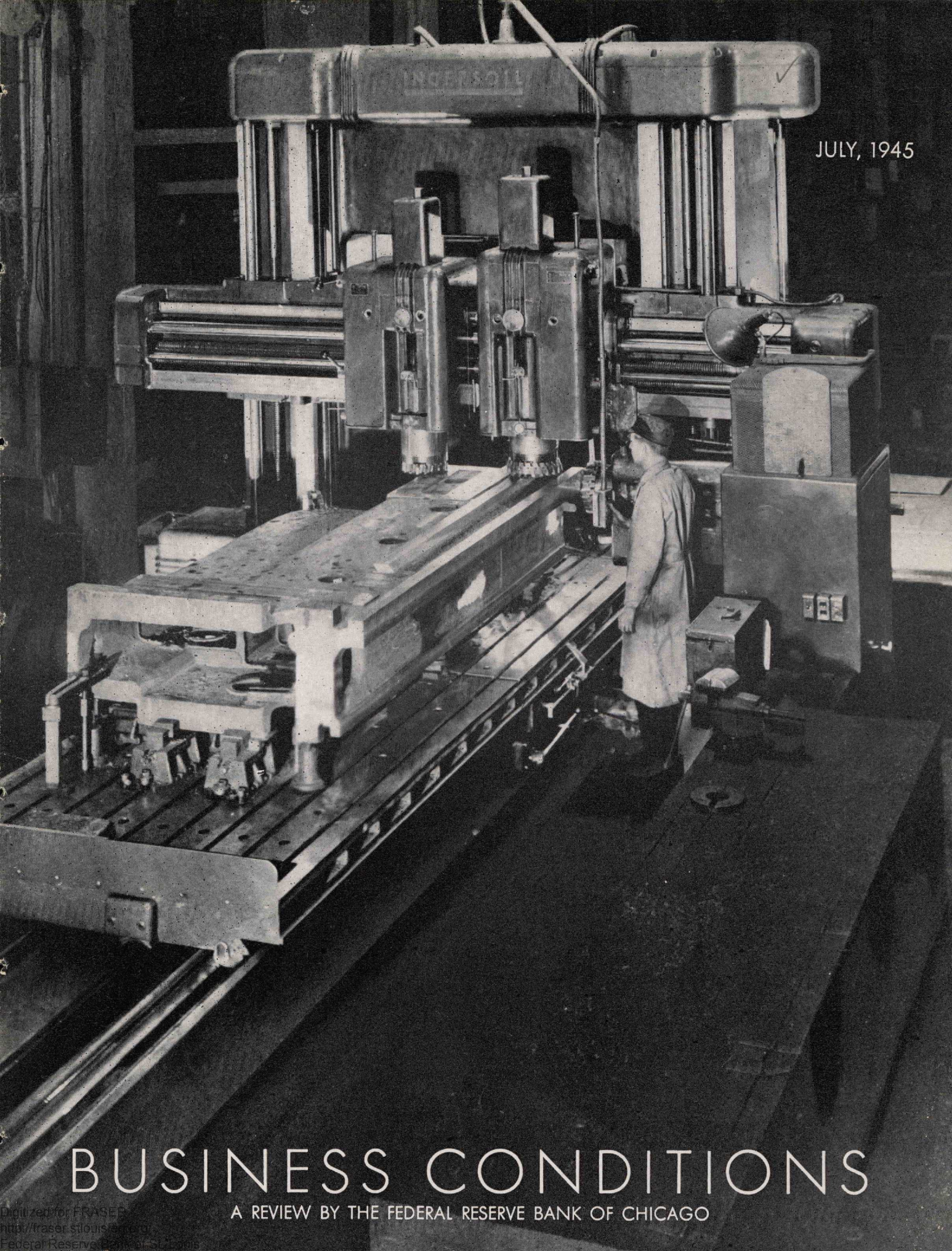


JULY, 1945

BUSINESS CONDITIONS

A REVIEW BY THE FEDERAL RESERVE BANK OF CHICAGO

Machine Tools—Bottleneck to Reconversion?

Large Surplus Disposal Problems Loom

Although a heavy program of war production continues for Seventh District industry, now producing more than one-fourth of the nation's war output, manufacturers are giving increasing attention to the availability of machine tools for reconversion to civilian production. It is evident that many manufacturing establishments both in the district and the nation will need a significant number of new, often specialized, tools to complete mass production and assembly lines before large scale peacetime operations can be resumed. The new machine tools needed, however, will probably number in the tens of thousands rather than in the hundreds of thousands as during the conversion-to-war period in 1941-42. Until these new machine tools can be produced, some serious bottlenecks to reconversion in particular plants may occur. A more extensive machine tool bottleneck, however, seems likely to arise in the removal of existing tools from war plants and their installation and use elsewhere.

While the output of new machine tools is likely to remain at a comparatively high level, judged by prewar standards, for at least two more years, it is quite clear that the unprecedented wartime production of machine tools has sharply reduced the need for many new tools, especially so-called general-purpose types. New machinery to be built will meet urgent reconversion needs with far-reaching deterring effects upon employment and production if availability is delayed. In many respects, however, a larger problem concerns the sale and redistribution of hundreds of thousands of machine tools already built. The primary aim of the Government, which now owns about three-fourths of the newest tools, and of industry generally must be to keep as many of the war-built machine tools in use as possible during and after reconversion. To the extent to which these machine tools cannot be, or are not, used, the nation's capacity to produce and to employ thereby will be lessened. Financing institutions may have an important role in assisting manufacturers to keep large numbers of these machine tools in use.

MACHINE TOOLS FOR WAR

Reconversion problems for machine tool builders, rebuilders, dealers, buyers, and Government surplus disposal authorities are almost entirely the result of abnormally high production trends since 1939. Hence, a brief review of the machine tool industry's wartime operations will provide some necessary background to assist in evaluating the scope and magnitude of the reconversion-to-peace task ahead. Many of the principal conversion-to-war problems of the machine tool industry were discussed in the June 1943 issue of *Business Conditions*. The longer-run outlook for the machine tool industry will be considered in a future *Business Conditions* article.

The war has greatly emphasized the indispensable nature of machine tools and accessories to modern industrial production. The more than 175 per cent increase in value of manufacturing output in the Seventh District and the nation since 1939 would not have been possible without the 550 per cent increase in machine tool production at the industry's wartime peak.

