THE FIVE INDUSTRIES: OPERATIONS AND FINANCIAL STRUCTURE

Each of the five industries whose small corporations we are studying is marked by peculiarities of its own - economic characteristics that distinguish it sharply from the others. The outstanding feature of the baking industry is the stable demand for its product. The manufacture of men's clothing is a particularly precaricus undertaking. In comparison with other consumer goods industries furniture manufacture is strongly influenced by cyclical forces; moreover, it is closely correlated with the construction industry, in which activity lagged during the period covered by this study. The stone and clay products industry has been undergoing a secular decline in business during the past few decades. Finally, the production of machine tools, vital as it is to large-scale heavy industry, is particularly sensitive to cyclical forces; today it is of strategic military importance as well.

The present chapter will describe each of these industries in turn, 1/ presenting a dossier of five case studies which should serve as a useful background for the subsequent composite analyses. The less general observations, particularly the discussions of financial characteristics, are based on figures pertaining only to the corporations in the 1926 sample that continued in operation through the period 1926-36. These corporations are believed to be reasonably representative of small enterprises in their respective industries, 2/ and it is unlikely that the success bias causes any serious distortion of the general picture. Particular aspects of the financial structure of these concerns, such as profitability and liquidity, reveal sharp variation from successful to unsuccessful companies. Generalizations on other characteristics, however, such as the significance of land and plant in financial structure, may be equally valid for surviving companies and those that discontinue business.

A company that might be regarded as a typical small manufacturing corporation in any particular industry is of course a mere abstraction. In this chapter it is attempted, however, to present a rough sketch of such a company - its operations, physical appearance and financial structure - for each of the five industries covered. Descriptions of its physical appearance and the nature of its operations are based on general observation. Its economic situation is described largely from census reports covering the entire industry. And its financial characteristics are averages representing the sample corporations that remained in operation over the whole 1926-36 period. The resulting composite picture is not necessarily typical in the strictly statistical sense; but it introduces into the discussion a certain concreteness, the advantages of which outweigh the statistical limitations of the procedure.

BAKING

The baking industry, which is here understood to comprise small producers of bread, cake and pies, but to exclude manufacturers of biscuits and crackers, is characterized economically by a relatively local and dependable market. The small radius of the market is attributable to the bulk of the product in comparison with cost, and to its perishability. The demand for bread from commercial bakers has remained stable, both cyclically and seasonally, in spite of the fact that there has been a secular decline in per capita consumption of wheat. The reasons why this contraction has not been reflected in sales are probably the shift from home to factory baking and the increase in population.

The basic process of bread-making has always been simple. It is now generally mechanized, although in some of the smallest companies many of the operations are still manual. The development of dough-mixing machines, continuous ovens and, particularly, bread-cutters and wrappers has changed the mechanics of production somewhat, but it did not effect any substantial savings of labor during the period covered by this report. 1/

Many small bakeries operate in their own buildings, and most of them are located in small and medium-size

communities, leaving the baking chains and large commercial bakeries to predominate in the big cities. This tendency is evident from the following figures, which show, for cities of different sizes, the average number of wage-earners in baking establishments in 1933 (rounded off to the nearest whole number), and the average value of products. 4/ It should not be concluded, however,

Population of City	Number of Wage-Earners	Value of Products
Less than 2,500	4	$18,000
2,500 - 5,000	5	21,000
5,000 - 10,000	6	26,000
10,000 - 25,000	8	39,000
25,000 - 100,000	11	52,000
100,000 - 500,000	16	76,000
500,000 and over	12	65,000
ALL CITIES	11	53,000

that very small bakeries, such as those in the present sample, are not found in the big cities. On the contrary, of the bakeries that employed no more than 5 wage-earners in 1933, more than a third were located in cities with a population of 500,000 or more. 5/

In what may be called the typical small bakery there are likely to be several ovens and two or three bakers with their assistants. 6/ There are also a few cutting and wrapping machines, perhaps operated by girls, and possibly a delivery truck or two. 7/ The front of the building may be devoted to a retail outlet for some of the baked goods. The bakery probably has contracts with local grocery stores, calling for the delivery of bread the morning after baking.

Such a small bread-baking corporation would have annual sales amounting to almost three times its total assets. The current debts of the enterprise would be slightly less than the current assets, and would consist largely of accounts payable to suppliers of flour and other raw materials. The balance of current debt would consist of notes payable, due within a year (probably bank loans for the most part), and accrued expenses for such items as taxes, insurance and interest. The officers of this fictitious corporation would receive some $7000 in combined salaries, and another few thousand dollars in cash dividends, in a year such as 1936. 8/

Table 2 - 81 BAKING CORPORATIONS: Composite Balance Sheet and Selected Income Statement Items, in Thousands of Dollars and in Percent of Total Assets, 1926 and 1936 a/

Item	Thousands of Dollars		Percent of Total Assets	
	1926	1936	1926	1936
Assets				
Cash and government bonds	$418	$345	7%	7%
Receivables	553	557	10	10
Inventory	634	560	11	10
Total current assets	1,605	1,462	28	27
Investments	88	186	2	4
Land and plant (net)	3,619	3,338	62	62
Other assets	452	378	8	7
TOTAL ASSETS	5,764	5,364	100	100
Liabilities				
Accounts payable	587	709	10	13
Notes payable	657	283	11	5
Other current liabilities	91	173	2	3
Total current liabilities	1,335	1,165	23	21
Long-term debt	309	375	5	11
Other liabilities	5	17	b/	b/
Capital stock	3,073	3,046	53	57
Surplus	842	561	15	11
TOTAL LIABILITIES	5,764	5,364	100	100
Income Statement Items				
Sales	13,966	14,050	242	262
Officers' compensation	661	555	11	10
Depreciation	357	337	6	6
Income taxes	58	42	1	1
Net income	377	144	7	3
Cash dividends	217	208	4	4

a/ Based on TNEC Monograph 15 (previously cited) Table 1-A in Appendix F. These statements refer to the end of the calendar year.
b/ Less than 0.5 percent.

As for the actual baking companies in our sample, several of their financial characteristics (Table 2) are explained by the dependability of market demand for the product. These companies' relatively stable volume of sales and earnings obviously reflects the steady market, as do also their rather small net working capital and relatively large long-term debt. 9/ When a business is conducted largely on a cash basis, and its sales income remains fairly constant, its margin of current assets over current liabilities can safely be slender. By vir-

tue of their general stability and their relatively heavy fixed investment in land and plant, small baking companies are more attractive to long-term lenders, particularly mortgagors, than small companies in other industries are likely to be.

