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# BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

FEDERAL RESERVE BANK OF ST. LOUIS

# Farm Machinery Continues Short

## *Military Fortunes Pare Schedules*

Farmers of the nation face another acute situation in obtaining farm machinery for the 1945 year. In fact, present indications are that it will be the most stringent season of any during the war. With diminishing manpower and old equipment rapidly wearing out, farmers will be hard pressed by needs for vital machinery to meet the goals of full production called for during the current year.

### MILITARY REVERSES IMPAIR SCHEDULED OUTPUT

Farm machinery production schedules called for about the same total output during the current season (July 1, 1944-June 30, 1945) as was turned out during the previous season. However, military reverses and upsets in schedules in the last half of 1944 resulted in a material expansion of the quantities and urgency of military items needed. Since the farm machinery and equipment industry includes important producers of critical items needed, and since many of these same critical items are component parts for important units of farm machinery, a substantial squeeze was put on the production schedules for agricultural items. During the first quarter of the production season, manufacturers were reported to be about 25 per cent behind schedule. During the second quarter (October-December) the lag behind schedules was about 22 per cent and there was probably a 20 per cent lag during the third quarter just ended. Some important manufacturers are substantially up to schedule, while others have been forced by circumstances beyond their control to lag much more than the above figures indicate.

In February the War Production Board set up procedures under farm machinery order L-257 to step up farm machinery output in those plants not operating at full capacity under existing authorizations, but which had necessary labor available to produce beyond their authorizations under the order. This was not an expansion of the over-all schedules authorized, but a move to pick up the lag in those items which were behind schedule.

The most important factor in the lagging production has been the acute shortage of labor in most of the areas in the Middle West where the bulk of the farm machinery and equipment is produced. The labor shortage has been particularly marked in the manufacture of component parts, including malleable and gray castings, as well as engines. Military needs have also put pressure upon supply of transmissions and forgings.

### FARMERS MECHANIZING RAPIDLY

Discussions of the farm machinery situation sometimes tend to give the impression that there is now very little machinery on the nation's farms. On the contrary, although production is frequently hindered by lack of machinery, the nation's farms have been undergoing a rapid shift from ani-

mal to machine power in recent years. This trend began to be significant during the last war and although interrupted by the depression period of the early 30's, it has been accelerated since then.

A few figures may be used to illustrate these trends in mechanization. At the beginning of this year it is estimated that there were 12 per cent more tractors on farms than at the beginning of 1942 and one-third more than in 1940. There are nearly one-fourth more grain combines on farms now than there were three years ago, and 75 per cent more than five years ago. The number of corn pickers is nearly one-third greater than before the United States entered the war and more than 50 per cent above the 1940 total. Even more phenomenal gains are shown by some special types of equipment. For example, windrow pick-up balers increased by two-thirds during the past three years. On the whole, greatest rates of increase in numbers have been shown for tractor cultivators and tractor row-crop planters. However, the number of tractors has increased somewhat faster than the farm stock of machinery for soil preparation and sowing. The experience of farmers in the Corn Belt during the last two seasons has tended strongly to sharpen their interest in, and reliance on machine power, for if farmers had been forced to rely upon animal power during the last two wet springs, the spring planting work could not have been done and the output of much of the nation's agriculture would have been much smaller than it was with machine power working two and three shifts in order to get crops sown.

It should perhaps be pointed out that the rates of increase in tractors and tractor machines on farms have recently been greatest in the South. But even though the rates of increase have been smaller in the Middle West and Great Plains areas the amounts of equipment added to farms in these areas have been very substantial.

Meanwhile during the three-year period there has been a substantial reduction in the numbers on farms of nearly all kinds of animal powered machines, particularly in the larger horse-drawn machines, such as riding plows, riding listers, disc harrows, riding cultivators, and grain and row binders. There was also a somewhat smaller reduction in the number of one-horse implements.

### SCHEDULES ABOUT SAME AS 1944

Scheduled production for the 1944-45 season anticipated that the high level of the output of new machinery and repair parts during the previous season would be maintained and perhaps slightly exceeded, although on wheel tractors the schedules called for 155,000 as compared with 180,000 for the previous year. For planting, seeding, and fertilizing equipment increases were scheduled for corn and cotton

*(Continued on Page 5)*

# State Tax Systems in the Seventh District

## *Sales, Payroll, and Highway User Levies Now Major Revenues*

The fiscal importance of state government and its rapid growth during the past quarter century, either by contrast with the tax revenue of Federal Government or that of the local governments, is often overlooked. Since the end of World War I, the states have increased their tax revenues nearly ten-fold. Just prior to that war state taxes in the aggregate were approximately one-half of Federal and one-third of local levies. The ensuing wartime taxes of the Federal Government drastically altered this relationship, but shortly after the war Federal taxes were reduced to approximately 70 per cent of their wartime level, and early in the decade of the 1920's state taxes were approximately one-fourth of the Federal total. Both state and local levies expanded rapidly during the 1920's, whereas Federal taxes remained relatively constant, and, by the end of this decade, the prewar relationship among these three governments had been reestablished. Since that time local revenues have remained relatively unchanged, but during the 1930's state taxes more than doubled and by the end of the decade roughly approximated the level of local taxation and had drastically narrowed the former margin between Federal and state taxes. The Federal tax program to finance American participation in World War II again dwarfed the state and local tax revenues.

The tremendous expansion of state taxes during the interval between the wars has of necessity been accompanied by a complete overhauling of state revenue systems. The expenditure requirements for highways, education, and welfare activities—all fields in which state participation has been of steadily growing importance—have necessitated a marked increase in state taxes. In financing these expanding functions the states have generally turned to sales, payroll, and highway user levies.