The machine tool industry includes an aggregation of establishments engaged in the manufacture of power-driven machines for cutting or forming metal into precise shapes and sizes for an infinite variety of uses in metal products. Machine tools of hundreds of different types are based upon five principal processes: turning, boring, planing, milling and grinding. Combinations of these processes are frequently incorporated into extremely complex units, performing several functions quickly and with extreme accuracy. Many of the latter machine tools are broadly referred to as specialized, in contrast to standard or general-purpose machines which often involve only one of the above-mentioned processes. Many machine tool builders, especially of standard types, commonly market their products through agents or distributors rather than directly to machine tool buyers. Specialized machinery, however, is usually built to accomplish a particular operation for an individual manufacturer, and hence sales are made directly, with close cooperation between the engineering staffs of the builders and the buyers.

The machine tool accessories industry includes producers of attachments for machine tools such as dies, used in forming identical metal parts; jigs, holding devices to guide tools accurately; fixtures, i.e., devices to hold in place material to be machined; tools, i.e., actual implements which do the cutting, drilling, shaving, and milling; and gages, i.e., instruments for measuring accurately the dimensions of manufactured parts.

Despite the tremendous strides which have been made by machine tool builders to accelerate their production during the war, the manufacture of many machine tools, and particularly some specialized types, is highly time-consuming, often requiring from several weeks to six months or more to complete a single machine. Any significant changes in industrial processes or techniques, consequently, necessitate considerable advance planning to allow for the production of key machine tools. The absence of a single machine tool on a production line can create a very serious bottleneck to final production.

(*Continued on Page 6*)

THIS MONTH'S COVER

A powerful planer-type milling machine built in Rockford, Illinois

(*Courtesy National Machine Tool Builders' Association*)

T Loans — Financial Aid to Reconversion

V-E Day Brings Substantial Contract Terminations

Substantial post V-E Day war contract terminations in the Seventh Federal Reserve District have resulted in a small increase in the application rate for T loans to free working capital frozen by contract cancellations. By July 1, 1945, little use had been made of T loan funds authorized.

From September 13, 1944, when the first Seventh District T-loan guarantee agreement was made following the enactment of the Contract Settlement Act of 1944, until May 8, 1945, V-E Day, the Federal Reserve Bank of Chicago approved 124 T-loan guarantee agreements, totaling $76,166,581. During the eight weeks following V-E Day to July 1, 1945, 40 additional T loan agreements have been authorized raising the cumulative commitment total to $103,411,581. Of the 164 loan agreements, twenty-three, aggregating $12,405,000, have been arranged through the Detroit Branch. On July 1, 1945, two borrowers were using roughly half of the T loan funds available to them.

The Seventh District, comprising most of Illinois, Indiana, Michigan, and Wisconsin, and all of Iowa, has had slightly more than one-fourth of all T-loan guarantee agreements made thus far by Federal Reserve banks and branches throughout the nation. In the Seventh District more than 400 other war contractors have termination financing protection through V and VT loan agreements.

The number of T loan credits approved is quite small when compared with the District's estimated 7,500 or more prime and subcontractors active in specialized war work for whom the T loan program is primarily intended to offer protection against working capital depletion pending war contract settlements. No T loan applications have been rejected. It is likely that many war contractors have delayed seeking T loan assistance to meet financial problems which may arise from war contract settlement because of continuing heavy war production requirements, widespread public assurances of speedy contract settlements, and still relatively few serious cutbacks. Government contracting agencies have gained considerable experience in contract settlements and have improved and streamlined administrative procedures, but it cannot yet be said that the contract settlement program has faced its most severe task of mass contract cancellations. The real test of settlement procedures and the need for T loans probably will come during the period immediately preceding and following Victory over Japan, when all war contract terminations will result in sharp reductions in production rather than reductions in the backlog of orders, as is now often the case.

PRETERMINATION PLANNING REQUIRED

War contractors are urged to re-appraise their probable interim financing problems to determine their needs for the financial insurance provided by the T loan program, because funds frozen by contract cancellations can be a serious deterrent to speedy reconversion, which is urgently needed to maximize employment and minimize production losses during the interim period. Should mass terminations occur involving numerous contracts with complex prime and subcontractor arrangements, immediate full or partial payment settlements for all contractors cannot be expected. It is now perfectly clear, moreover, that contract settlements cannot be handled quickly under any circumstances unless contractors in advance of terminations are thoroughly conversant with Office of Contract Settlement regulations and procedures, and file termination claims promptly. Commercial banks have a responsibility to keep their war contractor customers informed about the T loan program, and wherever interim financial assistance is likely to be needed, to encourage contractors to complete loan arrangements as soon as possible. Adequate preparations for contract settlements have already abundantly proved their worth to all concerned.

T LOAN PROGRAM SUMMARIZED

The Contract Settlement Act of 1944 provided the legal basis for extension of the Regulation V guaranteed war loan program of the Federal Reserve System to cover loan guarantee agreements dealing solely with war contract terminations. Previous guarantee agreements under Regulation V were limited to credit for war production purposes with provision, however, for financial protection upon contract termination. Thus, the T loan was added to the Regulation V program which already included V loans to facilitate and expedite war production, and VT loans to free funds frozen by contract cancellations as well as to provide working capital for war production purposes. The use of the borrowed funds is a basic distinction between V and T arrangements. T loans are designed primarily to make funds available pending final settlement of war contract claims. Also, in contrast to VT loans, T loans can be arranged after, as well as before, contract cancellations. This last condition contributes in part at least to the comparatively small volume of T loan applications which has been submitted thus far at a time when the number of war contract cutbacks and cancellations, although steadily increasing, is still well below the ultimate peak.

General administration of the T loan program closely parallels that of V and VT loans. T loan guarantee provisions derive their authority, however, directly from an act of Congress (Section 10 of the Contract Settlement Act of 1944), whereas Regulation V was initially authorized by Executive Order. T loan regulations are prescribed by the Board of Governors of the Federal Reserve System, subject to the approval of the Director of the Office of Contract Settlement, and after consultation with the War Depart-

ment, Navy Department, and Maritime Commission. As in the case of all Regulation V loans, the Federal Reserve banks are authorized to act on behalf of the contracting agencies as fiscal agents in the T loan program.

