1942

Financial aspects: emergency facilities

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College of Business Administration

THESIS

Financial Aspects: Emergency Facilities

by

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INTRODUCTION
Problem

World War I brought to this country a realization of the tremendous industrial requirements modern war places on all nations, whether directly or indirectly engaged in the combat. World War II quickly demonstrated that even these requirements were only a beginning. During the intervening years, the technique of warfare was modified on the basis of increasing mechanization which made the nation's industrial machine more and more an integral part of the armed forces. However, World War I, besides teaching the need of industrial cooperation in war activities, taught that the industrial effort must be made largely in producing goods not generally usable in times of peace, and that these goods must be produced by plant and equipment specialized for the task at hand. This conversion or redirection of industrial activity must, therefore, be recognized as a special dislocation for the duration. The men responsible for the nation's industrial plant in making the required expansion of productive facilities for war work are faced with the problem of financing this expansion on a basis consistent with the nature of the expansion -- i.e., the duration is an un-
known period which is expected to be shorter than
the lives of the assets, and the post-war utility of
the assets depends largely on the nature of the mater-
ial they are required to produce.

Significance

As the armed forces of the nation continue
to expand, and as the requirements of the nation's allies increase, the special war industrial machine must be expanded partially through the conversion of existing productive facilities, but mostly through the addition of plants for the specific purpose of achieving the needed output.

Approach

The problem presented here is the financing of an extraordinary type of investment in fixed assets. The approach must be, therefore, a clear understanding of the special nature of the investment, then a study of the fundamentals of the recovery of investment in fixed assets, a review of the methods available for solving the problem, and a comparison of the merits of these methods.
CHAPTER II

ORIGIN OF THE PROBLEM
ORIGIN OF THE PROBLEM

Need for Expansion of War Plant Recognized

During the long years that followed World War I, the industrialists and the government in America based their plans and actions on the fond hope that wars were a thing of the past. The specialized plant created for that war was reconverted to civilian production or destroyed. As the new European struggle increased in intensity during the late thirties, the need for expanded production of the implements of war began to become apparent. Yet, even with actual war between England, France, and Germany, the persistence of pacifism deterred manufacturers from engaging in war production for fear of public criticism. However, the fall of France and the declaration of a National Emergency finally brought recognition of our needs. Our enemies had spent years of work and a tremendous portion of their national income creating an arsenal and an armory surpassing those of the rest of the world. Our task then became that of creating a war industry capable of quickly producing a sufficient volume of material to exceed both their stock on hand and their current production.

Expansion Required

A large portion of the requirements of the mechanized forces of modern war must be met by specialized
productive facilities, while some parts of the requirements can be handled by existing facilities with relatively slight adjustments. We are concerned here primarily with the problems created in meeting the requirements by expansion of productive capacity, either by increasing the quantity of facilities of a nature normally useful in the industry, or by creating wholly new productive capacity of a nature not related to the normal effort of industry. Thus the machine tool industry with normal production of $100,000,000 per year increased its output to $450,000,000 for 1940, and to $765,000,000 for 1941, largely by extensive plant expansion increasing the ability to create the basic tools of production, a function it performs in times of peace. 1 Similarly, the aircraft industry has been recently engaged in huge expansion of capacity which, although principally military in nature (75% - 1939 2 ), can be used for peacetime production with but little alteration in the physical nature of the facilities. Such expansion is merely an addition to normal capacity without greatly altering the nature of the plant or product. In direct contrast, Chrysler, an automobile manufacturer, has constructed a huge new plant for the production of tanks, while American Locomotive has entered

2. Poor's Industrial Survey - Aviation, 1941, pages A-3-2.
production of both tanks and heavy gun mounts.

Each of these types of expansion creates financing problems related both to the nature and to the extent of the expansion as can be seen from a glance at past experience, and a review of the principles of recovery of investment in fixed assets during their economically useful lives.