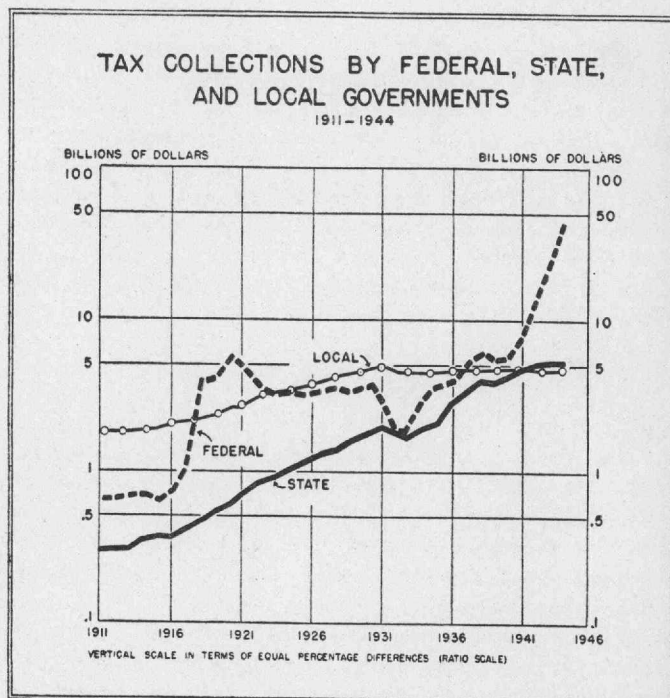
### GENERAL SALES TAXES

The introduction of general sales taxes into the tax systems of middle western states occurred at the depth of the depression of the 1930's when unprecedented property tax delinquencies had wiped out general fund balances in state treasuries and had necessitated much emergency financing, including borrowing from restricted funds and particularly from those dedicated to highway use. Confronted not only with the virtual breakdown of their principal source of unrestricted revenue—the property tax—and forced to meet the expanding requirements for the support of poor relief and the demands of property owners for tax reduction, four of the five District states turned to general sales taxes. In the first six months of 1933 these four states adopted the most far-reaching tax reformation in their fiscal histories.

In Illinois the sales tax law (technically known as the "retailers' occupation tax") imposed a tax of 2 per cent on

all sales of tangible personal property not for resale. While this definition of sales confined the tax largely to transactions of retail stores, retail sales of wholesalers and producers were also included in the tax base. This tax as well as similar taxes in other states when first enacted had little precedent in state or Federal fiscal practice for guidance and, consequently, were subject to considerable constitutional challenge and judicial construction. For the most part these objections to relatively novel fiscal measures were overcome, and state sales taxes rapidly developed a framework of legal acceptability which made them large revenue producers. The rate of tax in Illinois has not been constant; it was increased on July 1, 1935 to 3 per cent, and reduced effective July 1, 1941 to 2 per cent (1.96 per cent on the entire receipts of the taxpayer, including that portion collected from the consumer to cover the tax payment). The Michigan and Iowa sales taxes were also based on sales of tangible personal property at retail but in addition included receipts from the sale of electricity and gas in the case of Michigan, and electricity, gas, water, communications service, and admissions in the case of Iowa. The rate of tax since the original enactment has been 3 per cent in Michigan and 2 per cent in Iowa.

The Indiana sales tax law differed markedly from those in the other District states; it is referred to as a "gross income tax" and applies to the entire gross receipts of individuals, corporations, and others from virtually every source; e.g., wages, salaries, pensions, rents, interest, and dividends, and



gross proceeds from business, sales of securities, real estate, and all other types of assets, and insurance. Thus, it combines some of the attributes of a sales tax and an income tax. The rate for retail sales was 1 per cent until 1941 when it was reduced to ½ of 1 per cent for all persons engaged in the business of selling at retail; the rate for wholesalers is ¼ of 1 per cent, and for most other income receipts 1 per cent. An exemption of \$1,000 is provided for all taxpayers excepting retail merchants, who are entitled to \$3,000.

Wisconsin did not follow the example of other states in the District by enacting a general sales tax. This appears to be due in considerable measure to the fact that in Wisconsin reliance on property taxation for state purposes had been lessened twenty years earlier through the inclusion of corporate and personal net income taxes into the Wisconsin revenue system. Net income taxes were not used in any of the other District states prior to 1933.

#### SELECTIVE SALES TAXES – ALCOHOLIC BEVERAGES

The repeal in December 1933 of the prohibition amendment to the Federal Constitution shortly resulted in the entry of the states into the field of liquor taxation. All of the Seventh District states within a year and a half of repeal enacted taxes on beer; three enacted taxes on spirits and wines; the other two, Michigan and Iowa, created liquor commissions for the control and dispensing of spirits. The yields from these taxes and liquor monopolies to the general revenues of the states were substantial additions to state revenues in depression. Both state and local licensing of retailers, wholesalers, and manufacturers of alcoholic beverages provided further revenues from the industry; these license fees, however, are not included with sales tax receipts in the accompanying table but are treated as special business taxes.

The rates of tax on alcoholic beverages are substantially uniform among the District states and, in the case of beer and spirits, are approximately 11 to 15 per cent of present Federal levies. On spirits, for example, the prevailing state rate is \$1 per gallon; the Federal rate, \$9. On malt beverages the typical state rate is \$1.25 per barrel and the Federal rate is \$8. The wine rates are more variable and, depending on alcoholic content, range from 15c to 50c per gallon in contrast with Federal rates of from 15c to \$2.50 per gallon. Effective May 1, 1945, Indiana virtually doubled the rates of tax applicable to beer, spirits, and wines.