Raw material and fuel costs represent approximately half the value of products (at factory selling prices) of the baking industry. The chief raw material item is wheat flour,10/ which, like other agricultural products, underwent a sharp price decline over the period covered by this study. The importance of flour prices in the operations of the baking companies in the present sample is but inadequately indicated by the size of these companies' inventory holdings (about 10 percent of total assets); a better gauge of the significance of this item is afforded by the fact that raw material and fuel costs amount to more than half the selling price. The stability of the companies' operations, the rapid turnover of their inventory and the ease with which they can obtain additional supplies explain why their inventory holdings are small in relation to the volume of their business. In 1936 the sales of the 81 baking companies in the present sample were 25 times their combined inventory, a ratio more than three times as large as the corresponding figure for any of the other industries studied here. Moreover, the baking companies' inventory was composed almost entirely of raw materials and supplies. For the companies that classified their inventory the various items represented the following proportions of total classified inventory in 1936, and these proportions changed very little over the 11-year period: 11/

Raw materials	74%	(reported separately by 63 cos.)
Work-in-process	0	(" " " 0 ")
Finished goods	4	(" " " 20 ")
Supplies	22	(" " " 40 ")

In the baking industry labor costs are not a particularly large item - about a fifth of the value of products. Distribution costs and depreciation together form a more important item: in 1936 depreciation, in relation to the volume of business, was even larger for the sample of bakeries than for the sample of machine tool companies. For the bread-baking industry as a whole about half the value of output (at factory selling prices) represents value added by manufacture; the proportion tends to be

higher for large than for small bakeries, and for companies such as those in the present sample it is about 45 percent. 12/

The gross land and plant of these small baking corporations are divided fairly evenly between buildings and machinery. Almost all these companies own their ovens, and frequently the building in which they operate. For the companies in this sample that showed the breakdown of their land and plant, the constituent items represented the following proportions of total classified land and plant (gross) in 1936. 13/ Since these small bakeries

Buildings	42%	(reported separately by 51 cos.)
Machinery and equipment	46	(" " " 78 ")
Furniture and fixtures	2	(" " " 64 ")
Land	10	(" " " 49 ")

had more than half their fixed assets in the form of real estate it is not surprising that some 10 percent of their total liabilities represented long-term obligations - an unusually large proportion for such small manufacturers. There were scarcely any changes in the land-and-plant breakdown over the 1926-36 period.

To the outside observer competition among the smaller companies in the baking industry appears to be keen: producers' selling prices are much the same, and their profit margin is generally small. But the stability of prices and sales, and the small inventory, tend to minimize the danger of loss inherent in the slender profit margin. The aggregate net loss of the 81 companies in the present sample during the trough of the depression was considerably smaller, in relation to sales, than for any of the other four industries.

The profits of a business enterprise generally fluctuate directly with its volume of business, largely because overhead expenses are relatively inflexible. When sales volume is high, profits are high, and vice versa. But there are times when changes in costs and prices intervene to upset this relationship between sales and profits. It is difficult to discuss, with any degree of certainty, the varying cost and price situations that confronted the typical small bakery over the period 1926-36. Its sales and those items of expense (such as depreciation) that are customarily itemized on the income tax

turn can be estimated from the present sample, but movements in raw material and labor costs and in selling prices, which are especially important considerations, must be inferred from other data applicable to the entire industry. 14/

In 1926-29 the direct relationship between sales and profits seems to have been disturbed by a change in the cost and price structure. As Table 3 shows for the sample studied here, the volume of business increased steadily from 1926 through 1929, with no interruption in the depression year 1927. But the movements of officers' compensation, depreciation and flour prices caused net income to fluctuate over this period. The 1927 sales were the most profitable of this prosperity period, because then flour prices 15/ dropped sharply while bread prices 16/ held firm. By 1928 the increases in officers' compensation and in depreciation had apparently offset the fall in flour prices, for in that year profits reced-

Table 3 - 81 BAKING CORPORATIONS: Selected Income Statement Items, 1926-36 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1926	$13,966	$661	$357	$58	$377	2.7%	$217
1927	14,826	708	412	81	583	3.9	264
1928	15,034	754	438	44	313	2.1	218
1929	15,725	834	442	59	538	3.4	223
1926-29	59,551	2,957	1,649	242	1,811	3.0	922
1930	15,130	811	447	41	306	2.0	238
1931	12,692	761	418	27	88	0.7	173
1932	10,246	616	398	21	-266	-2.6	77
1930-32	38,068	2,188	1,263	89	130	0.3	488
1933	10,462	540	373	23	-47	-0.4	40
1934	12,408	534	349	22	-72	-0.6	41
1935	13,438	518	340	30	-26	-0.2	56
1936	14,050	555	337	42	144	1.0	208
1933-36	50,358	2,147	1,399	117	-1	.c/	345

a/ Based on TNEC Monograph 15 (previously cited) Table 1-A in Appendix F.
b/ After income taxes, and exclusive of profits or losses from sales of real estate.
c/ Less than 0.05 percent.

ed to their 1926 level. The second most profitable year, 1929, also was marked by a concurrent increase in sales and decrease in flour prices, and would have been a more profitable year than 1927 had not officers' compensation increased sharply. Throughout this period the wholesale price of white bread, as reported in Chicago and New York, remained stationary.

Over the entire period 1926-36 small bakeries were slow to lose and slow to gain. They were never in the red very deeply, however, as is indicated by the fact that for the bakeries studied here the annual losses over the 11 years came to only a small fraction of annual profits. Net losses do not appear until 1932, and were sizable only in that year. Sales began to recover in 1933, and rose sharply in 1934 and 1935. But net losses persisted through 1935, even though officers' compensation and depreciation continued to decline; the reason was sharp increases in flour prices, which rose $2.50 a barrel in 1933, another $.50 in 1934, and another $1.00 in 1935. By 1936 these small bakers were comfortably in the black again, but officers' compensation was still below pre-1933 levels. Sales in 1926 and 1936 were at the same level, yet net income (before officers' compensation, depreciation and income taxes) was 10.4 percent of sales in the early year and 7.7 percent in the later. In view of the fact that 1936 flour prices were still under their 1926 level, we must explain this differential in profits per sales dollar in terms of the lower wholesale bread price, and the higher wage costs and taxes, that prevailed in the later year.