The parties to the T loan agreements are the same as those for other Regulation V loan agreements: (1) the borrower, (2) the lending financing institution, (3) the guarantor contracting agency, and (4) a Federal Reserve bank. Any war contractor, prime or sub, is eligible for a T loan, subject, of course, to the general regulations of the program, including approval by each of the three other parties. The loan agreement is negotiated between the borrowing war contractor and the lending institution. Where more than a single bank participates in the loan, one financing institution normally serves as agent for the others. A financing institution may not charge more than 4½ per cent on the T loan funds actually borrowed, nor more than ¼ of one per cent as a commitment fee on the unused portion of the loan credit. The financing institution may, however, as an alternative, charge a flat fee not to exceed $50.

A guarantee agreement is arranged between the lending financing institution and one of the Government guaranteeing agencies represented by a Federal Reserve bank. The War Department and the United States Maritime Commission have delegated to the Federal Reserve banks authority to approve, after consultation with representatives of the agency, all applications for guarantee of loans totaling (a) $500,000 or less to any one borrower when the requested percentage of guarantee is not in excess of 90 per cent, and (b) $100,000 or less to any borrower when the requested percentage of guarantee is not in excess of 95 per cent. Ordinarily the requested percentage of guarantee is not questioned by the Federal Reserve bank or the contracting agency if it is not in excess of 90 per cent.

The guarantee fees payable to the guaranteeing Government agency by the lending institution are on a graduated scale designed to provide an incentive for banks to take as much of the loan risk as possible without guarantee. Loans guaranteed 80 per cent or less carry a fee of 10 per cent of the interest payable to the financing institution by the borrowing war contractor. If the percentage guarantee is 90 per cent, the fee absorbs 20 per cent of the interest payable on the T loan, and if the guarantee percentage exceeds 95 per cent, the fee takes 50 per cent of the interest charged. In practice, this financial incentive based upon graduated guarantee fees appears to be relatively unimportant to most financing institutions which thus far have requested 90 per cent guarantees for three-fourths of the loans made.

DISTRICT T LOAN EXPERIENCE

An analysis of the 124 T-loan guarantee agreements approved in the Seventh District before V-E Day reveals that the District's seven largest banks, measured by total deposits on December 31, 1944, are serving as agents for nearly half of the T loans, accounting for more than 70 per cent of the T loan credit made available. The Seventh District T loan program has reached manufacturers chiefly in the middle asset size range, i.e., with gross assets from $250,000 to $5,000,000, with relatively few very small or very large manufacturing establishments applying for T loans.

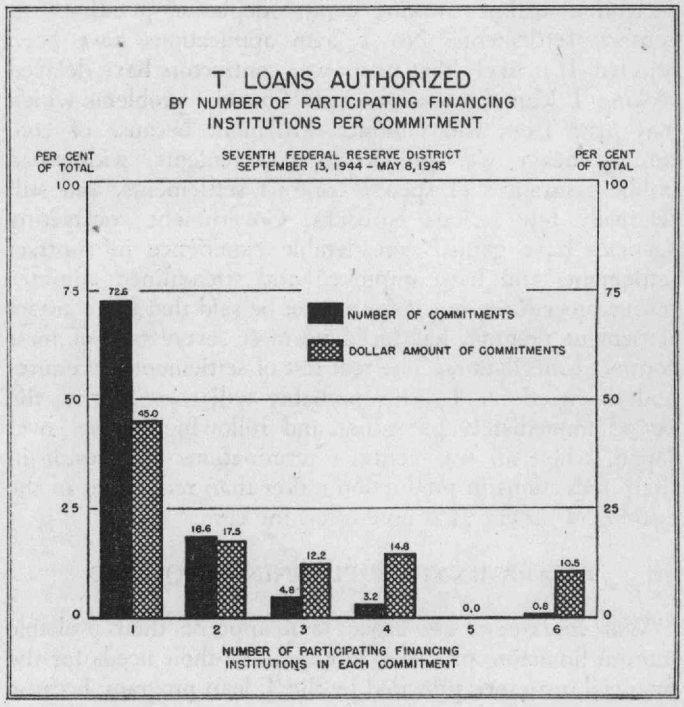
During the period from September 13, 1944, to May 8, 1945, nearly half, 60, of the 124 approved Seventh District T loan commitments were for war contractors in Illinois, with 50 in Chicago. T loans authorized for firms in other District states were as follows: Michigan, 29, with 10 in Detroit; Indiana, 17, with 6 in Indianapolis; Wisconsin, 12, with 4 in Milwaukee; and Iowa, 1. Five loan agreements involved firms with home offices outside the Seventh District.

Loans authorized ranged in size from $1,581 to $8,000,000, with a simple arithmetic average of $614,247 per loan commitment. The largest number of loan commitments, 57, or nearly half, fell in the size group from $50,000 to $299,999, but accounted for about 11 per cent of the dollar volume. Commitments in amounts of $1,000,000 or more represented about 14 per cent of the number but more than three-fifths of the total value of loans authorized.

FEW COMMITMENTS USED

Until V-E Day, only one T loan commitment was used and this loan has since been repaid. During the eight weeks following V-E Day, two other war contractors borrowed under their T loan commitments. It thus becomes clear that not only have relatively few T loan agreements been made in the Seventh District thus far, but very few of the contractors have had to use their T loan protection.

Judged by the maturities of Seventh District T-loan guarantee agreements, war contractors anticipate that their interim financing requirements in general may extend over a period of from one to three years. Only 13 per cent of the commitments have been for a period of one year or less, and 47 per cent for one to two years. Most of the agreements



with maturities beyond two years are concentrated at or near the three-year limit.

T loan agreements have been made almost entirely at the maximum allowable commitment fee, ¼ of one per cent, to the financing institutions. Of the 124 T loans authorized during the pre-V-E Day period, only one carries a flat commitment fee and four others have no commitment fees.

Seventh District T loan commitments have been fairly evenly distributed over a range of interest rates from 2.5 through 4.5 per cent, but in amount are heavily concentrated at the lowest interest rates. About 30 per cent of the 124 T loan agreements analyzed, covering more than two-thirds of the aggregate T loan funds, have interest rates of less than 3.5 per cent. The weighted average interest rate for all pre-V-E Day Seventh District T loans was 3.1 per cent. A comparison of interest rates charged and loan commitment sizes reveals a general tendency for smaller loans to concentrate at higher rates, and vice versa.