#### OTHER SELECTIVE SALES TAXES

The cigarette tax, the other major selective sales tax imposed in the District, is a more recent addition to state tax systems, excepting in the case of Iowa which imposed its tax in 1921; Wisconsin and Illinois added cigarette taxes to their revenue systems in 1941. The rates in the three states are 2c per package on the popular priced brands; the Federal rate is 7c per package.

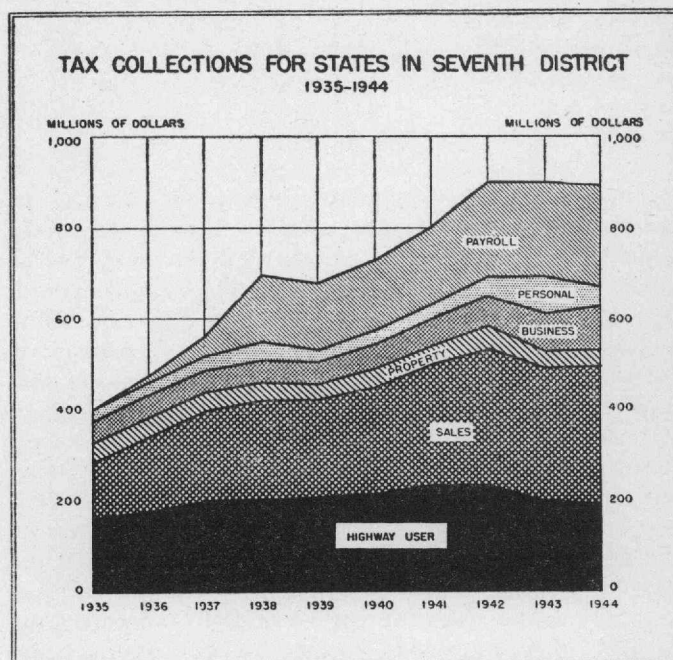
In 1935 Illinois supplemented its retail sales tax by an excise on sales of public utility service at a rate of 3 per cent. This, in effect, made sales taxation in Illinois more closely

comparable to such taxation in Michigan and Iowa. The tax applies to sales of gas, electricity, and telephone and telegraphic service, and the rate has remained at 3 per cent despite the fact that the tax on retail sales generally was reduced to 2 per cent in 1941.

The alcoholic beverage and cigarette taxes are the principal selective sales taxes imposed in the Seventh District states, but included in this category are minor revenues from pari-mutuel levies and admission taxes to racing meets and athletic exhibitions in Illinois, and from oleomargarine taxes in Iowa and Wisconsin.

#### PAYROLL TAXES

Another newcomer to the state fiscal scene is the payroll tax used as a restricted revenue to finance unemployment compensation payments. This tax was first adopted in Wisconsin in 1933 and, as a result of the introduction in 1935 of a Federal system of unemployment compensation, was enacted by Indiana in 1936, by Iowa and Michigan in 1937, and by Illinois in 1938. State payroll taxes are collected from employers of eight or more persons on the first \$3,000 of each employee's wage or salary income. The Federal rates of tax were 1 per cent of 1936 payments, 2 per cent of 1937 payments, and 3 per cent thereafter. A credit up to 90 per cent of the Federal rate is allowed for payments under state laws. This provision, in effect, fixed state rates after 1937 at 2.7 per cent, the so-called "standard rate." The standard rate has been reduced approximately one-third during the past two or three years by the adoption of experience rating, an adjustment in employer contributions under the state tax laws to give effect to individual employers' experience with unemployment risks. Experience rating first affected Wisconsin yields in 1938, those for Indiana in 1940, Iowa and Michigan in 1942, and Illinois in 1943. Payroll taxes now yield a little over 200 million



dollars in the District states and constitute roughly one-fourth of these states' tax receipts.

### HIGHWAY USER TAXES

The highway user taxes are older elements in state fiscal systems. Consisting of motor fuel or gasoline taxes and motor vehicle licenses and fees, they are levied not only in the Seventh District states but in every state in the Union. Motor vehicle licenses and fees include car licenses, operators' licenses, certificates of title, and a variety of special taxes by weight or mileage on common, contract, or private carriers by truck or bus. Highway user taxes developed during the 1920's as the states rapidly expanded and improved highway and urban street systems. In 1935 such taxes constituted about 40 per cent of total state tax revenues but their relative importance had been substantially reduced by 1944 as payroll and sales taxes displaced them as the major sources of state revenue.

### BUSINESS TAXES

Business taxes are not a prominent feature of state tax systems in the Seventh District excepting in Wisconsin where the corporation income tax and related levies have usually contributed 10 per cent or more of total state tax yields and a much larger proportion during the war. In 1944, for example, such taxes amounted to nearly 30 per cent of Wisconsin's total tax receipts. Wisconsin and Iowa are the only states in the Seventh District which impose corporate net income taxes, but the Iowa tax has not been nearly so productive as that in Wisconsin. The difference in yield is due in some part to differences in rates. The Iowa rate is 2 per cent; the Wisconsin rates are sharply graduated to 6 per cent and are supplemented by surtaxes of approximately one-sixth the normal tax. Moreover, Wisconsin also levies a tax of 3 per cent on dividends declared and paid on income earned from property located or business transacted in Wisconsin. The major cause of the striking increase in the wartime yield of the Wisconsin corporation income tax appears, however, to be due to a restriction on the deduction of Federal income and excess profits taxes from the net income base. Whereas Iowa permits the full deduction of these taxes from the state income tax base, Wisconsin limits the deduction to 10 per cent of the taxpayer's net income without the benefit of such deduction.

All of the Seventh District states excepting Wisconsin impose capital stock levies on corporations, but the amounts involved are relatively small. In Illinois, for example, they have seldom exceeded 3 million dollars a year; in Michigan, they have amounted to as much as 6 million dollars in some years.