World War I Experience

It was noted in the Introduction that World War I first brought to the American people a realization of the need for expansion of war industry to produce the specialized material required. Even more important to the problem at hand than that realization is the memory of the aftermath. The Armistice brought with it the idea that war was completely and finally ended — an idea held by the people and their government, and duly reflected in the attitude displayed in the treatment of the plant especially created war industries. In many cases, due to restrictions placed on cost computation and on profits, as well as to lack of understanding of the problem of writing off the cost of the extraordinary productive capacity during its economically useful life, the plants were still regarded as assets by their owners and by the government at the close of the war. Gradually in the following years, their owners came to recognize many of the
properties as peacetime liabilities and they were treated as such. A clear example of the change from a war asset to a peace liability can be seen in the case of the Bethlehem Steel Company which, for World War I, had constructed one of the finest ordnance plants in existence. "Today only a ghost of the skills and a fraction of the costly tools remain. A government dedicated to a 'return to normalcy' declined to buy the foundries and the tools and refused to accept them as a gift. And since under Treasury rules Bethlehem could not write off the plant investment as long as the physical property was not demonstrably obsolete. Bethlehem did what any conservative business would have done with a useless property; it called in the wreckers. The destroying iron balls rose and fell, and after the wreckers departed, millions of dollars worth of specialized machinery had been smashed."¹ Bethlehem had faced the prospect of carrying a heavy investment in an economically, but not physically, obsolete plant, of paying property taxes thereon, and of taking depreciation only at normal rates. The solution to their problem was practical in the face of government policy, and although the political fallacy of that policy can now be read into the cries for more ordnance, the memory of such a loss can but dampen any enthusiasm -- patriotic or economic -- for

¹ Fortune -- National Defense; The Sinews, October 1940, p. 52.
the creation of another war plant. This was not an isolated case, "there were others -- the wiping out of Remington's great Eddystone rifle plant, which in its peak year of operation turned out more rifles than any (other) plant in the world; the shutting down of duPont's huge explosive plants,"¹ and many others, perhaps the best known of which was Hog Island shipyards, one of the greatest production marvels of the War. This huge plant was constructed at a cost of about $65,000,000 to produce the ships needed for victory. However, the war had ended before the yard actually got into production and "when wartime contracts were exhausted, Hog Island went begging for an entrepreneur"² because the supply of ships produced for the war effort exceeded peacetime needs to such an extent that ships were anchored in out of the way places to rot. "For years this Yard rusted idly. Philadelphia's airport now covers the site."³ Still another industry, also again in the throes of war expansion, had a similar experience. Aviation "with the outbreak of the World War ... experienced a full sized boom ... Sales of the Curtiss Aeroplane & Motor Corp., the then leading producer in the industry, jumped from $6,158,439 in 1916 to $46,181,141 in 1918. The postwar

². Fortune - How Many Ships How Soon, July 1941, p. 39
³. Ibid.
reaction was severe, leaving the industry in a state of collapse. Sales of the Curtiss company in that year amounted to only $1,261,375. And as a final illustration, "World War demands and high prices resulted in a huge increase in the coal productive capacity of the United States. Ensuing low prices forced the closing of some mines..."

Taken together, the foregoing illustrations cast an interesting light on the problem. The highly specialized plants such as those for ordnance found no place in the peacetime industrial structure, and thereby became economic burdens. But even the expansion of basic industries such as coal and aircraft, which have a normal place in peacetime industrial society, could and did exceed in extent any reasonable volume of peacetime business.

The experiences with plant expansion for World War I differ from any experiences since in one feature only, namely, in the reason for the expansion. So far as the economics of expansion are concerned, the effects of the depression of the thirties provide clear illustrations of the dangers existing even in expansion to handle volume received through normal business.