Four different guarantee levels, 75, 80, 85, and 90 per cent, have prevailed in T-loan guarantee agreements approved by the Federal Reserve Bank of Chicago. As previously indicated, three-fourths of all pre-V-E Day loan commitments carry 90 per cent guarantees. Almost all the remaining loans are in the 80 per cent guarantee group. There is no appreciable difference between the weighted average interest rate for loans guaranteed at 90 per cent and for those guaranteed at 80 per cent, indicating that the guarantee level, in general, probably has had little noticeable effect upon the interest rates charged for Seventh District T loans. It appears likely that many of the financial institutions have accepted the highest percentage guarantee generally allowed without much specific differentiation between loan risks eligible for guarantee.

SIZE OF BUSINESS RELATIONSHIPS

For purposes of this analysis, business firms have been classified into five principal size groups according to their total assets on December 31, 1944[1]: (1) under $250,000; (2) $250,000 to $1,000,000; (3) $1,000,000 to $5,000,000; (4) $5,000,000 to $10,000,000; and (5) $10,000,000 and over. The first group includes the smallest firms; the (2) and (3) groups increasingly larger firms in the middle asset ranges; and the (4) and (5) groups the large and very large war contractors. Seventh District war contractors arranging for T loan commitments before V-E Day fell into those size groups as follows: (1) 22 per cent; (2) 32 per cent; (3) 35 per cent; (4) 6 per cent; and (5) 5 per cent. It thus becomes apparent that the Seventh District T loan program during the period under study covered primarily establishments in the middle asset ranges.

T loan commitments to small manufacturers typically carry higher interest rates than those for large firms. The greatest volume of T loan funds made available to the smallest firms has been at 4.5 per cent; middle asset range firms, from 3 to 3.9 per cent; and the largest firms, from 2.5 to 2.9 per cent. More specifically, the weighted average interest rates for T loans by increasing asset size classes are (in per cent): (1) 4.2, (2) 3.7, (3) 3.4, (4) 3.0, and (5) 2.7.

In several cases, however, a considerable variation occurs from this general pattern of size of business and interest rate charged. While no T loan commitments to the smallest firms were made below 3 per cent—and in the case of the very small, i.e., assets under $100,000, establishments, below 4.5 per cent—commitments to businesses in the middle asset ranges were distributed over the entire series of interest rates. No business with assets over $5,000,000, however, was charged more than 3.5 per cent.

As indicated earlier, T loan guarantees are clustered heavily at 90 and 80 per cent, with no striking difference with respect to varying commitment sizes or interest rates. Introduction of the additional variable, size of business, does not alter the earlier conclusions materially, but does provide further evidence of the somewhat "automatic" nature of the guarantee percentages. The weighted average guarantees for loans in increasing asset size classes are (in per cent): (1) 87.5, (2) 88.1, (3) 87.8, (4) 87.0, and (5) 90.

COMMERCIAL BANK PARTICIPATION

The number of commercial banks participating in the Seventh District T loan program has been small, 76, but this is to be expected from the comparatively few commitments which have been made. The participating Seventh District T loan financing institutions, between September 13, 1944, and May 8, 1945, include 44 banks which have served as agents or principal negotiators with the Federal Reserve Bank of Chicago, and 32 others which only have joined with agent banks in T-loan guarantee agreements. Six of the agent banks have on one or more occasions also participated in T loans with other banks on a non-agent basis. Nine of the financing institutions are nonmember banks. Six additional banks are located outside the District.

The T loan banks constitute a very small fraction of the District's 2,430 member and nonmember banks. Many of these banks, however, have little or no opportunity to make T loans because of their locality, nature of customer relationships, and size. The proportion of participating banks is still fairly small, however, even when the number of T loan banks is compared with the 630 member and nonmember banks which, because of their location within recognized Seventh District industrial areas, may be considered broadly as "potential" T loan lenders. The District's seven largest banks, each having total deposits in excess of $500,000,000 on December 31, 1944, as indicated, are serving as agents in nearly half of the number and more than 70 per cent of the value of all of the Seventh District T loans authorized during the period under study. These same seven banks, four of which are in Chicago, individually have extended more than 65 per cent of all Seventh District T loan credit, thus emphasizing their leading position in the T loan program.

More than 72 per cent of the T loan agreements have been made by single commercial banks, but these agreements account for less than half of all Seventh District T loan credit extended. About 19 per cent of the agreements

[1]In a few cases where total asset data were not available for December 31, 1944, the asset figure for the closest available date was used.

NUMBER AND AMOUNT OF T LOANS AUTHORIZED
SEVENTH FEDERAL RESERVE DISTRICT

September 13, 1944 — May 8, 1945

ITEM	Number		Amount (in thousands of dollars)								
			SIZE OF BUSINESS Total assets (in millions of dollars)[1]					SIZE OF AGENT FINANCING INSTITUTION Total deposits (in millions of dollars)[1]			TOTAL
	Loan Commitments	Per Cent of Total	Under ¼	¼ to 1	1 to 5	5 to 10	10 and over	Under 20	20 to 100	100 and over	
SIZE OF LOAN COMMITMENT (000)											
Under $50	6	4.8	137	...	...	...	...	30	82	25	137
50 — 99	16	12.9	725	255	...	...	...	325	455	200	980
100 — 199	18	14.5	900	1,000	150	...	...	450	200	1,400	2,050
200 — 299	23	18.6	400	3,500	1,350	...	...	275	1,525	3,450	5,250
300 — 399	10	8.1	...	2,150	950	...	...	...	600	2,500	3,100
400 — 499	4	3.2	...	400	1,200	...	...	400	...	1,200	1,600
500 — 749	23	18.6	...	2,000	10,200	...	...	500	3,200	8,500	12,200
750 — 999	6	4.8	...	...	4,000	750	...	...	...	4,750	4,750
1,000 — 4,999	15	12.1	...	...	6,100	11,000	7,000	...	2,100	22,000	24,100
5,000 and over	3	2.4	...	...	...	...	22,000	...	...	22,000	22,000
RATE OF INTEREST											
2.5 — 2.9	13	10.5	...	300	3,400	5,000	19,000	...	1,000	26,700	27,700
3.0 — 3.4	26	21.0	260	1,450	7,800	4,000	10,000	100	1,700	21,710	23,510
3.5 — 3.9	33	26.6	175	3,930	7,150	2,750	...	75	480	13,450	14,005
4.0 — 4.4	19	15.3	125	2,425	3,600	...	...	1,000	3,650	1,500	6,150
4.5	33	26.6	1,602	1,200	2,000	...	...	805	1,332	2,665	4,802
PERCENTAGE GUARANTEE											
75	1	0.8	150	...	...	...	...	150	...	...	150
80	29	23.4	325	1,805	5,200	3,500	...	150	765	9,915	10,830
85	1	0.8	...	...	200	...	...	...	...	200	200
90	93	75.0	1,687	7,500	18,550	8,250	29,000	1,680	7,397	55,910	64,987
TOTAL	124	100.0	2,162	9,305	23,950	11,750	29,000	1,980	8,162	66,025	76,167
Per cent of total	...	...	*2.8*	*12.2*	*31.5*	*15.4*	*38.1*	*2.6*	*10.7*	*86.7*	*100.0*

[1]On December 31, 1944.

have involved two financing institutions and the others have as many as six participating banks.