The owners and officers of these small bakeries drew out sizable amounts as officers' compensation and cash dividends. The compensation withdrawals were marked by their persistency. Dividends, however, fell off sharply in 1931 and 1932, and did not resume their pre-depression level until 1936. Even so, from 1931 to the end of the period dividends greatly exceeded the available net income (after income taxes), constituting in the aggregate a heavy drain on the resources of this group of small bakers. Not all companies that suffered increased losses continued to pay dividends; but it is clear from the aggregate figures that a good many of the companies disbursed dividends that were either equal to or greater than their net income. 17/

MEN'S CLOTHING

Men's and boys' clothing manufacturers, in sharp contrast to the bakers described in the preceding section, lead a precarious business existence. Especially is this true of small companies like those in our sample. The owners' equity in the concern is meagre, and often one or two bad seasons suffice to place the business in the hands of creditors. Style changes are less important than in some other divisions of the apparel trade, but even for men's outerwear the variety of fabrics needed usually means that suitings must be woven to order. The insecurity of the small-scale manufacturer of men's clothing is attested by the fact that of the 191 companies picked at random in the 1926 drawing only 46 continued in existence through 1936. 18/ Thus it is not surprising to find that in these companies the owner's financial interest is less than in other small manufacturing enterprises. The owner obtains most of the necessary raw materials and equipment on credit, and as a result keeps his loss not much more than that of the creditors in case of receivership, even though the latters' claims have priority over his own. Although he is likely to fail quickly, the entrepreneur in this business rebounds with astonishing agility: several months after a forced liquidation he may be back in business, under a new company name and with a few thousand dollars borrowed from a friend or relative. 19/

For some years the small manufacturer has been adversely affected by the growth of chains, such as Bond, Howard and Richman, which tie up the retail outlets and lead to similar vertical integration on the part of other large manufacturers. 20/ In New York and Chicago - from which the bulk of our sample was drawn - the small units have been harder hit by these difficulties than in centers like Baltimore, Philadelphia and St. Louis. 21/ In addition, there is evidence that the proportion of the consumer's dollar spent for men's clothing (suits, coats and overcoats) has been declining secularly, partly as a result of an increase in sportswear (not generally made in the men's clothing factories we are studying).

Men's clothing is a consumer good, but since it is semi-durable, expenditures thereon are temporarily postponable. Moreover, family buying habits are such that

the children's clothing requirements are met first, the mother's second, and the father's last. For this reason the men's clothing industry is quickly affected by a cyclical contraction in general business. As in most apparel lines, seasonal fluctuations in this industry are sharp, the two busy seasons of the year being spring and fall. 22/

A men's clothing concern more or less typical of the companies in our sample would have total assets around $70,000, about 85 percent of which would consist of inventory, customers' accounts and notes receivable, and a small amount of cash and government bonds. The total claims upon these assets would be divided fairly evenly between the creditors and the owners, the former holding short-term claims almost exclusively. The company's annual sales would amount to a figure about three times its total assets. In a year such as 1936 the salaries paid to officers would aggregate some $10,000, and the officer-owners would receive in addition about $2000 in cash dividends, representing almost all of the net income. Probably there would be no more than two full-time officers, and thus the compensation of each would be fairly adequate. 23/

Table 4 reveals that the investment of the small manufacturers in the present sample is largely in current assets. From the very meagre outlay on land and plant we may infer that most of these companies either farmed out their tailoring to contract factories or rented their work shops, possibly both. Contracting is a common practice among small manufacturers of men's clothing. They buy and cut the cloth, send the trousers out to one contractor, the coats to another and the vests to a third. The contractors tailor the cut cloth, returning the finished garments to the manufacturer for assembling and selling. The latter bears the production risk and pays the contractors a definite fee. Manufacturers generally shift from one type of operation to another, or divide their output, tailoring some of their garments and farming out the remainder.

What little land and plant the sample companies had consisted mainly of machinery and equipment, plus furniture and fixtures. Only a third was in real estate, and this third was held by only a handful of concerns. Most

Table 4 - 46 MEN'S CLOTHING CORPORATIONS: Composite Balance Sheet and Selected Income Statement Items, in Thousands of Dollars and in Percent of Total Assets, 1926 and 1936 a/

Item	Thousands of Dollars		Percent of Total Assets	
	1926	1936	1926	1936
Assets				
Cash and government bonds	$349	$212	10%	7%
Receivables	1,579	1,173	45	36
Inventory	1,056	1,296	31	41
Total current assets	2,984	2,680	86	84
Investments	69	135	2	4
Land and plant (net)	276	289	8	9
Other assets	128	92	4	3
TOTAL ASSETS	3,457	3,196	100	100
Liabilities				
Accounts payable	719	819	21	26
Notes payable	449	419	13	13
Other current liabilities	171	134	5	4
Total current liabilities	1,338	1,372	39	44
Long-term debt	43	98	1	3
Other liabilities	1	4	b/	b/
Capital stock	1,622	1,673	47	52
Surplus	453	59	13	2
TOTAL LIABILITIES	3,457	3,196	100	100
Income Statement Items				
Sales	8,549	8,838	247	277
Officers' compensation	627	451	18	14
Depreciation	28	24	1	1
Income taxes	34	27	1	1
Net income	218	105	6	3
Cash dividends	142	82	4	3

a/ Based on TNEC Monograph 15 (previously cited) Table 1-B in Appendix F. These statements refer to the end of the calendar year.
b/ Less than 0.5 percent.

of the small companies in the sample probably rented a few rooms in an upper floor of a building in the heart of the metropolitan district. The constituent land-and-plant items that were reported represented these proportions of total classified land and plant (gross) in 1936: 24/

Buildings	24%	(reported separately by 3 cos.)
Machinery and equipment	49	(" " " 27 ")
Furniture and fixtures	19	(" " " 23 ")
Land	8	(" " " 4 ")

Raw material costs in the industry bulk large. According to the Census of Manufactures, expenditures for materials, and for what little power is used, run around one-half the factory selling price of the product; labor costs come to less than a fourth of the value of products, the remaining fourth consisting of overhead and profits. 25/

The composition of the inventory of men's clothing manufacturers, as well as its amount, varies sharply with the season. Little significance can be attached to the relative holdings of the various inventory items as reported by the sample of small manufacturers. Little more than half the total inventory was classified in 1936. In that year the reports showed raw materials and supplies constituting 38 and 16 percent respectively of total classified inventory, and work-in-process and finished goods 10 and 36 percent respectively. 26/ A tabulation pertaining to 10 large manufacturers in 1938 and 1939 shows raw materials and supplies constituting, together, a third of the total inventory, and work-in-process plus finished goods two-thirds. 27/ There are marked differences between the results of the two tabulations, due probably to the incomplete reporting in the small manufacturers sample, but possibly also to a difference in statement dates, a difference between large and small manufacturers, or even a difference in time period.

Because of the heterogeneous product, and the various kinds of raw materials used, it is difficult to ascertain the various price and cost relationships in the small-scale manufacture of men's clothing over the 1926-36 period. Here too this type of manufacture differs from the bread-baking industry, where both the raw materials and the final product are fairly uniform. There is enough evidence, however, to show convincingly that small-scale men's clothing companies experienced changes in prices and costs which exercised a strong effect upon their profits.