In addition to these general business taxes applying to corporations in general, the states impose a variety of special taxes on business enterprise. Premium taxes on insurance companies and the liquor licenses on manufacturers or retailers of alcoholic beverages are common to all states and comprise a substantial part of the receipts in this category. Neither chain store taxes in Indiana, Iowa, Michigan, and

Wisconsin (expired in 1939), nor the oil and gas severance tax in Michigan (a severance tax on the production of these resources in Illinois was held unconstitutional in 1944) have yielded important revenues. There are numerous special permit and inspection fees, licenses, and miscellaneous taxes attendant upon the engaging in certain specified occupations or businesses found in all states, but these miscellaneous sources do not bulk large in the total of state levies although they comprise a significant element in the category of business taxes. It will be noted from the table that throughout the period business taxes have made up approximately 10 per cent of the total District revenues.

### PERSONAL TAXES

Taxes on individuals include personal net income, poll, and inheritance levies. There are inheritance taxes in all of the five District states, but only Wisconsin and Iowa have personal income taxes. Attention is directed again to the fact that the Indiana gross tax is also in the nature of a flat rate net income tax as it carries an exemption of \$1,000 and applies to salary, wage, rent, royalty, interest, and dividend income, the usual components of personal net income tax base. Two states, Iowa and Indiana, have poll taxes.

### PROPERTY TAXES

The remaining category of taxes—property taxes—was a major source of state revenue prior to the reformation of state tax systems in 1933. Since that time, Illinois, Michigan, Iowa, and Wisconsin have virtually abandoned their dependence upon the property tax. However, there are certain levies still classified as property taxes which are vestigial inheritances of dual state-local administration of the property tax. Thus, for example, Michigan early in the century provided for the state taxation of railroads, telephone, and telegraph companies in lieu of local property taxation. This feature of the Michigan system has remained unchanged to the present time, and the state still derives revenues from property that would normally be a part of the local property tax base. The tax is in lieu of local levies; in fact, the rate is determined by the average of local levies on real estate and personal property in general. A similar situation exists in Wisconsin, but the proceeds are earmarked to a large degree for local sharing. In addition to this special treatment of public utilities, Michigan and Indiana provide for state assessment and taxation of intangible property, another device calculated to secure more effective administration in the property tax field. Finally, some minor levies, principally on passenger and freight carline companies, express companies, and other special businesses are measured by gross receipts or some other characteristic and collected at the state level instead of locally in lieu of all property taxes.

### CLASSIFICATION OF TAXES

The classification of state taxes into sales, payroll, business, personal, highway user, and property levies is directed to the drawing of conclusions regarding the incidence of



state tax systems, to observing the relative elasticity of tax yields in various stages of the economic cycle, and to facilitating an analysis of revenue potentials for the financing of major state functions. These aspects of state tax systems will be considered in ensuing issues of *Business Conditions*.

A basic difficulty arises in attempting to treat state tax systems apart from local tax systems because of the close integration of certain shared revenues as well as state grant programs to localities. Unless state and local revenue systems are treated as one, it is impossible to provide a wholly satisfactory treatment of specific revenues which will be consistent for even the five states in the Seventh District. The decision has been arbitrarily made, therefore, to regard all taxes collected by the states or for the states as components of state systems. The data thus include taxes collected by the states, whether for the states' own use or automatically returned to the localities for expenditure. Collections by local units of taxes for state purposes, including in some instances even the portion retained to cover the cost of local administration, are also regarded as state taxes. All general property taxes, for example, are generally collected at the local level; the amount included herein is that returned to the state. The residual elements of local taxes are only those locally administered and collected. It should be noted that the treatment adopted does not necessitate the addition of local shares of jointly used sources of revenue unless their administration is completely separated and excepting the property tax. From the standpoint of taxpayers and types of taxes, therefore, the classification needs only minor qualification as to completeness and coverage.

#### NOTE ON SOURCES FOR TAX YIELDS

The tax statistics in the accompanying table are derived in the main from annual and biennial report series of state accounting and budgetary officials as follows:

*Illinois*: Annual Report of the Department of Finance (a convenient summary of tax yields for the period 1935-1944 is found in the 27th Annual Report, 1944, p. 43); the *Illinois State Budget*, Department of Finance; *Biennial Report of the State Treasurer*.

*Indiana*: *Statistical Report for the State of Indiana* (annual), Division of Accounting and Statistics; *Indiana Budget Report* (biennial), Director of the Budget; reports of various state departments and officials responsible for the administration or collection of state taxes compiled in the *Year Book of the State of Indiana*, Division of Accounting and Statistics.

*Iowa*: *Annual Report of the Iowa State Tax Commission*, (formerly Iowa Board of Assessment and Review); *Biennial Report of the Treasurer of the State of Iowa*; *Iowa State Budget* (biennial), State Comptroller.

*Michigan*: *Financial Report of the State of Michigan* (annual), Auditor General (prior to 1939, *Annual Report of the Auditor General*); *Michigan State Budget* (biennial); Budget Director.

*Wisconsin*: *Taxes and State Aids* (annual), Wisconsin Department of Taxation (formerly Wisconsin Tax Commission); *Biennial Report of the Treasurer of the State of Wisconsin*; *Wisconsin State Budget* (biennial), Bureau of the Budget.

In addition to the state reports the annual series titled *Financial Statistics of the States*, issued by Bureau of the Census, U. S. Department of Commerce for the years 1937-1943; *Tax Yields, 1940*, and *Tax Yields, 1941*, published by the Tax Institute, have been utilized.