The foregoing discussion has clearly indicated the dominant importance of manufacturers in the middle asset size range, i.e., from $250,000 to $5,000,000, and the largest banks in the Seventh District T loan program before V-E Day. Further analysis of this relationship reveals that all of the large firms, i.e., with total assets of $5,000,000 and over, have made their T loan commitments through large banks, i.e., with total deposits of $100,000,000 and over. More than two-thirds of the firms in the middle asset ranges, and nearly two-fifths of the smallest establishments also have obtained T loan credits through the large banks. Moreover, the large banks have made more T loan commitments to small manufacturers than have banks which for purposes of this study may be called small, i.e., with total deposits of under $20,000,000.

From many points of view, T loans seem to be a most satisfactory method for arranging termination financing, yet, they are not being widely applied for or used. In addition to the reasons suggested earlier for this lack of widespread response, several others are apparent: (1) a significant number of terminated war contracts involve no financial claim or claims of nominal amounts; (2) on the average, less than 10 per cent of the total value of any war contract is involved in a termination claim because the remaining portion of the contract usually either has been completed and the goods delivered or else the materials for yet-to-be produced items have not been purchased; and (3) to an increasing extent war contracts are running to completion so that many termination problems are avoided. For these and other reasons, some war contractors in the Seventh Federal Reserve District are known to feel confident that their termination financial problems will not be serious. In many instances the facts may warrant such conclusions, but officials of the Government contracting agencies, Office of Contract Settlement (OCS), and the Federal Reserve System agree that there is no basis for general complacency about future contract termination uncertainties. War contractors are urged to analyze their situations carefully and to take adequate measures to insure financial protection upon termination.

T LOAN ADVANTAGES

To the war contractor, T loans offer insurance against working capital depletion pending settlement of his war contract claims. Moreover, the cost to the war contractor of making a T loan commitment before contracts are actually terminated or cancelled is negligible. Although the arrangement made in advance requires a small commitment fee on the unused portion of the credit, such fee, as well as the actual interest charges up to 2½ per cent on funds used, may properly be included as reimbursable costs in termination claims.

For the banks, the T loan program offers an opportunity to render a valuable service to many of their war contractor customers as well as to augment earnings whether or not the T loan funds are used fully. Banks located in industrial areas in particular can call to the attention of local war contractors the importance of having full protection of commitments for termination financing. The T loan program has been designed to provide a simple and expedient medium whereby the banks can render termination protection for their customers. Accompanying the guarantee agreement is a standard form of loan agreement, the availability of which reduces the banks' work in preparation of the loans to a minimum. For their efforts, the financing institutions may receive as a minimum the commitment fee, even though the T loan funds are not used. The guarantor does not share in the commitment fee. Interest earnings on the T loan funds actually borrowed, of course, vary with the interest rate charged and the percentage guarantee on the loan. General administration of T loans is ordinarily simpler than in the case of V loans because the borrowers' working capital requirements, ability of management, and condition of production facilities are comparatively unimportant in making or servicing a T loan. Except where there is reasonable doubt of substantial overstatement of the value of the war contract settlement claim, the loan base is not questioned. Financing institutions, whether large or small, are qualified to function T loans and are invited to make inquiry at the Federal Reserve Bank of Chicago regarding arrangements.

CONTRACT SETTLEMENT JOB AHEAD

For the nation as a whole, the OCS reports that prior to April 1945, war production adjustments required $27.5 billions in terminated war contract commitments, consisting of $19.6 billion in fixed-price contracts, and $7.9 billion in cost-plus contracts. Through March 31, 1945, 75 per cent of the fixed price terminations had been settled for $674 million, or less than five per cent of the over-all value of the cancelled contracts. The proportion of cost-plus contracts finally settled was much smaller, only 42 per cent, primarily because of the difficulty in separating payments connected with the unterminated portion of the contract from those strictly associated with termination.

Since V-E Day, substantial terminations have occurred to adjust the war production program to a one-front war. Terminations in May 1945 were $5.1 billion, about three times the level of the preceding month. June terminations are estimated to have been about $3 billion, and, assuming the continuation of the war with Japan, the last six months of the year are expected to add another $10 billion in terminated contracts. In short, by the close of 1945, a total of $47 billions in war contracts probably will have been terminated.

The rate of contract settlements is currently about $1.6 billion per month. It is anticipated by the OCS that contracting agencies "will be well equipped to settle well above $2 billion per month of terminations by August or September of this year, provided contractors file their claims promptly." It is hoped that the backlog of unsettled contracts at the end of the year will not be much larger than that on March 31, 1945. A substantial job lies ahead in settling war contracts, and the T loan program stands ready, wherever needed, to prevent working capital depletion pending final settlements.

MACHINE TOOLS — BOTTLENECK TO RECONVERSION?

(Continued from Inside Front Cover)

Machine tools normally have a long life, often being reconditioned and resold several times after leaving the original purchaser's plant. An almost entirely separate industry dealing in used machine tools has been built upon this long life factor. The used machine tool group comprises: dealers who buy and sell machine tools and commonly assist manufacturers in setting up production lines incorporating used machinery, rebuilders who recondition machine tools and also serve as dealers for their products, brokers, auctioneers, and liquidators.

WAR PRODUCTION TRENDS

In peacetime, a very "good" annual volume of production of new machine tools was valued at 200 million dollars, such as achieved in 1939. By contrast, at the wartime peak in 1942 shipments reached 1.3 billion dollars, or a gain of 550 per cent from 1939. Since 1942 machine tool output has declined to 1.2 billion dollars in 1943, and 500 million dollars in 1944. Current estimates place 1945 production at about the 1944 level.