1. Poor's Industrial Survey -- Aviation, 1941, P. A-5-2
2. Poor's Industrial Survey -- Coal, 1941, p. C-2-3
Depression Experience

During the boom of the twenties, industry again engaged in tremendous plant expansion to meet what appeared to be ever increasing demand. However, with the thirties the boom broke and production fell far below the level necessary to cover expenses. The experience of struggling to keep a portion of the productive facilities in use is clearly remembered by the industrialists now being urged to expand their busy plants beyond anything previously considered. The steel industry has resisted expansion, because it remembers that "in 1932, after one splurge of expansion, the industry was able to scrape up business for only 19.5 per cent of capacity. Between 1935 and 1938, production was at the rate of less than 50 per cent."¹ A similar experience of excessive capacity was felt by the aviation industry because "although many new transports were built in 1933 and 1934, the volume of business was inadequate to sustain the overextended manufacturing branch of the industry."² Curtiss Wright was hard pressed by this decline in volume as is shown by the fact that its assets slumped from 78 million dollars in 1929 to 34 million in 1938 with losses running as high as 9 million dollars in one year.³ Another industry, machine tools, which is today far overloaded with

¹. Fortune -- Steel Capacity, April 1941, p. 72.
orders, has to go back only a few years to see the results of overcapacity. Machine tool "sales volume slumped almost to the vanishing point at the bottom of the 1930-33 depression,"¹ and owners of machine tools plants feel as the managers of Jones & Lamson are said to feel when "looking out at night from their homes on Cherry Hill on the brightly lighted shops, they recall the days of 1933 when these same shops were dark, when employment was down to 120 men against the 1600 employed today.²

Thus recent experience has taught the industrial community that plant expansion can be dangerous and very expensive should volume decline.

Summary

The advent of war has brought the necessity for expansion of industrial plant to provide the weapons for the conduct of hostilities. This need for expansion has brought to mind the experiences of a similar situation that arose from the previous great war and the experiences of the depression with plant overexpanded from normal economic causes. Together they make the plant managers fearful of the great risks involved. Certain of the plants

¹ Standard & Poor's -- Machine Tools, January 14, 1942.
² Fortune -- Jones & Lamson, May 1941
required for production for the armed forces is of such a nature that it must be regarded as wholly uneconomic, although essential. Other expansion, while it fills the present need, may also fill normal needs in the postwar period. Each of these types raises special financing problems. The plant that is to be retired after war ceases, must be financed in such a manner that it will not be carried as a business asset at that time. Plants that may be usable after the war must be financed in such a manner that they will produce a valuation at the close of the war that might reasonably be justified by their economic usefulness. For both of these types of plants, consideration must be given to the cost of carrying the investment, regardless of its book value, in the years succeeding the peace treaty, because certain expenditures such as those for insurance, property taxes, and general maintenance will continue to be necessary.
CHAPTER III

FUNDAMENTALS

of

DEPRECIATION ACCOUNTING
Depreciation a Part of Cost

The existence of depreciation as a fact has always been recognized. There has never been a question but that over a period of time capital assets became worn out or obsolete and that their value thereby became greatly diminished. However, for many years controversy has raged as to the validity of attempting to prorate the diminishing value over the life of the asset and of considering the apportioned amounts as capital expended during the period to which the amount was applicable and, therefore, as part of the cost of doing business during that period. The enactment of income tax laws greatly altered the situation by providing that "a reasonable allowance for the exhaustion, wear and tear of property used in trade or business, including a reasonable allowance for obsolescence" could be computed and considered as an item of expense in arriving at taxable income. Furthermore, the decisions of public bodies to permit the inclusion of depreciation as an expense in determining utility rates furthered the acceptance of the idea of apportioning the expenditure of capital assets over their productive lives. Two of the decisions express the matter as:

1. Internal Revenue Code - 1939 - Sec. 23 (L).
"Depreciation may be defined as the consumption of investment in property, or the loss in service value of property, due to use, wear and tear, physical deterioration, or the demands of public authority. Briefly, it results from the usual forces and conditions which limit the service life of property and cause its retirement."¹

"Depreciation is the loss in service value not restored by current maintenance and incurred in connection with the consumption or prospective retirement of property in the course of service from causes against which the carrier is not protected by insurance, which are known to be in current operation, and whose effect can be forecast with a reasonable approach to accuracy."²

As a result of the legal provisions and decisions, plus a great deal of accounting education, business has for many years now accepted the fact that in computing periodic profits, this capital expenditure must be included. In brief, the accepted principal is that fixed assets decline in value continuously, whether in use or not, as a result of all or any combination of the factors: wear of use, action of the elements, and passage of time which results in physical obsolescence because of the increased productive capacity of newer facilities, and economic obsolescence created by changes in the demand for the product of the existing assets.