For example, although the dollar volume of sales made by the sample companies increased steadily over the 1926-29 period (see Table 5) net income did not go up proportionately. For this there were two reasons. In the first place, the prices that men's clothing manufacturers had to pay for raw materials and labor held firm - the

Table 4 - 46 MEN'S CLOTHING CORPORATIONS
Selected Income Statement Items, 1926-36 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1926	$8,549	$627	$28	$34	$218	2.6%	$142
1927	9,040	651	32	26	127	1.4	119
1928	9,173	630	35	19	163	1.8	87
1929	9,609	650	32	15	108	1.1	41
1926-29	36,371	2,558	127	94	616	1.7	389
1930	8,181	573	33	9	-115	-1.5	36
1931	6,792	458	24	5	-279	-4.1	1
1932	4,843	377	20	4	-357	-7.4	9
1930-32	19,816	1,408	77	18	-755	-3.8	46
1933	5,919	392	20	20	32	0.5	27
1934	7,467	452	17	18	2	c/	1
1935	8,599	430	20	24	65	0.8	2
1936	8,838	451	24	27	105	1.2	82
1933-36	30,816	1,725	81	89	204	0.7	112

a/ Based on TNEC Monograph 15 (previously cited) Table 1-B in Appendix F.
b/ After income taxes, and exclusive of profits or losses from sales of real estate.
c/ Less than 0.05 percent.

wholesale price of suiting remained fairly stable, 28/ and average hourly earnings dropped only a few percent 29/ - but there was a decline in the prices they received for their finished products. 30/ Second, as is evident from Table 5, there was no downward revision of officers' compensation. As a consequence of these two circumstances net income fell 50 percent during this period of general cyclical expansion.

In 1933 the wholesale price of men's suits almost doubled, outstripping the rise in raw material and labor costs and resulting in a modest profit for these small manufacturers, after a 1932 loss larger than that suffered in any other year of the 1926-36 period. Selling prices fell back slightly in 1934, while labor and material costs proceeded to catch up; hence a further increase in sales in that year failed to advance profits markedly. Thus the experience of these small clothing manufacturers appears to corroborate the thesis that in-

dustries requiring a large inventory and a relatively heavy raw material outlay suffer early in depression but prosper early in recovery.

Other evidence, too, suggests that men's clothing manufacturers enjoyed a profitable year in 1933. A study of 243 manufacturers, including the larger as well as the smaller units, shows net profit amounting to 2.3 percent of sales in 1933. 31/ For an identical sample of 229 of these manufacturers a loss of 3.5 percent of sales was reported in 1932, a profit of 2.7 percent in 1933 and a profit of 1.3 percent in 1934, 32/ a movement similar (though at a slightly higher level) to that of the sample of small companies studied here.

The dividend payments made by the sample of small clothing manufacturers were not particularly large over the 1926-36 period. They declined even during the 1926-29 prosperity years. Still, small as they were, they exceeded, over the 1926-36 period as a whole, the net profits minus the net losses of these companies in the aggregate. The evidence indicates, too, that particular companies in the sample paid out in dividends more than they earned. 33/ Officers' compensation was a large item in each year, and surprisingly stable. Practically none of it was earned in 1932, and less than half was earned during the 1930-32 period as a whole.

FURNITURE

Purchases of furniture involve relatively large outlays on the part of consumers, and sales fluctuate sharply with changes in general business. Individuality of design and finish is an important competitive factor, especially for the higher-priced grades of furniture. When demand for the more expensive products falls off relatively sharply, as during business depression, manufacturers tend to shift to cheaper designs and finishes.

The average asset size of the furniture companies in the present sample is about $100,000, some $30,000 larger than the average size of the small enterprises in the other industry samples. An enterprise that could be regarded as fairly typical, according to the convention outlined above, would consist of an office housing the owner

and a bookkeeper, and the factory proper. If the company manufactures upholstered furniture it probably buys the frames ready-made; otherwise they are made in a separate, woodworking section of the plant. In either case the plant buys the stuffing, the coil springs and the covering fabrics. The parts are put together on a series of tables, similar to an assembly line except for the absence of a continuous conveyor. The manufacturer may have a showroom at his factory, but it is not likely to be pretentious. If the purchasers do not actually visit the factory, selling is probably done by means of pictures of the finished product and swatches of the covering upholstery fabric. Probably a large part of the output is sold to the big urban stores, which give it a brand name of their own choosing. In a year like 1936 the sales of an average small furniture company might total about $150,000, officers' compensation about $7000, and cash dividends to the owner-officers about $3000.34/

From the information given in the income tax returns it is not possible to distinguish with certainty between the companies that manufacture upholstered furniture and those that produce case goods such as dining-room and bedroom sets, but in our sample the former are probably in the majority. For one thing, the sample companies are small, and manufacturers of upholstered furniture tend to operate on a smaller scale than the makers of case goods. Second, the upholstered furniture manufacturers are most often located in the urban centers, while the case goods companies are situated mainly in the rural areas, and of the companies in our sample about one-third were in cities of 1,000,000 population or more, about two-thirds in cities of 50,000 or more. 35/ It has been estimated by one who is familiar with the furniture industry 36/ that in the present sample the upholstered furniture manufacturers probably outnumbered the case goods companies two to one.

The manufacture of furniture, especially of the higher grades, is fairly concentrated in five principal centers: Grand Rapids, Michigan; Jamestown, New York; Evansville, Indiana; Chicago, Illinois; and High Point, North Carolina. These centers achieved their dominant position many years ago and have since maintained it, although there is some evidence that the manufacture of furniture has been decentralizing in recent decades. 37/ Wholesale

and retail sales are highly seasonal; manufacturers' shipments reach a primary peak in September or October, and a secondary peak around March, 38/ the fall peak resulting from the culmination of summer building activities and fall moving day. Seasonal fluctuations in plant operations appear to be considerably less marked. 39/

The small companies that make up our sample had a large net worth (almost three-fourths of their total li-

Table 6 - 44 FURNITURE CORPORATIONS: Composite Balance Sheet and Selected Income Statement Items, in Thousands of Dollars and in Percent of Total Assets, 1926 and 1936 a/

Item	Thousands of Dollars		Percent of Total Assets	
	1926	1936	1926	1936
Assets				
Cash and government bonds	$633	$415	9%	6%
Receivables	2,234	1,836	31	28
Inventory	2,068	1,779	29	27
Total current assets	4,935	4,030	69	61
Investments	174	231	2	4
Land and plant (net)	1,975	2,122	28	33
Other assets	81	120	1	2
TOTAL ASSETS	7,165	6,503	100	100
Liabilities				
Accounts payable	891	923	13	14
Notes payable	734	437	10	7
Other current liabilities	91	160	1	3
Total current liabilities	1,716	1,520	24	24
Long-term debt	89	288	1	4
Other liabilities	86	b/	1	c/
Capital stock	3,197	3,275	45	50
Surplus	2,077	1,424	29	22
TOTAL LIABILITIES	7,165	6,503	100	100
Income Statement Items				
Sales	11,484	10,089	160	155
Officers' compensation	602	478	8	7
Depreciation	144	152	2	2
Income taxes	67	63	1	1
Net income	378	226	5	3
Cash dividends	284	202	4	3

a/ Based on TNEC Monograph 15 (previously cited) Table 1-C in Appendix F. These statements refer to the end of the calendar year.
b/ Less than $500.
c/ Less than 0.5 percent.

abilities) and a sizable volume of current assets (about two-thirds of total assets), as is evident from Table 6. Their large inventory reflects the wide variety of their products, and the size of their receivables indicates extensive credit sales.