The lack of uniformity and detail in published state reports makes it impractical to compile data on tax receipts with absolute consistency. So far as practicable, the yields shown include delinquencies, penalties, and interest and are charged for refunds. For most taxes, penalties and interest items are of minor importance. Refunds are important offsets to gross collections of motor fuel taxes, as all District states refund the tax on gasoline purchased for non-highway use (agriculture, manufacturing, etc.). Taxes paid pending the outcome of legal objections and held in protest funds are excluded from receipts until final disposition of the litigation. The portions found legally due are treated as tax receipts upon transfer from the protest account. This method of handling such items distorts the accuracy with which tax yields reflect the timing of transactions which give rise to the tax, particularly as regards tax forms that are new to a given state and more likely to be subject to considerable statutory construction or constitutional objection.

Property tax yields also require some qualification as to timing. In Iowa, they represent receipts by county treasurers on account of state taxes and not withdrawals by the State Treasurer from such receipts and accumulated balances. In Wisconsin, the amounts given are levies (tax extensions) instead of collections.

## FARM MACHINERY

(Continued from Inside Cover)

planters, lister planters, potato planters, beet and bean drills, end-gate seeders and fertilizer distributors. Production of grain drills and manure spreaders was scheduled at about the same level as for the previous year. Tillage equipment items, such as tractor moldboard plows, disc plows, disc harrows, tractor cultivators, and rotary hoes, were scheduled for increases. Spike harrows and spring tooth harrows, as well as soil pulverizers and packers, were scheduled at about the same output as in the previous year.

The output of harvesting equipment was scheduled at about the same rate as in the 1943-44 season, but even if this schedule should be met there would still be less of this equipment for sale currently than last year because sizable amounts of harvesting equipment were sold last season which had been carried forward out of production authorized two seasons ago. Dairy equipment schedules called for increases in the production of farm separators and milk coolers and for a decrease in milking machines.

#### SOME MACHINERY BEING EXPORTED

The charge has sometimes been made that, in view of the machinery shortage in this country, too large a proportion of the industry's output was being shipped abroad. During the last production season just under 80 per cent of the total tractor output was distributed through the War Food Administration to farmers. Less than 8 per cent was exported to Canada, about 11 per cent was handled abroad through the Foreign Economic Administration, and the Army and Navy absorbed about 2 per cent. Data are not available as to the distribution of other types of farm equipment.

For the current production season about 10 per cent of the value of the machinery and equipment made in this country will be exported through usual commercial channels by individual companies or under lend-lease terms. Lend-lease shipments of farm machinery and equipment are justified upon the grounds that they permit increased food production abroad, helping to supply food for American military forces with a resultant saving in shipping space.

From the beginning of lend-lease to June 1944, 2.5 per cent of the total value of United States farm machinery products produced during the period was shipped under lend-lease. For the same period 7 per cent of production was exported through commercial exports. The bulk of the lend-lease exports, the total of which amounted to 44 million dollars for the above period, went to the United Kingdom which received 24 million dollars worth, and to Australia and New Zealand, which accounted for a total of 10 million dollars. The commercial exports during the same period total 135 million dollars, over 80 million dollars of which went to Canada, 10 million to Mexico, 8 million to the United Kingdom, and 7.5 million to the Union of South Africa.

Tentative schedules of lend-lease requirements for 1944-45 called for a total of 23 million dollars, covering 9,000

wheel tractors, 1,500 crawler tractors, 500 combines, 4,000 plows, 7,000 cream separators, 2,400 harrows, and about 8.5 million dollars worth of tractor parts and other miscellaneous machinery.

### CURRENT DEMAND IS HEAVY

A rough measure of the present potential demand for farm machinery and equipment is afforded by the formal requests from farmers to the War Food Administration for machinery to meet the needs of the 1945 season. While these requests probably do not represent total needs of farmers, they do give some indication of the present urgency of demand. In the following table the left hand column indicates the total of the 1945 requests, while the right hand column shows the total numbers scheduled for production in the 1944-45 season.

	1945 Requests	Scheduled Production
Wheel Tractors .....	257,000	155,000
Plows .....	248,000	128,000
Disc Harrows .....	200,000	107,000
Cultivators .....	339,000	242,000
Grain Drills .....	70,000	43,000
Combines .....	88,000	46,000
Corn Pickers .....	62,000	28,000
Side Delivery Rakes.....	74,000	39,000
Water Pumps .....	250,000	1
Cream Separators .....	69,000	70,000
Milking Machines .....	61,000	58,000
Fertilizer Distributors .....	74,000	1
Weeders .....	29,000	1
Pick-up Balers .....	33,000	11,000
Milk Coolers .....	32,000	1

<sup>1</sup>Not available.

On the whole, the scheduled production is substantially less than this current demand, and, as indicated above, current production is expected to run considerably less than even the scheduled output. According to the WPB during the first half of the current season (the last six months of 1944) production of wheel-type tractors was only 7 per cent below schedule. Cultivators were more than 35 per cent below schedule. Plows were in deficit in about the same proportion, while disc-type, spike, and spring tooth harrows were 10 to 20 per cent under schedule. Grain drills during the period were produced in about scheduled amounts, while fertilizer distributors were nearly 30 per cent in deficit. The output of milking machines, cream separators, and milk coolers was 5 per cent below schedule. It may be expected that some of these deficits will be made up before the end of the scheduled season, at least in part.

Early in April the allocations of controlled materials for the production of farm machinery in the second quarter of 1945 were cut about 25 per cent below the tonnages used in the first quarter. This reduction was necessitated by the step-up in demands for critical materials, particularly steel, to supply military equipment for the military actions in the Rhine area. No changes at that time were made in the production quotas.

Toward the end of the month the reductions were reversed, bringing the allocations for the second and third quarters of 1945 back to the approximate level allowed in the first quarter. However, labor and other shortages are still expected to prevent 100 per cent completion of the currently authorized production programs.