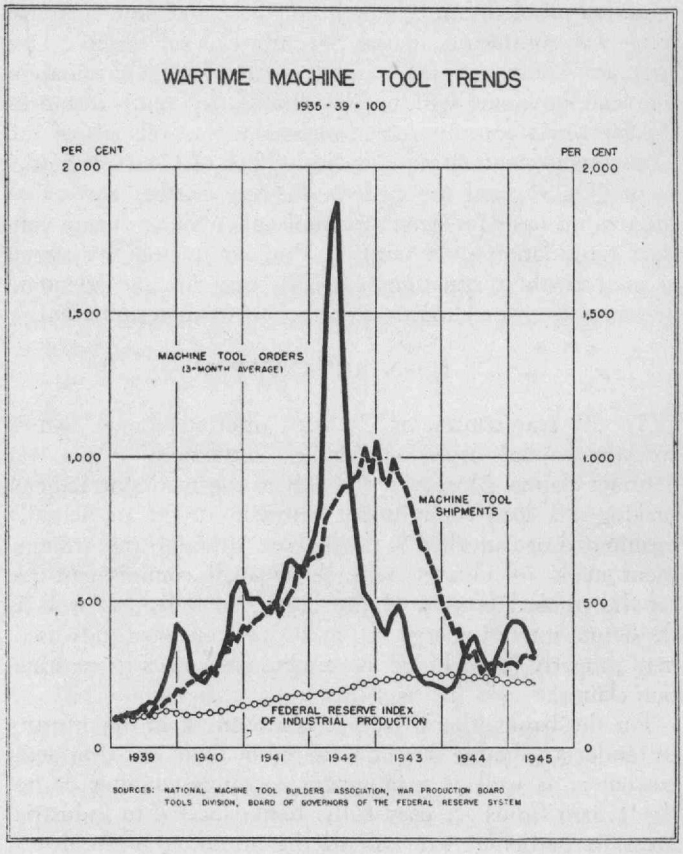
The heavy machine tool requirements for war production necessitated a large expansion in machine tool building capacity. Roughly half of this expansion has been financed by the Federal Government, which also undertook to speed the delivery of machine tools by authorizing builders to begin production of standard tools under a "pool" order plan before definite orders were placed by individual manufacturers. From June 1940 until the close of 1944 new and expanded machine tool and accessory manufacturing facilities in the nation totaled about 335 million dollars with 85 million dollars, or 25 per cent, in the Seventh Federal Reserve District states, Illinois, Indiana, Iowa, Michigan, and Wisconsin. Most of the new machine tool building capacity was added to prewar establishments. Among the new firms which entered the machine tool and accessory industries since 1940, there has been a heavy concentration in machine tool accessories, particularly in the Seventh District.

The pool order system was utilized extensively in 1941 and 1942. The War Production Board announced in April 1944 that 98 per cent of the tools produced under this plan had been absorbed by industry. Pool orders were revived again in December 1944 when an emergency munitions program, intensified by the "Belgian bulge", led to authorizations for substantial expansion of plant and equipment. With victory in Europe, however, much of this new program has been cancelled, and pool orders subsequently curtailed.

RECONVERSION DEMAND FOR MACHINE TOOLS

Several major factors seem certain to influence the demand for machine tools, new and used, during the reconversion period which probably will extend through the next two or three years. The level of income payments normally is the principal determinant of peacetime sales to general consumers, and thus, indirectly, the continuing determinant of the demand for machine tools, both new and used. In other words, the present and future over-all demand for the *products* of machine tool users assumes prime importance in setting the level of derived demand for machine tools. The absence of many types of consumers' durable goods from consumer markets for several years clearly means that new and replacement demand for them will be heavy for at least some indefinite period. The level of income payments is now expected to be comparatively high by prewar standards for some time after reconversion is completed, although it is widely recognized that the highly desired sudden collapse of Japanese hostilities would probably have a very disrupting influence upon the reconversion period now under way.

The heaviest prewar demand for new machine tools, including many specialized types, came from the automobile industry. Other industries having large peacetime machine tool demands were: steel, railroads, railroad equipment, electrical machinery, and construction. Partial evidence from orders already placed indicates that these and many other related industries will require certain key machine tools to complete production lines for civilian goods. The current materials supply situation places limitations upon the scale



of resumption of production of certain civilian goods, and hence influences the timing of the need for some new machine tools. Most metals, however, are expected to be available in somewhat larger quantities for general civilian use by the fourth quarter of 1945. Announced postwar plant expansions by the automobile, mechanical refrigeration, laundry equipment, sanitary equipment, and many other industries indicate orders for new machine tools, some of which have already been placed.

Early production of new machine tools for reconversion of industry is recognized widely as vital in reducing the time lag, and hence the number of unemployed, between the ending of war production in many plants and areas and the resumption of civilian manufactures. In May 1945, the War Production Board gave official acknowledgment to the important transition role of new machine tools. Priority ratings, in general AA-3, were granted to 72 essential civilian industries, now largely engaged in war work, to facilitate their acquisition of equipment and construction items necessary for reconversion.

The automobile industry throughout the nation by July 6, 1945 had received 58 per cent of the dollar volume of priority authorizations. Industries in the Seventh District states, including the center of automobile production, received 62 per cent of all such approvals by the same date. Assigned ratings for machine tools, however, to date have not been of great value to manufacturers because current war orders with higher priorities have kept most machine tool manufacturing facilities in full operation. The WPB has supplemented its priority granting regulation by assuring manufacturers that any individual machine tool hampering the civilian production of an entire plant will be pushed ahead of some higher-rated orders.

POTENTIAL SURPLUS MAGNITUDE

In the Seventh Federal Reserve District alone various types of machinery and allied equipment valued at nearly three billion dollars have been added to prewar industrial production facilities, and in the nation the total is more than 14 billion dollars. It is estimated that about 800 thousand machine tools, valued at about three and one-half billion dollars, have been built for American industry since 1940. Probably 600 thousand of these machine tools are owned by the Federal Government. The latter figure provides the best measure of the general magnitude of the surplus disposal problem for machine tools. The prospects for postwar usability of these war-built tools are generally conceded to be excellent, with some estimates indicating that in excess of 80 per cent of the units can be used in their present condition, or else can be readily adapted to civilian use.