In furniture manufacture the cost of materials 40/ is a relatively important item, constituting about 45 percent of the value of products. For case goods companies lumber is the principal raw material item, but for upholstered furniture manufacturers, which predominate in the present sample, the covering fabrics represent the bulk of the raw material cost. Persons familiar with the industry assert that in this field of furniture manufacture three-fourths of the outlays for raw materials and supplies goes for piece goods, and this observation is supported by a comparison of census data on the raw materials cost of furniture manufacturers, exclusive of their outlays on wood, with the total output of the upholstery wire-spring industry. Labor costs account for about a third of the value of products, and the remaining fifth represents overhead and profits. Woodworking machinery is extensively used in the manufacture of case goods, and in making frames for upholstered furniture, but since most of the companies in our sample produced upholstered furniture and bought frames ready-made, and since woodworking machinery has a comparatively long life, the machine cost for the sample as a group was relatively small.

Almost half of the gross land and plant of the small furniture companies in the present sample consisted of buildings, and much of the remainder was in machinery and equipment. In 1936 the total classified land and plant (gross) was divided as follows: 41/

Buildings	46%	(reported separately by 36 cos.)
Machinery and equipment	38	(" " " 61 ")
Furniture and fixtures	3	(" " " 53 ")
Land	13	(" " " 31 ")

Two-fifths of the inventory holdings of these companies represented finished goods, the balance being about evenly divided between raw materials and work-in-process. The accompanying figures show the 1936 breakdown of the total classified inventory of this sample. 42/ There were several changes in these proportions over the period

Raw materials	28%	(reported	separately	by	32	cos.)
Work-in-process	27	("	"	"	28	")
Finished goods	40	("	"	"	35	")
Supplies	5	("	"	"	18	")

1926-36, but the only ones that appear to be significant were an increase in the finished goods component and a decrease in the raw material component. Work-in-process increased in relation to total inventory, but some of this increase is probably explained by a more complete reporting of this item.

The 1926-28 decline in the profits of small furniture manufacturers, evident from Table 7, appears to be explained by a fall in selling prices 43/ not fully compensated for by declines in piece goods and lumber prices. 44/ The effect of changing price and cost relations during 1929 and the immediately following years is obscured by a large and extraordinary capital gain recorded in 1929, probably by a company in the sample which disposed of a piece of real estate that had appreciated enor-

Table 7 - 66 FURNITURE CORPORATIONS: Selected Income Statement Items, 1926-36 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1926	$11,484	$602	$144	$67	$374	3.3%	$284
1927	10,984	617	158	58	285	2.6	186
1928	11,178	639	174	48	232	2.1	167
1929	12,160	764	182	158	215	1.8	284
1926-29	45,806	2,622	658	331	1,106	2.4	921
1930	9,338	683	177	69	-313	-3.4	242
1931	7,397	522	160	13	-339	-4.6	206
1932	4,446	339	131	6	-768	-17.3	164
1930-32	21,181	1,544	468	88	-1,420	-6.7	612
1933	5,557	333	132	21	-132	-2.4	33
1934	6,075	368	121	18	-178	-2.9	64
1935	7,988	379	120	31	-85	-1.1	70
1936	10,049	478	112	63	226	2.2	202
1933-36	29,669	1,558	485	133	-169	-0.6	369

a/ Based on TNEC Monograph 15 (previously cited) Table 1-C in Appendix F.
b/ After income taxes, and exclusive of profits or losses from sales of real estate.

mously in value.45/ This operation seems to have had the effect of boosting dividends, officers' compensation and, of course, income taxes in 1929, thereby decreasing the net income exclusive of capital gains and losses. It was probably because of this windfall gain that officers' compensation was maintained at an unusually high level in 1930 particularly, and also in 1931, thereby swelling the net losses reported in those years. But the large net loss in 1932 can be explained only by the very small volume of business. The fact that these companies' operations continued to be unprofitable through 1935 may be explained by the relatively modest recovery in their volume of business, in conjunction with increases in lumber prices and average hourly earnings 46/ and probable increases in piece goods prices.

Cash dividends for the present sample declined in 1927 and 1928, but rose abruptly in 1929, presumably because of the windfall gain. Dividends fell sharply in the years of cyclical contraction but in 1932 they were still as high as they had been in 1928, thus reflecting the continuing effect of the large 1929 capital gain. By 1933, however, the effect of this capital gain seems to have disappeared from the cash dividend series. Although dividends increased in 1934 it was not until 1936 that they returned to their pre-depression level.

STONE-CLAY

The manufacture of brick and tile 47/ has been undergoing a secular decline over the past several decades. This industry attained an all-time production peak, in terms of common-brick equivalents, early in the present century. 48/ Since then the development of competing materials, particularly structural steel, has cut down the market for common brick, the most important product of the industry. Also, since 1927, this field of manufacture has been strongly affected by the lag of construction activity. The financial statements of the present group of small, incorporated manufacturers of clay and stone products, largely brick and tile, reflect this slump in the industry. Their sales began to drop after 1928, falling off more than those of the other sample groups; in comparison with the other groups their depression losses were larger, in relation to sales, and in

1936 their volume of business indicated a less extensive recovery.

A small brick plant that might be regarded as more or less typical of those included in the present sample would have total assets of about $75,000. In a year such as 1936 officers' compensation would average $5000, and withdrawals in the form of cash dividends would run almost as high. 49/

Brick-making requires extensive physical equipment and a large number of workers; the labor is almost entirely unskilled. The plants are usually located near clay deposits, on the outskirts of a small city and in the general vicinity of a large urban center. The mined clay is taken to a storage bin, from which it is conveyed to a hopper on the top floor of a machine building. From the hopper the green clay works down through various grinding and milling operations to the brick-making machine. When the clay emerges from this machine, pressed into bricks, it is conveyed to drying rooms, frequently by hand. Once dried, the bricks are placed in kilns, again by hand, and baked for several days, after which they are sorted and removed to storage sheds. Deliveries are made by truck.

Most brick and tile products are distributed in a local market. There are several reasons for this localism: demand is geographically widespread; the necessary raw materials and unskilled labor can be found in most parts of the country; the product is heavy and bulky in relation to its value. Paving brick and some types of face brick are an exception, their essential raw material being found only in certain parts of the country.50/ Because of the local market for most brick and tile products the manufacturing establishments in the industry seldom reach large proportions. Even the consolidations and mergers - of which there have been quite a few - have not resulted in a marked increase in the size of the producing unit.