### HEAVY POSTWAR DEMAND LIKELY

It is generally anticipated that after the end of the war the demand for farm machinery will continue to be very heavy for a number of reasons. First of all, the trend in mechanization of farms may be expected to continue, probably at an accelerated rate for some of the newer types of special equipment. Secondly, there is a large volume of unsatisfied demand from farmers for new equipment. Thirdly, the financial status of farmers will give them purchasing power to expand their stock of machinery, and unused credit facilities could provide additional purchasing power.

The U. S. Department of Agriculture estimates that between 100,000 and 110,000 tractors would normally be replaced each year in view of the numbers bought in the late 20's and 30's, with a presumed average life of 12 to 13 years. In addition to this, about 50,000 farmers per year have been switching from animal power to tractors. During the war period production has been considerably less than this rate of 150,000 tractors per year. It is therefore predicted that there will be deferred demand for upwards of 100,000 tractors after the war and that yearly domestic purchase of tractors by farmers will probably average around 200,000 tractors for several years after the end of the war.

Several surveys have been made throughout the country to test the postwar intentions of farmers as to the purchase of capital equipment, including farm machinery. For example, a survey in one county of Illinois, on a sample basis, indicated that farmers of the county intend to purchase over 2,000 tractors; over 6,000 tractor-drawn plows, discs, planters, cultivators, and mowers; 200 corn planters; nearly 2,000 corn pickers; over 1,000 side-delivery rakes; and nearly 1,000 manure spreaders. The county has roughly 4,000 farms. This sample survey furnishes a rough indication that farmers will want new equipment in sizable amounts. It must be emphasized, however, that this county is one of the most productive in the Corn Belt and one in which mechanization is well advanced. It cannot, of course, be inferred that similar postwar demands per farm or per acre will exist throughout the Seventh Federal Reserve District.

When conditions permit removal of wartime controls the farm machinery and equipment industry will be in good position to meet the heavy demand for its products. The industry is not expected to have serious difficulties of plant reconversion since the adjustment is largely one of shutting down production facilities which were added to produce military items other than farm equipment. During the war they have produced their regular lines in large quantity. Their supply sources and distribution channels are without major impairment.



# Gold and Foreign Dollar Balances

## *Shifts in Trade Balances Reverse Prewar Movement*

Recent war years have witnessed changes in the distribution of the world's monetary gold stocks—a development which may significantly influence postwar foreign trade and economic reconstruction. Monetary gold stock of the United States has declined 2.3 billion dollars from its peak of 22.8 billion dollars in November 1941. More than half of the total drain occurred in 1944. This outflow represents a reversal of the vast inward movement of gold which began in 1935 and continued at an accelerated rate through the early years of the war in Europe. It reflects a new pattern of international trade and finance which is determined by the exigencies of war and is manifested in fundamental shifts in the United States balance of payments with foreign countries.

The most important factor currently influencing our balance of payments is the merchandise balance of trade. Despite a tremendous volume of exports, an "adverse" balance of trade has developed because a large portion of these exports is shipped to Allied countries under the lend-lease program. Meanwhile, our foreign purchases have resulted in the accumulation by foreign central banks and governments of dollar balances, part of which has been converted into gold either for earmarked accounts in the United States or for actual shipment abroad.

Notwithstanding the sustained outflow of gold since 1941, United States holdings still represent approximately two-thirds of the world's total gold supply and are roughly 3.5 billion dollars higher than they were at the end of August 1939. The gold which moved from the United States to other countries has, for the most part, entered the monetary reserves of those countries. Furthermore, all of the new gold production has been taken by countries other than the United States. This accumulation of gold and dollar exchange represents a shift in international purchasing power which has important implications with respect to the prospective postwar flow of international trade. Countries whose demand for American goods was previously limited by a dearth of foreign exchange resources will be in better position to carry on a large volume of foreign trade without recourse to the exchange restrictions and discriminatory practices which characterized the world market prior to the war. At the same time, the redistribution of international reserves will promote a greater degree of stability in foreign exchange relationships after the war.

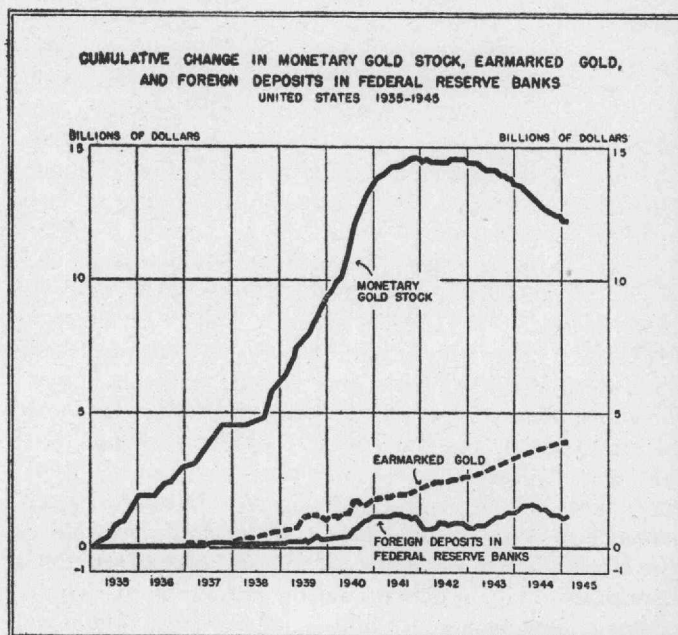
### BALANCES IN THE TRANSITION PERIOD

The outward movement of gold did not begin at the outset of the war in Europe. From the end of August 1939 through the first half of 1941 the United States gold stock rose approximately 6 billion dollars. Domestic gold production accounted for about 250 million dollars of the total.