Within the over-all reconversion demand for machine tools, the demand for used machine tools seems likely to be much larger than that for new ones. It is, of course, extremely difficult to generalize in many cases whether new or used machine tools will be purchased. Certain machine tool builders point out that most of the large and financially strong industrial firms, such as the leading automobile manufacturers, have followed the practice in the past of buying principally new machine tools. Their requirements commonly have been for high precision machine operations and for maintenance of facilities at high efficiency levels. Machine tool builders more or less expect this new machine tool buying policy of large and financially strong manufacturers to continue, and thus foresee only partial use of both prewar machine tools which have been stored during the war production period and certain war-built tools. These machine tool builders emphasize the high cost and time-consuming aspects of rebuilding older equipment. Some desire that the Government set aside as many as 50 per cent of its machine tools as a strategic military reserve which would also prevent surpluses from destroying future machine tool markets.

Delivery time, however, may be the controlling factor in influencing many decisions regarding the immediate purchase of new or used machine tools. If new machinery is not readily available when needed, manufacturers who have demonstrated their ability to improvise and rebuild equipment to meet war emergencies almost certainly will not wait for new machine tools, if civilian goods can be produced competitively with tools on hand or readily accessible. Later when new equipment becomes available, it no doubt will be purchased.

The greatest outlet for war-built machines promises to be in the plants where they are now installed which will be converted to peacetime production. In addition, many medium- and small-sized manufacturing establishments will require more modern equipment to reconvert plants on a competitive basis with other, particularly larger, firms in their industries. Some of these smaller establishments, it is reported, have not been able to retool and modernize their plants extensively during the war in contrast with many other larger war plants which have had higher priorities leading to the installation of new machine tools and related equipment. Except where production tolerance requirements are very exacting, or where a very specialized machine is needed to do a particular job, used machinery seems likely to compete with new tools. This potential competition between new and used machine tools promises to be important for the bulk of the manufacturing firms in the Seventh Federal Reserve District, if the procedures for making surplus machine tools available to prospective buyers are streamlined and if the terms are financially attractive.

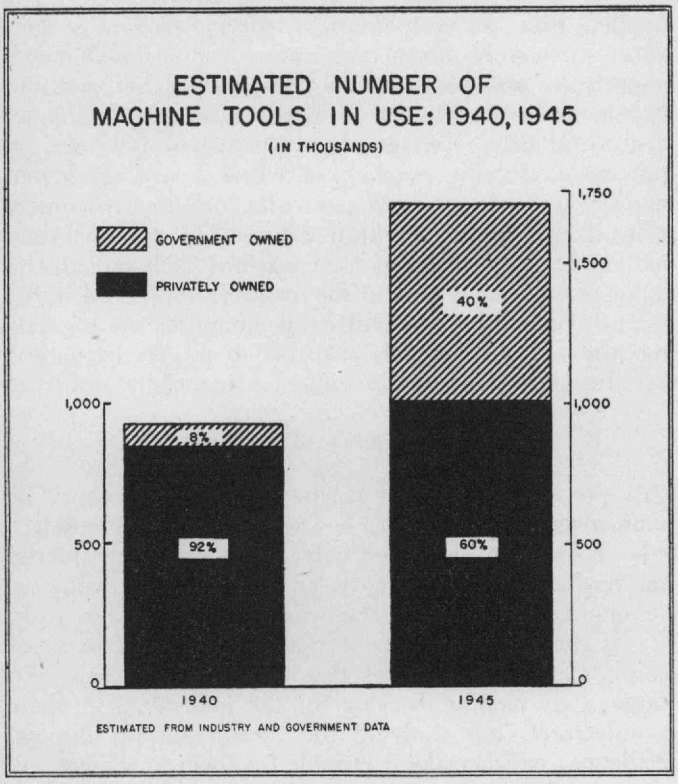
THE CURRENT SITUATION

At present, the general machine tool situation may be summarized as follows: (1) The machine tool builders' order boards are almost entirely filled with high priority war production items, but the outlook is for gradually increasing capacity to become available for civilian tools; (2) at the present shipment rate, 40 million dollars per month, the WPB estimates that unfilled orders now constitute a six months' backlog for the industry; (3) many manufacturers are studying the newest surplus disposal regulations which make it possible for them to acquire any

or all of the Government-owned machine tools in their plants even though war production continues; and (4) machine tool dealers and rebuilders are anxiously awaiting the crystallization of surplus disposal policies to see what opportunities they will have to use their distributive experience and facilities.

With victory in Europe some cancellations of machine tool orders for war production purposes have occurred, particularly those resulting from the "Belgian bulge" reversal, allowing certain rated civilian orders to find a place in the builders' production schedules. In the fall of 1944, some preliminary steps were taken to permit production for civilian industry, but such authorizations were curtailed because of expanded military requirements. With many rated and unrated orders on their books, builders obviously face the difficult problem of scheduling production to satisfy the Government and individual customers. Builders, for the most part, do not desire to reconvert or expand their own production facilities to meet what is likely to be an important but nevertheless temporary wave of demand. Continuing direct war production, and manpower and material shortages, moreover, limit the possibilities for bringing additional machine tool building capacity into use in the immediate future. The builders hesitate to aggravate their own difficult task of reducing abnormal wartime operations to a substantially lower peacetime level, somewhat above the prewar volume. In general, they consider the production problems ahead to be of much smaller magnitude than those which they met in 1941 and 1942.

The machine tool reconversion problem, as indicated, will be more in the moving, sale, reconditioning, and reinstallation, than in building, of machine tools. Well over half of the estimated 600 thousand Government-owned, war-built machine tools probably will be subject to redistribution (1) in ownership from Government to private companies, and (2) physically, within and among manufacturing plants and surplus storage depots throughout the nation. Relatively few of the privately owned, war-built tools are expected to be shifted to new owners during the early reconversion period.



PRINCIPAL SURPLUS QUESTIONS

The task of redistributing machine tools obviously depends, to a large extent, upon the satisfactory solution of many perplexing administrative and financial problems associated with surplus disposal. Some of the principal questions are: What machine tools will be declared surplus, and when? What groups or individuals have prior rights to purchase used machine tools, and how are such rights to be interpreted and protected? Through what channels will surplus machine tools be sold? What price policies will prevail? What arrangements for financing sales of surplus machine tools will be available?

Technically, machine tools become surplus when they are no longer needed for war production, either in the plant of their first installation or in any other war plant.