The manufacture and sale of brick and tile are characterized by a strong seasonal variation. With the advent of cold weather, mining of the clay and burning of the green bricks become increasingly difficult. Many plants shut down entirely for three or four of the winter

months. Also the demand for structural clay products falls, of course, with the winter slackening of building activity. Production holds to a high level in the summer and early fall; it declines with the approach of winter and reaches a low point in February. Shipments fluctuate less sharply, but follow a similar timing. Finished stocks fluctuate the least; they are at their peak (less than 10 percent above their annual average) in November and December, 51/ the balance-sheet date for most of the companies in the present sample.

Table 8 - 70 STONE AND CLAY CORPORATIONS: Composite Balance Sheet and Selected Income Statement Items, in Thousands of Dollars and in Percent of Total Assets, 1926 and 1936 a/

Item	Thousands of Dollars		Percent of Total Assets	
	1926	1936	1926	1936
Assets				
Cash and government bonds	$645	$461	9%	9%
Receivables	1,501	1,013	22	20
Inventory	1,055	714	15	14
Total current assets	3,201	2,188	46	43
Investments	69	227	1	4
Land and plant (net)	3,533	2,692	51	52
Other assets	161	61	2	1
TOTAL ASSETS	6,964	5,169	100	100
Liabilities				
Accounts payable	539	458	8	9
Notes payable	644	526	9	10
Other current liabilities	44	195	1	4
Total current liabilities	1,227	1,179	18	23
Long-term debt	234	344	3	7
Other liabilities	12	2	b/	b/
Capital stock	3,169	3,043	46	59
Surplus	2,322	594	33	11
TOTAL LIABILITIES	6,964	5,162	100	100
Income Statement Items				
Sales	7,605	4,561	109	88
Officers' compensation	594	345	9	7
Depreciation	287	193	4	4
Income taxes	85	75	1	1
Net income	490	267	7	5
Cash dividends	312	264	4	5

a/ Based on TNEC Monograph 15 (previously cited) Table 1-B in Appendix F. These statements refer to the end of the calendar year.
b/ Less than 0.5 percent.

As is evident from Table 8, the financial structure of the present sample of manufacturers is characterized by a relatively large investment in land and plant, a small amount of accounts payable, and an annual volume of sales barely equal to total assets. In addition to a factory building with heavy machinery, brick-making enterprises comprise clay deposits, drying sheds and burning kilns. Since the bulk of the raw material consists of the green clay, an item included under land and plant, accounts payable are small. Inventory is sizable, not because of the raw material item but because of stocks of finished goods.

The breakdown for 1936 of the total classified land and plant (gross) of these small stone-clay companies

Buildings	40%	(reported separately by 59 cos.)
Machinery and equipment	45	(" " " 62 ")
Furniture and fixtures	1	(" " " 47 ")
Land	14	(" " " 51 ")

further illustrates their reliance on buildings, machinery and land. 52/ Although the land component is larger for this industrial sample than for any of the other groups studied, it is nevertheless understated, because depletable assets were reported in the "all other capital assets" category. 53/ Thus most of the clay deposits, especially those that were being currently mined, have been classified as other capital assets; this item, which was reported by 55 companies in the sample, amounted to 20 percent of the total gross land and plant. It is probably safe to say, therefore, that as much as a fourth of the gross land and plant of these companies consisted of land, including not only land for the buildings but also clay deposits, and possibly even coal deposits.

As was already mentioned, the bulk of the inventory holdings of these companies consisted of finished goods. The dollar volume of raw materials was not large, the clay generally being mined as needed. There was some work-in-process, and a small amount of supplies. The 1936 breakdown of the total classified inventory was as follows. 54/ These statements refer, in general, to the

Raw materials	11%	(reported separately by 19 cos.)
Work-in-process	10	(" " " 14 ")
Finished goods	73	(" " " 39 ")
Supplies	6	(" " " 26 ")

end of the calendar year, when brick plant operations are slack and stocks of finished goods are at their peak.55/

The data available on the cost and price relationships of the stone-clay companies differ in an important respect from those for the other industries. The cost of materials constitutes about a third of the value of products in stone-clay, but there is some question whether this item, as reported in the Census of Manufactures, includes depletion, which in Table 9 is shown together with depreciation. Fuel constitutes about half of the raw material cost and, when derived from coal deposits, may also figure in the depletion charge. Although payrolls are an important cost item - more than two-fifths of the value of products - data on average hourly earnings in this industry are scarce for the years before 1932.

The 1929 sales of small stone-clay companies, in current dollars, were about the same as in 1926, yet profits in 1929 stood at scarcely more than a fifth of their 1926

Table 9 - 70 STONE AND CLAY CORPORATIONS
Selected Income Statement Items, 1926-36 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1926	$7,605	$594	$287	$85	$490	6.4%	$312
1927	8,056	587	319	72	398	4.9	406
1928	8,199	550	344	68	507	6.2	406
1929	7,653	527	357	30	106	1.4	134
1926-29	31,513	2,258	1,307	255	1,501	4.8	1,258
1930	6,354	539	347	15	-113	-1.8	136
1931	4,098	386	313	7	-390	-9.5	144
1932	2,113	263	226	4	-683	-32.3	68
1930-32	12,565	1,188	886	26	-1,186	-9.4	348
1933	1,874	184	206	7	-344	-18.4	16
1934	2,322	189	186	14	-163	-7.0	47
1935	2,791	204	188	33	18	0.6	63
1936	4,561	343	193	75	267	5.9	264
1933-36	11,548	920	773	129	-222	-1.9	390

a/ Based on TNEC Monograph 15 (previously cited) Table 1-D in Appendix F.
b/ After income taxes, and exclusive of profits or losses from sales of real estate.

level (Table 9). The cause appears to have been a decline in selling prices between the two years. 56/ If there was any tendency in 1929 for wage rates to be higher than those prevailing in 1926 it was probably offset by the drop in the price of coal. 57/ The increase in depreciation from 1926 to 1929 was offset by decreases in officers' compensation and in income taxes.

Increasing net losses characterized the years 1930-32. Even these relatively successful small companies went into the red in 1930, and by 1932 reported an aggregate loss of 32 cents for every dollar of sales. Selling prices fell concurrently with sales, but the latter dropped the more sharply, indicating a decline in the physical volume of business. 58/

In 1933, when many industries enjoyed at least a modest upturn in business, the sales of the small stone-clay companies studied here were even lower than in 1932. The 1933 net loss was only half that of the preceding year, however, because selling prices started upward in 1933, wage rates lagged behind in turning upward 59/ and depreciation charges and officers' compensation continued to fall. The sharp increase in sales that occurred in 1936, in conjunction with a relatively stable production-cost structure, resulted in a profit two and a half times the 1929 net income, even though officers' compensation was more than two-thirds again as high as it had been in the preceding year.