This inflow, however, was of an essentially different nature from that of the prewar period. At the outset of the war the application of strict exchange controls and freezing regulations by belligerent nations severely curtailed private transactions—all transfers being directed to the implementation of the war effort. Thus, instead of reflecting uncontrolled capital flight due to recurrent war scares and unstable monetary conditions during prewar years, the inflow of gold after 1939 represented primarily the settlement of commercial balances. From September 1939 through 1941 our export balance, excluding lend-lease, amounted to 2 billion 859 million dollars.

After 1939 the composition of capital flow itself changed. In contrast to the relatively large proportion of inflow through foreign purchases of American securities and repatriation of American capital which took place earlier, the funds which moved into the country after the war began were largely in the form of short-term banking funds. The latter, in turn, showed a relatively greater growth in the "official" accounts of foreign central banks and governments. This shift occurred as monetary authorities mobilized available foreign exchange resources for war purposes and as foreign private owners of United States securities sold their holdings to their respective governments to avoid having their assets subjected to "freezing" controls. Since that time private transactions have been negligible.

The British Empire was the largest single source of funds moving into the United States prior to 1941. The outbreak of the war was followed by a tremendous increase in British purchases of materials and equipment from the United



States. To finance such purchases Great Britain sold gold to the United States Treasury. In the 16 months ending December 1940 British gold holdings were reduced from 2 billion dollars to approximately 300 million dollars. In addition, France, Sweden, South Africa, Japan, and Australia shipped sizable amounts of gold to the United States during this period. Short-term foreign balances also were built up concurrently as the amount of gold sold to the United States was more than sufficient to balance immediate requirements for dollar exchange.

The rate of gold imports during the early part of 1941 was considerably diminished as British gold reserves were by that time virtually exhausted. Additional imports were confined largely to current production. At the end of 1940 British authorities began the liquidation of American investments, many of which were requisitioned from private holders, to replenish the supply of dollar exchange. British holdings of marketable United States securities dropped from an estimated 950 million dollars at the outbreak of the war to 372 million dollars by September 1941. Foreign deposits were also drawn down—a tendency which continued until February 1942. By that time short-term foreign banking funds were almost 700 million dollars below their peak of a year earlier. Not all of this decline, however, was due to the liquidation of Allied funds for commercial purposes. Part of it represented conversion into earmarked gold by countries whose dollar balances were expanded by extensive United States foreign buying in connection with our own war effort.

#### IMPORTANCE OF THE LEND-LEASE PROGRAM

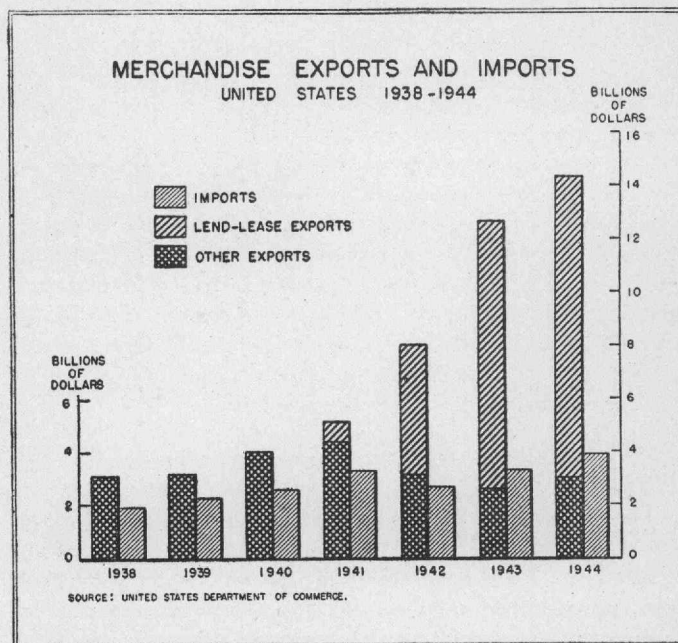
By the beginning of 1941 the amount of dollar exchange which could be acquired through liquidation of remaining British assets in the United States was negligible relative to the expanding demand for United States goods. To receive additional war supplies the Allies required financial assistance, and the inauguration of the lend-lease program in March 1941 provided such assistance. Under the lend-lease account shipments of war materiel to Britain and other countries "whose defense the President deems vital to the defense of the United States" were settled through book credits and were excluded from our cash merchandise trade. In effect, the program constituted a special type of capital export by the United States Government similar to long-term loans to foreigners.

Total lend-lease exports through 1944 amounted to 27 billion dollars. These exports increased yearly from only 700 million dollars in 1941 to 4.9 billion in 1942, 10.1 billion in 1943, and 11.3 billion in 1944. In the last two years lend-lease accounted for 80 per cent of total exports. The accompanying chart shows the relationship between lend-lease and cash exports and imports since 1938. Although total exports in 1944 were almost three times as great as in 1941, our imports exceeded cash exports last year by approximately 900 million dollars. The value of all goods shipped out of the United States since the war in Europe began totals more than 45 billion dollars, and the current annual rate of exports is approximately 14 billion dollars. Great Britain and

Russia have been the recipients of the major portion of our wartime exports. During 1944 these two nations received 75 per cent of all goods shipped on lend-lease account, while about 10 per cent went to Africa, the Middle East, and the Mediterranean area.

Expansion in United States imports also tended to reverse this country's prewar "favorable" balance of trade. United States demands for raw materials were stepped up after Pearl Harbor. Total imports to the United States rose to almost 4 billion dollars in 1944—almost twice the level of 1938. Because some sources of supply, such as Japan, were cut off, it was necessary to develop new ones. Often the substitution was made at higher prices, which account to a considerable degree for the rise in the reported dollar volume of imports during the war. Moreover, countries from which our imports have been growing are not the countries to which we have been exporting heavily. Shortages of consumption goods here and of shipping space have necessitated reduction in our shipments of goods to the countries from which most of our imports originate.