2. Depreciation Charges of Telephone Companies and of Steam Railroads -- 177 I.C.C. 422, Dockets 14,700 and 15,100.
It has been further recognised that while the results of the action of these factors may not be obvious from month to month or year to year the decline in value is nevertheless present and provision must be made to meet its cumulative effect at the time when it does become obvious. This is generally accomplished by charging each period's expenses with a share of the total cost and establishing a reserve that in effect reduces the value of the assets. It is planned that the accumulation of these periodic provisions will equal the decline in value of the asset at the end of its useful life when it is discarded.

Many methods have been devised in the attempt to discover an equitable basis of apportioning to each successive period its fair share of the total expected capital expenditure. In these attempts, great difficulty has been encountered due to the varied nature of the causes of the loss in value and the uncertainty of the length of the period of useful life. However, we are not concerned here with the detail of the various methods, but rather with the basic factors involved.

Factors of Depreciation

The first factor to be considered is "cost."

This is the basic factor because the object of depreciation accounting is to provide for the loss of value which is the
decline from original cost to the ultimate disposal value. For the assets acquired in current plant expansion, the cost is readily ascertainable as the sum of purchase price and all expenditures necessary to get the asset ready for the use for which it was acquired (freight, installation, etc.).

The second factor is the estimated residual value. This is the net amount that it is estimated can be recovered from the disposal of the asset at the end of its period of usefulness. Such an estimate must be conservative, and it is usually the scrap value after cost of removal and sale.

The third and most difficult factor is time. (If the basis of units of production is used, the factors to consider in determining the total output are the same.) Normally, this is the period during which it is expected that the asset will be economically useful in production. Such an estimate must take into consideration the factors of wear during use, wear caused by action of the elements, and declining value due to obsolescence. Usually past experience serves as a guide, and the guidance is further assisted by the study of asset lives, expressed as annual percentages of cost, compiled by the Treasury Department and published as T.D. 4422 to serve as an indication of
what would be considered reasonable. Naturally, the validity of the period of time finally determined will be questioned if it varies greatly from the Treasury's findings, and proof in terms of the factors involved will be expected if the period is to be used in determining depreciation for tax purposes. As noted on page 12, the tax law permits the inclusion in the computation of a reasonable allowance for obsolescence" due to economics as distinguished from physical exhaustion. It is due to changed business conditions which render an asset useless and unprofitable prior to its normal useful life."¹

But such "obsolescence may be taken . . . only when it is definitely known, and not when it is merely the opinion of the taxpayer that the property might become obsolete."²

Thus for all practical purposes, the factors to be used in arriving at the length of life for an asset are wear and tear of use, wear caused by the elements, and such obsolescence as past experience will prove can be expected in the normal course of events. (Example -- Value dies used in forming parts for automobile bodies must be in sound and accurate condition at the end of the model year, yet, although physically in excellent condition, they are known to be economically obsolete because of the established custom

2. Ibid.
of annual model changes. In such a case, one year is the life of the asset.)

**Financial Aspects of Depreciation**

The need for depreciation accounting has been generally accepted and the various methods of computing rates of depreciation have been established. The basic reason for this accounting, however, is to recover during the useful life of each asset, from the sale of its product, the capital invested therein. It is this basic principle that is vitally important, and it is the most often neglected because of the interest in methods and rates.

"The object of the accounting for depreciation is to recover only the capital originally invested in the fixed assets and consequently no consideration is given to the replacement value, whether higher or lower than the original cost. The cost of the original assets as it is recovered from the profits of the business is kept in the business, sometimes as a definite fund, but more often as an unidentified part of the net assets. The business, at least to the extent of the cost of the original assets, should, at the time the assets are discarded, be financially able to replace them."  