The dividend policy of the small stone-clay companies in the present sample appears to have resulted in considerable liquidation of assets over the 1926-36 period as a whole. In the prosperous late 1920's they disbursed the bulk of their net income as cash dividends. When income fell in 1929, cash dividends were cut sharply, but the subsequent losses were not accompanied by further reductions in dividends until 1932. In other words, these companies maintained a fairly high rate of dividend distribution in the early years of the depression. In 1933, on the other hand, the entire 70 companies in the present sample paid out only $16,000 as cash dividends. In 1936, after operations had again become profitable, cash dividends jumped sharply to a level closely approximating that of net income. Over the eleven years as a whole cash dividends were greatly in excess of net in-

come: the net losses incurred in 1930-34 wiped out practically all of the net profits earned in 1926-29 and 1935-36, whereas the cash dividends disbursed by these 70 companies over the eleven years reached practically 2 million dollars. As will be shown in the next chapter, this difference is to be accounted for largely by a liquidation of both current and fixed assets.

MACHINE TOOL

For the last two centuries machine tools have played a key role in the development of industry. The perfecting of the steam engine, for example, was dependent upon boring and turning machines capable of finishing cylinders and their pistons to close-fitting dimensions. The principle of interchangeable parts, to cite a more recent illustration, could not be applied to the problems of large-scale manufacture until various metalworking machines had been developed which could finish off a given part in any quantity, always with identical dimensions. In the present decade the key role of the machine tool industry has been enhanced even further by the demands of war. The manufacture of all kinds of armament is dependent upon machine tools, and the industry has been booming since the middle 1930's, originally from its export business - since military preparations were stepped up abroad some years ago - and now from domestic demand.

The machine tool industry is an important indicator of business trends. 60/ This sensitiveness to cyclical forces is due to the fact that machine tools are sold largely to manufacturers of producer goods, and reach virtually every segment of our industrial economy. Machine tool companies make the metalworking machinery which in turn is used by companies manufacturing special industry machines. The automobile industry demands new jigs and fixtures and possibly even new machine tools in its annual retooling for new models, and this industry alone absorbed about a third of the output of machine tools in prewar years. In this portion of their output, and in that used by manufacturers of articles such as refrigerators and sewing machines, the machine tool companies are relatively close to the ultimate consumer; in the rest, however, they are several stages removed from the consumer market.

The wide separation of a large part of machine tool output from the ultimate consumer market means that changes in consumer demand are swiftly transmitted to this industry. 61/ In a period of cyclical contraction it is among the first to curtail operations, and it suffers a sharper decline in business than do other industries. The converse is true in a period of cyclical expansion.

Machine tools are of many types and varieties. The most common are turning machines (lathes), which shave off the metal, and drilling machines are the next most numerous group; 62/ other types are milling machines, honing and lapping machines, which polish the metal surface, and, according to some definitions, 63/ forging machines and presses. Although machine tools make possible standardized, large-scale production, their manufacture is specialized and small-scale. As a result of patent rights and the predominance of technicians and skilled laborers in this field, machine tool manufacturers constitute a closely-knit industrial aristocracy. The National Machine Tool Builders Association, the trade association of the industry, contains fewer than 200 members. The Census of Manufactures, under its broader definition of machine tools, reported less than 300 such establishments for 1937.

Closely bound up with machine tool manufacture is the production of accessories used on machine tools - checks, vises, attachments, dies, jigs, small cutting tools and tool holders. A machine tool producer contracts out to these accessory manufacturers a large part of his work, and incidentally shares with them the peak loads in the industry.

It would be difficult to find a machine tool company that could be regarded as typical of those in the present sample. Some of these small corporations produce complete machine tools; a majority probably specialize in machine tool accessories, but in special situations may undertake the manufacture of, say, a lathe designed for preliminary rather than final cutting operations on metal. 64/ The total assets of an average company in the present sample are about $70,000. In 1936 the compensation of officers totaled around $10,000 per company, and cash dividends to owner-officers $3000. 65/ A considerable part of the val-

ue of output of a machine tool company represents value added, and thus raw material purchases in the industry are not large. The most important raw materials are gray-iron castings, carbon and other steel, cold-rolled steel and pig-iron. 66/

The peculiarities of the industry are reflected in the financial structure of the companies in the present sample. As is shown in Table 10, these companies' assets are about evenly divided between current and fixed items,

Table 10 - 118 MACHINE TOOL CORPORATIONS: Composite Balance Sheet and Selected Income Statement Items, in Thousands of Dollars and in Percent of Total Assets, 1926 and 1936 a/

Item	Thousands of Dollars		Percent of Total Assets	
	1926	1936	1926	1936
Assets				
Cash and government bonds	$517	$1,045	7%	13%
Receivables	1,305	1,610	17	20
Inventory	1,793	1,487	24	19
Total current assets	2,615	4,142	48	52
Investments	89	298	1	4
Land and plant (net)	3,359	3,201	45	39
Other assets	465	395	6	5
TOTAL ASSETS	7,528	8,036	100	100
Liabilities				
Accounts payable	723	995	9	12
Notes payable	753	644	10	8
Other current liabilities	195	496	3	7
Total current liabilities	1,671	2,135	22	27
Long-term debt	329	580	4	7
Other liabilities	1	5	b/	b/
Capital stock	4,404	4,720	59	59
Surplus	1,123	596	15	7
TOTAL LIABILITIES	7,528	8,036	100	100
Income Statement Items				
Sales	9,778	11,665	130	145
Officers' compensation	1,055	1,146	14	14
Depreciation	311	241	4	3
Income taxes	60	128	1	2
Net income	332	430	4	5
Cash dividends	205	373	3	5

a/ Based on TNEC Monograph 15 (previously cited) Table 1-E in Appendix F. These statements refer to the end of the calendar year.
b/ Less than 0.5 percent.

while their current debts amount to only about a quarter of their total liabilities. Annual sales are about a third again as large as total assets.

Machinery and equipment accounted for two-thirds of the total classified land and plant (gross) of these small machine tool and accessory manufacturers in 1936, the complete breakdown for that year being as follows.67/

Buildings	25%	(reported separately by 51 cos.)
Machinery and equipment	65	(" " " 114 ")
Furniture and fixtures	3	(" " " 91 ")
Land	7	(" " " 46 ")

These figures testify to the importance, in this industry, of heavy and costly metalworking machinery, and to the fact that a large number of the small enterprises rent their factory buildings.