Cash purchases of war goods by the United States have been distributed widely among non-belligerents but concentrated chiefly in Latin American and neutral European countries. Of the 764 million dollar excess of imports over cash exports during 1943, Latin American countries accounted for 490 million dollars. Our import balance gave rise to the accumulation of dollar balances by these countries. This tendency, combined with the curtailment through lend-lease of the drain on Allied funds, was reflected in the rise of foreign short-term funds in the United States. Total short-term banking funds rose 2.2 billion dollars from the end of February 1942 to a level of 5.5 billion dollars at the end of March 1944. This inflow, it should be added, differed as to both origin and ownership from the earlier growth of short-term balances which reflected Allied dollar exchange requirements prior to our entrance into the war.



## GOLD HOLDINGS OF CERTAIN FOREIGN COUNTRIES<sup>1</sup>

(In millions of dollars)

Countries	December 1941	December 1944 <sup>2</sup>	Increase
<b>Latin America</b>			
Argentina.....	436 <sup>3</sup>	939 (Dec. 1943)	503
Brazil.....	70	329	259
Mexico.....	47	222	175
Uruguay.....	100	151 (Nov.)	51
Venezuela.....	41	130	89
Other.....	67	180	113
Iran.....	26	115 (Aug.)	89
Rumania.....	182	369 (June)	187
South Africa.....	366	814	448
Spain.....	42	104 (Oct.)	62
Sweden.....	223	463	240
Switzerland.....	665	1,052	387
Turkey.....	92	221 (Oct.)	129

<sup>1</sup>The figures represent gold held either at home or abroad by central banks and governments and include earmarked gold in the United States to the extent such holdings are reported by the respective governments.

<sup>2</sup>Or latest date for which figures are available.

<sup>3</sup>1940 figure: Argentina's Central Bank's reserves held abroad and in its Stabilization Fund not published during 1941 or after December 1943.

Source: *Federal Reserve Bulletin*

Since March 1944 conversions of dollar exchange into gold by foreign central banks and governments have exceeded credits arising from our foreign buying. In consequence, from March through October short-term official balances declined almost 400 million dollars although a concurrent increase in private funds partly offset official withdrawals. From March through December foreign deposits with the Federal Reserve Banks declined approximately 700 million dollars.

### FOREIGN PURCHASES OF GOLD

Part of the increase in foreign dollar balances was converted into gold through purchases by foreign monetary authorities from the United States Treasury. Gold buying by foreign countries began about the middle of 1941. Besides the increased volume of gold purchases, most of which was earmarked at the Federal Reserve Bank of New York for foreign account, the cessation of the inflow from Europe and curtailment of domestic gold production contributed to the reduction in our gold stock. On an annual basis a net decrease in our gold stocks appeared for the first time in 1942 and totaled 10 million dollars. During the past two years foreign purchases were increased sharply and United States monetary gold stock was reduced in the years 1943 and 1944 by 790 million dollars and 1 billion 320 million dollars respectively. Despite the record volume in 1944, during the later months of the year the decline proceeded at a decreasing rate.

Prior to 1944 most of the gold purchased by foreign countries remained under earmark in the United States. The increase in earmarkings for foreign account here amounted

to 800 million dollars in 1943 — approximately offsetting the decline in our gold stocks. During 1944, however, actual shipments abroad reached sizable proportions. Earmarkings accounted for only 460 million dollars of the total outflow of gold. The total outflow for the year, when domestic production is considered, amounted to 1 billion 350 million dollars—indicating that approximately 890 million dollars of the metal left the United States.

Although war censorship has restricted specific details as to which countries have been purchasers of gold from the United States, figures on gold reserves of central banks and governments published by certain foreign countries furnish some clue concerning the direction of the outflow. In the accompanying table are listed countries which have reported sizable changes in their gold reserves since the end of 1941. In the main, these are countries from which the United States has imported large amounts of raw materials for war production. The United States was not the source of increased holdings of South Africa where gold production is substantial, or of Rumania which succeeded in obtaining gold in exchange for considerable reichmarks claims. In addition to the countries listed, China, India, and other Middle Eastern countries have been recipients of some of our gold exports.

### SIGNIFICANCE OF THE OUTFLOW

The demand for gold abroad reflects in part the desire of certain foreign governments to recover their stocks of the metal which were seriously depleted in prewar years. Supplies of idle dollar exchange were employed for this purpose. Besides the earlier reduction in their holdings of gold, war-time expansion in local currencies required a greater volume of gold reserves, except where legal reserve requirements have been relaxed.

The need for internal monetary stabilization has also increased the demand for gold. By official sales of gold or gold certificates to the public in return for local currencies certain Latin American countries have attempted to alleviate their problems of inflation arising from large and continued Allied commodity purchases. The British and American governments have conducted similar sales in Asiatic countries—particularly in India—the proceeds being employed to obtain war materiel. Public demand for gold for investment purposes gave rise to high premiums in those areas where gold is traded on the market. By the middle of 1943 the price of gold had risen to more than 77 dollars per ounce in Bombay and to somewhat lesser premiums in other markets, particularly in Mexico, Argentina, Egypt, and Turkey. Governmental gold sales have tended to reduce such premiums and at the same time to satisfy the demand for hoarding purposes.

On the whole, the present tendency for moderate redistribution of the gold which the United States accumulated prior to the war may be regarded as beneficial from the standpoint of our international economic relations. Additional foreign exchange reserves at the disposal of certain foreign countries will contribute to the promotion of international monetary stability.

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