. Although today most synthetic detergents are derived from products or by-products of the petroleum industry, such as ethylene and kerosene, the first one for general consumption was sodium lauryl sulfate which is made from natural coconut oil. It is still important.

There are many types of dirt and an endless variety of surfaces. The chemist's selection of "building blocks" by type and quantity will, therefore, depend on the job the synthetic detergent has to do. It is this extraordinary freedom of selection that has made possible so many different kinds of synthetic detergents.

When synthetic detergents are mentioned, most of us think of their use for dishwashing, laundering, shampooing, and other household tasks. Use of these detergents in industry, however, is probably far more extensive.

The textile industry pioneered in the development of synthetic detergents for cleaning and other textile-processing operations. In most cases, laundering of dirty clothes requires a detergent that will remove and suspend dirt in which oil and grease are embedded. Textile scouring operations have always presented the reverse problem, that is, the dirt is generally suspended in the oil or fat. Removal of the oil or fat is the essential problem. Synthetic detergents have been made to meet this need.

The Atomic Energy Commission's Oak Ridge Laboratory has found some synthetic detergents particularly effective for the difficult job of removing radioactive particles from contaminated surfaces. Their experience suggests possibilities of using such products in all industries where removal of harmful bacteria, as well as dirt, is essential. These industries would include milk plants, food handling and processing industries, pharmaceutical plants, and hospitals.

Wherever there is a surface to be cleaned and washed, there is an existing or possible application for synthetic detergents. In car washing, these detergents are becoming popular, especially in hard-water areas, because they are less likely to leave streaks on the body. A future for their use in the washing of streets, sidewalks, and buildings is visualized. Application in lather shaving creams is under study.

It must be realized that the conventional soaps will always have a place in our lives, and an important share of the detergent market. This is particularly true in soft-water areas where many metropolitan centers are located. Consumer preference for the foam of conventional soaps is still strong, although foam itself usually has little cleansing value. In many cases, manufacturers of synthetic detergents have added a foaming agent to satisfy the consumer.

Synthetic detergents fill an essential need because they are versatile and may be tailor-made to fit particular cleaning and washing jobs. Future expansion in their usage will continue as new demands arise.

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.