The operation of these ideas can best be seen by illustration.

A very simple example of the results of depreciation accounting on the financial position of a business can

be seen by examining the statements of a cash and carry business having as fixed assets only the store.

**Balance Sheet at Start of Period**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$1,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>500</td>
</tr>
<tr>
<td>Store</td>
<td>3,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$4,500</strong></td>
</tr>
<tr>
<td>Liabilities</td>
<td>$-0-</td>
</tr>
<tr>
<td>Net Worth</td>
<td>$4,500</td>
</tr>
</tbody>
</table>

**Profit and Loss Statement for the Period**

**Book Figures**

<table>
<thead>
<tr>
<th>Sales</th>
<th>Cash Account</th>
</tr>
</thead>
<tbody>
<tr>
<td>Debit</td>
<td>Credit</td>
</tr>
<tr>
<td>Sales</td>
<td>$5,000</td>
</tr>
<tr>
<td>$5,000</td>
<td></td>
</tr>
</tbody>
</table>

**Cost of Sales:**
- Beginning inventory: $500
- Purchases: 3,000
- Closing inventory: 500
- **Total:** $3,500

**Expenses:**
- Wages, etc.: 1,000
- **Total:** $1,000

**Profit (before depreciation):** 1,000

**Net cash debit (increase):** 1,000

Thus combining the balance sheet at the beginning with the result of operations for the period, we have the balance sheet at the end of the period showing the net increase in the cash account and the corresponding increase in net worth from the profit.
This balance sheet shows that there was a net profit of $1,000 made during the period and available for distribution, that the cash account has been increased by $1,000 and that the store is still worth $3,000. However, depreciation must be considered. The entry of the depreciation charge for the period is a simple entry not affecting the accounts other than to reduce the profit and to apply the amount removed from profit as a deduction from the value of the store, thus showing the true total cost of doing business. The profit and loss statement, after this entry would appear as:

Profit and Loss Statement for the Period

Book Figures                                      Cash Account
                                                   Debit          Credit
Sales                                             $5,000         $5,000
Cost of sales:
  Beginning inventory $  500
  Purchases                          3,000
  Closing inventory          3,500
                             500
Expenses--Wages, etc.               1,000
Depreciation                     300          -0-         -0-
Profit after depreciation       $  700         $5,000         $4,000
Net cash debit (increase)      $1,000
The balance sheet after depreciation would show:

**Balance Sheet at Close of Period**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$2,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>$3,000</td>
</tr>
<tr>
<td>Store (Cost)</td>
<td>$3,000</td>
</tr>
<tr>
<td>Less: Depreciation</td>
<td>$300</td>
</tr>
</tbody>
</table>

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Liabilities</td>
<td>$500</td>
</tr>
<tr>
<td>Net worth --</td>
<td>$4,500</td>
</tr>
<tr>
<td>Add: profit</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>5,200</td>
</tr>
</tbody>
</table>

The effect here was solely to transfer from profit after cash expenditures to the asset a portion of the profits representing the estimated decline in the value of that asset during the period, owing to wear and tear, etc., thereby showing as an increase of net worth only the true profit after all expenses. Had not this entry been made, the books would have shown a profit in excess of the true profit by $300, the entire amount of which could then have been paid out to the owners. This in effect would have been a partial return of their capital although it would not have been recognizable as such. In addition, failure to make the entry would have left the value of the store account on the books at cost, whereas a period of use had reduced its value.

An important point to notice in the illustration is that the decrease in net value of the fixed sheet was offset by an increase in the current asset account "Cash" and that in addition the cash account was increased by the
amount of the net profit. The principle is always true if there is a profit because the very existence of a profit would indicate that the assets (or excess of assets over liabilities) had increased. However, the entry for depreciation results in a reduction of the net value of the fixed asset account and therefore the increase must be in the other asset accounts.