Inventory holdings are divided fairly evenly among raw materials, work-in-process and finished goods, as can be seen from the following breakdown of total classified inventory for 1936. 68/ In this industry the work-in-proc-

Raw materials	30%	(reported separately by 69 cos.)
Work-in-process	30	(" " " 54 ")
Finished goods	36	(" " " 37 ")
Supplies	4	(" " " 34 ")

ess component is larger, in relation to total classified inventory, than in any of the other four, and even so, its relative magnitude is probably understated by the foregoing figures. 69/

Value of products in the machine tool industry is distributed almost equally among wages, raw materials (including fuel) and overhead plus profits. The production of a machine tool is a long job requiring skilled hands and expensive machinery. 70/ The "feast or famine" nature of the industry causes, however, a very wide temporal variation in the proportion of the value of products that is available for overhead and profits.

Information on selling prices and costs for the machine tool group is scanty, not only because the companies are small and closely held but also because their product is complex and their raw materials are constantly changing. The only factor on which usable data are avail-

able is labor cost, as represented by average hourly earnings. 71/ Raw material costs and selling prices depend on the particular types of machines produced, and it would be unjustifiable to offer estimates purporting to represent the corporations studied here.

The sensitiveness of machine tool companies to cyclical forces is clearly illustrated in Table 11. The 1927 contraction in general business was not particularly severe, yet it is easily recognized in these companies' net income figures: profits in 1927 were only half of what they had been the year before. The reaction to the depression of the 1930's was both prompt and intense. Sizable losses appeared in 1930. By 1932 the loss per dollar of sales was larger than the profit in any of the prosperity years covered, and the volume of business was not much more than a fourth of the peak it reached in 1929. By 1934, however, the losses had dwindled to the vanishing point, and in the next two years there were comfortable profit margins.

Table 11 - 116 MACHINE TOOL CORPORATIONS
Selected Income Statement Items, 1926-36 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1926	$9,778	$1,055	$311	$60	$332	3.4%	$205
1927	9,550	1,040	326	52	174	1.8	131
1928	11,671	1,191	376	66	517	4.4	210
1929	15,232	1,456	410	131	1,211	8.0	338
1926-29	46,231	4,742	1,423	309	2,234	4.8	884
1930	9,843	1,149	382	32	-279	-2.8	342
1931	6,589	873	341	15	-503	-7.6	149
1932	4,341	606	341	5	-831	-19.1	27
1930-32	20,773	2,628	1,064	52	-1,613	-7.8	518
1933	4,793	562	259	24	-248	-5.2	35
1934	7,211	708	240	46	-14	-0.2	70
1935	8,782	841	242	88	294	3.3	105
1936	11,665	1,146	241	128	430	3.7	373
1933-36	32,451	3,257	982	286	462	1.4	583

a/ Based on TNEC Monograph 15 (previously cited) Table 1-E in Appendix F.
b/ After income taxes, and exclusive of profits or losses from sales of real estate.

The 1930 loss was so sizable and sudden that it warrants special consideration, particularly in view of the fact that sales in that year, although considerably smaller than in the preceding year, were larger than in 1926, 1927 or 1935 - years when these companies were in the black. It is likely that a considerable part of this 1930 fall in earnings - though we are unable to determine how much - was due to a divergence in the movements of selling prices and material costs. Another part is probably attributable to the maintenance of depreciation and officers' compensation at their 1928 levels (1930 sales were far below those in 1928) and to an increase in average hourly wages in the industry. 72/ Depreciation charged off by the companies studied here fell only slightly from 1929 to 1930, and was higher in these two years than in any other part of the period covered. Similarly, compensation of officers, although down considerably from its 1929 peak, was higher in 1930 than in any other year of the period except 1928 and 1929. Thus the abrupt and heavy loss of 1930 was probably due largely to the inflexibility of labor costs and of certain overhead items. Some of it may have been caused by inventory losses and a break in selling prices, but it is impossible even to estimate the amount of these.

The position of machine tool companies was very favorable as early as 1936, several years before the outbreak of the current war. In that year sales, as indicated by the present sample, were higher than in any earlier year of the period except 1928 and 1929, and were practically as high as they had been in 1928. Also the 1936 net income, on both a total and a per-dollar-of-sales basis, was outranked only by that of 1928 and 1929. The finding that in 1936 net income was somewhat below the 1928 figure, although sales in the two years were almost identical, may be largely explained by the fact that average hourly earnings were at their 11-year peak in 1936. Rises in raw material costs may round out the explanation, but this item is not likely to have been so important as the others.

A special tabulation, prepared by the Treasury-NPA Income Tax Study for the Securities and Exchange Commission, 73/ makes it possible to show for the years 1936-39 the financial operations of an identical sample comprising 62 of the 118 small machine tool manufacturers dis-

Table 12 - 62 MACHINE TOOL CORPORATIONS
Selected Income Statement Items, 1936-39 a/
(Dollar figures in thousands)

Year	Sales	Officers' Compensation	Depletion & Depreciation	Income Taxes	Net Income b/	Net Income b/ in % of Sales	Cash Dividends
1936	$4,293	$485	$78	$43	$96	2.2%	$135
1937	4,772	530	89	29	87	1.8	154
1938	3,286	376	84	6	-96	-2.9	34
1939	4,175	440	80	22	42	1.0	44
1936-39	16,526	1,831	331	100	129	0.8	367

a/ Based on Table B-6 in Data Book (see footnote 16 of Chapter 1).
b/ After income taxes, and exclusive of profits or losses from sales of real estate.

cussed above. The data on the smaller sample, presented in Table 12, reveal that the 1938 slump was keenly felt despite war preparations throughout the world. Sales fell off sharply, net profits turned into net losses, and both officers' compensation and cash dividends declined. The next year saw considerable recovery, but not back to 1936 levels. Over the four years as a whole net income amounted to less than 1 percent of sales.

The 1936-39 movement of sales of these 62 companies paralleled closely that of the sales of a sample of 18 large machine tool companies (with assets averaging about $5,000,000), registered with the Securities and Exchange Commission. These large manufacturers, however, succeeded in reporting a profit (after income taxes) in every year of the period. On the other hand, a sample of 6 large manufacturers of machine tools (with assets averaging about $4,000,000), not registered with the Securities and Exchange Commission, sustained a net loss not only in 1938 but also, apparently because of special deductions, in 1939. 74/

It is somewhat surprising that such a thriving industry should have the extraordinarily meagre net income per dollar of sales that is revealed in Tables 11 and 12. It must be remembered, however, that the net income shown here is calculated after deduction of officers' compensation as well as income taxes. In small, closely-held

concerns, in which the officers are also the owners, compensation is naturally adjusted to the available income, and a large excess of income available for distribution as cash dividends is not a desideratum. Moreover, many of the companies in this sample were manufacturers of accessories, a division in which the profit margin is narrower than in the production of such custom-built items as turret lathes, thread-grinding machines and borers.