Surplus property does not become available for general civilian purchase until after certain priority rights, as set forth in the Surplus Property Act of 1944, have been waived. Government agencies, including the armed services, have first claim on all surplus property. Second claim is vested in States and their political subdivisions and instrumentalities, and tax-supported and non-profit institutions. Veterans, farmers, and small business all have been granted some lesser, rather indefinite preference in buying surplus property, including machine tools.

On May 21, 1945 the Surplus Property Board issued a regulation empowering Government agencies owning machine tools to dispose of them, with certain exceptions, to war contractors, prime and sub, in possession of the machinery even though still in use for war production and therefore not yet declared surplus. The contractors must agree to keep the machine tools in war production as long as needed, and not to resell them at a profit. Sales are, to the greatest extent possible, to be made at fixed rather than negotiated prices. Most of the contractors already have an option to buy such machine tools, but the new arrangement gives them an opportunity to select whatever machines they desire from the stock on hand in their plants rather than to have to buy all or none of the machinery. Under the new plan, contractors must give up their option on machine tools they do not buy now. The Surplus Property Board believes the plan will not work to the disadvantage of veterans, farmers, or small business, and that it will minimize greatly the surplus disposal problem for machine tools, clear the way for other manufacturers to acquire the remaining tools, and thereby expedite general reconversion.

Considerable interest is attached to the channels of distribution through which the surplus machine tools are to be sold. Insofar as machine tools are retained by war con-

tractors, the distribution procedures are greatly simplified and involve chiefly the purchasers and the Government agencies owning the tools. For machine tools not sold to present users, the problem obviously may be much more complicated. At least three groups have expressed somewhat conflicting views on the marketing channels to be used: (1) Government surplus disposal agents, operating under the general provisions of the Surplus Property Act, who are interested in selling surplus machine tools directly to users, with a strong objective to prevent speculation and profiteering in such sales; (2) the used machine tool group, which includes the experienced sellers of used machine tools and maintains that sales through well-established channels on a commission basis, but at the same price to the purchaser as sold directly by the Government, will yield greater return to the Government and place more machine tools in use than disposal by any other method; and (3) some machine tool builders who desire to remarket their own branded machine tools after reconditioning to protect their trade names.

To date, the Surplus Property Board appears to have adopted a fairly rigid policy of disposing of machine tools directly through Government channels, but with ample allowance for private financing. The disposal program for surplus machine tools, administered through the RFC, includes: individual rather than lot sales; leasing, when the individual circumstances make this advisable; the development of sales outlets; using descriptive inventories; circulation of national catalogs and detailed regional listings of surplus machine tools; setting up of storage facilities with display rooms for prospective purchasers to inspect machine tools; and general use of affixed prices rather than negotiated prices so that, wherever possible, surplus machine tools will bear price tags, but bids and auctions will be used whenever deemed appropriate.

Several more or less unavoidable deterrents to the speedy sale of used machine tools are apparent: (1) the number and types of machine tools suitable for civilian use to be retained by owning Government agencies have not been disclosed; (2) the volume of Government-owned machine tools in some of the largest factories is probably too great to make removal possible in sixty days after contract cancellations, as required by law; (3) available storage space for surplus machine tools is limited; (4) necessary packaging of surplus machine tools and removal to storage may inhibit sales because of the time and expense involved in moving the machinery and in later setting it up for inspection prior to sale; and (5) location of stored surplus machine tools may prove unfavorable to some sales of used machine tools where prospective purchasers are not conveniently situated nearby.

FINANCING SURPLUS SALES

Although normally sales of used machine tools are made on a cash basis, it is widely recognized that many credit sales must take place if surplus machine tools are to be used as soon as possible after they are released from war work. A number of private financing institutions are reported to be studying the possibilities of extending credit to medium- and small-sized manufacturing establishments who will need machine tools for reconversion purposes, but who may not be able at present to finance the acquisition of these tools. The new Surplus Property Board regulation permitting war contractors to purchase any or all of the machine tools in their plants, even though war production work still remains to be done, promises to open up opportunities for commercial banks to make loans, independently or with a Government guarantee.

To facilitate machine tool sales, the RFC is making available its recently announced program of guaranteeing commercial bank loans up to 75 per cent, with a limit of 250 thousand dollars outstanding at any one time for any single borrower. The RFC guarantee is given more or less automatically on the request of the commercial bank, which may not charge more than four per cent interest on the guaranteed portion, nor more than six per cent on its own participation in the loan. Loans may run 10 years, but 10 per cent of the principal must be repaid each year.

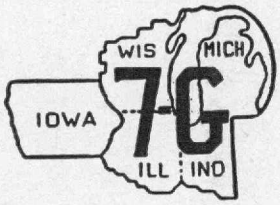
The RFC has also announced a deferred payment plan for machine tools which requires a 15 per cent down payment by the purchaser and a maximum credit of five years at four per cent per year. This special credit arrangement is to be extended only when other financial arrangements through regular commercial channels are not available. In the deferred payment plan, the RFC maintains control over the machine tools either by (1) retaining title until full payment is made; (2) executing a bill of sale, but retaining a chattel mortgage; or (3) extending credit on an "open line" method, similar to charge accounts, to be paid in a few weeks.

The Smaller War Plants Corporation has been authorized by the Surplus Property Act of 1944 "to make or guarantee loans to small business in connection with the acquisition, conversion, and operation of plants and facilities which have been determined to be surplus property, and in cooperation with the disposal agencies, to arrange for sales of surplus property to small business concerns on credit or time bases." The detailed credit program of the Smaller War Plants Corporation with respect to surplus property has not yet been completed. A deferred payment plan for the purchase of machine tools similar to the RFC plan, however, is now available as well as the regular financial assistance program of the Smaller War Plants Corporation. The latter includes direct loans, deferred participation loans in cooperation with commercial banks, repurchase loans also in cooperation with commercial banks, and the direct lease of equipment to small manufacturers with an option to buy.

In short, thousands of usable machine tools are becoming available for civilian purchase for immediate or deferred civilian production. These machine tools provide the basis for much production and employment. They must be kept in use or placed in new use wherever possible.

The combined efforts of manufacturers, Government surplus disposal authorities, dealers, commercial bankers, and other interested groups are needed to see that this is accomplished with utmost speed, efficiency, and fairness.

SEVENTH FEDERAL



RESERVE DISTRICT