Since, in determining profit, the expenses are deducted from revenue, the profit before depreciation must consist of the net revenue remaining after the deduction of expenditures of current assets and increases in current liabilities which constitute the cost of obtaining that revenue. Now the revenue itself is almost always in the form of cash, accounts receivable, or notes receivable which are current assets. Therefore, the balance of revenue after other expenses but before depreciation must consist of current assets. As previously noted, the depreciation entry merely segregates the profit before depreciation between the reserve for reduction in value of the fixed asset and the net worth. Thus the current assets that constitute the profit before depreciation are earmarked by the depreciation entry as profit available for distribution, and as assets to be retained to offset the decline in value of other assets. Naturally, the particular portion of the current assets that serve each of
these purposes can not be identified, but the important financial point of their existence is all that is necessary because their existence proves that the net assets of the business are being maintained at the amount of the original investment even if all profits are paid out to the owners, and that the current assets of the business contain the provision for replacing the fixed assets at least to the extent that their original value has declined through their use in the business.

The principle can be clearly shown also in relatively complicated cases where there are several accounts involved and where the business has no profit, but just earns enough to cover all costs.

**Profit and Loss Statement for the Period**

<table>
<thead>
<tr>
<th>Book Figures</th>
<th>Debit</th>
<th>Account Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>$5,000</td>
<td>$4,000(1)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1,000(2)</td>
</tr>
<tr>
<td>Cost of sales:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>$500</td>
<td></td>
</tr>
<tr>
<td>Purchases</td>
<td>3,700</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$4,200</td>
<td>$3,000(1)</td>
</tr>
<tr>
<td>Closing inventory</td>
<td>500</td>
<td>3,700</td>
</tr>
<tr>
<td>Expenses-Wages etc.</td>
<td>1,000</td>
<td>1,000(1)</td>
</tr>
<tr>
<td>Depreciation</td>
<td>300</td>
<td>300(4)</td>
</tr>
<tr>
<td></td>
<td>$-0-</td>
<td>$5,000</td>
</tr>
<tr>
<td>Cash Account (1)</td>
<td>$4,000</td>
<td>$4,000</td>
</tr>
<tr>
<td>Accounts receivable (2)</td>
<td>1,000</td>
<td>700</td>
</tr>
<tr>
<td>Accounts payable (3)</td>
<td></td>
<td>300</td>
</tr>
<tr>
<td>Reserve (deduction from asset)(4)</td>
<td>$5,000</td>
<td>$5,000</td>
</tr>
</tbody>
</table>
Combining this profit and loss statement with the beginning balance sheet we obtain

**Balance Sheet at Close of Period**

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$1,000</td>
</tr>
<tr>
<td>Accounts Receivable</td>
<td>1,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>500</td>
</tr>
<tr>
<td>Store</td>
<td>$3,000</td>
</tr>
<tr>
<td>Less Depreciation</td>
<td>300  2,700</td>
</tr>
<tr>
<td></td>
<td>$5,200</td>
</tr>
</tbody>
</table>

Here the cash account has not changed because the cash received as revenue was just equalled by the cash outgo for expenses, and the inventory at the close of the period is the same as the inventory at the start because the cost of the goods sold equalled the cost of those purchased during the period. However two new accounts were added, one of these a current asset "accounts receivable", and the other a current liability "accounts payable." The net of these two accounts is an increase of $300 in current assets, and, opposed to this there is a decrease in fixed asset value of $300. Thus it can be clearly seen that where the revenue was just sufficient to cover all expenses including depreciation, the net worth was not changed and there was not therefore an increase in the net assets of the business. But there must have been a change in the nature of the assets because the depreciation entry reduced the net value of the fixed asset. It is then obvious that the offset to this reduction must be an increase in one or
more of the other asset accounts, or a reduction in the liabilities which would cause an increase in the net of the other assets over liabilities. This offsetting amount can readily been seen to be the net increase in "Accounts Receivable" over "Accounts Payable."

Here again, the fundamental principle of depreciation accounting can be seen. Revenue in the form of current assets was received from the operation of the business. From this was deducted, in preparing the profit and loss statement, the costs of doing business consisting of cash expenditures and the incurring of liabilities totalling just $300 less than the revenue produced. Thus before depreciation, there was an increase in net assets of $300 which could have been considered profit and removed from the business. However, the fixed assets had declined in value from use by an amount estimated to be $300, so this amount was transferred from profit before depreciation to be applied as a reduction in the value of the fixed asset. Such a transfer had no effect on the current assets or current liabilities, but merely earmarked the net increase in current assets as being applied to cover the loss in value of the fixed asset. Thus, while there was no profit, sufficient revenue was obtained to permit the retention in the business of an increase in current assets that would compensate for the reduced value of fixed assets, and, naturally, the net of total assets over total liabilities
(net worth) did not change.

Depreciation accounting's function of retaining in the business total net assets equivalent to the original investment was easily seen in these simple illustrations because there were not present the usual complicating factors of additions of new fixed assets and retirement of fully depreciated fixed assets. However, the principle is nevertheless true regardless of complications as was shown by studies made during the industrial recession. Here it was found that with expenditures for new fixed assets reduced or eliminated, the net result of earned depreciation was to increase the excess of current assets over current liabilities, thereby retaining in the business the ability to replace those fixed assets at least to the extent that their original value was diminished.¹

However, we must also consider the other possibility. If there is not a profit before depreciation sufficient to cover the depreciation charge, there must be a decrease in the total net value of the assets. This, again, can most clearly be seen by a simple illustration.

Profit and Loss Statement for the Period

Book Figures

<table>
<thead>
<tr>
<th></th>
<th>Cash Account</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Sales</td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td>$5,000</td>
</tr>
<tr>
<td>Cost of sales:</td>
<td></td>
</tr>
<tr>
<td>Beginning inventory</td>
<td>$ 500</td>
</tr>
<tr>
<td>Purchases</td>
<td>3,700</td>
</tr>
<tr>
<td></td>
<td>$4,200</td>
</tr>
<tr>
<td>Closing inventory</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>3,700</td>
</tr>
<tr>
<td></td>
<td>$3,700</td>
</tr>
<tr>
<td>Expenses- Wages, etc.</td>
<td>1,300</td>
</tr>
<tr>
<td></td>
<td>1,300</td>
</tr>
<tr>
<td>Depreciation</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>$5,000</td>
</tr>
<tr>
<td></td>
<td>$5,000</td>
</tr>
<tr>
<td>Loss after depreciation</td>
<td>$300</td>
</tr>
</tbody>
</table>

Combining these figures with those of the original balance sheet:

Balance Sheet at Close of Period

<table>
<thead>
<tr>
<th>Assets</th>
<th>Liabilities and Net Worth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash</td>
<td>$1,000</td>
</tr>
<tr>
<td>Inventory</td>
<td>500</td>
</tr>
<tr>
<td>Store</td>
<td>$3,000</td>
</tr>
<tr>
<td>Less Depreciation</td>
<td>$2,700</td>
</tr>
<tr>
<td></td>
<td>$4,200</td>
</tr>
<tr>
<td>Liabilities</td>
<td></td>
</tr>
<tr>
<td>Net Worth</td>
<td>$4,500</td>
</tr>
<tr>
<td>Less-loss</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>4,200</td>
</tr>
</tbody>
</table>

From this, it can be seen that current assets received as revenue equaled current assets disbursed in securing that revenue and the bookkeeping entry to record the loss in value of the fixed assets in effect applied part of the owner's equity to those assets. Thus when the profit before depreciation is less than the depreciation,
the net increase in total assets is less than the depreciation and the excess of the depreciation charge must be applied against net worth to record the fact that the true financial result of operations is a loss in the net value of the assets, which is a decrease in the owner's equity.

A summary for these illustrations is found in George O. May's article, "The Relation of Depreciation Provisions to Replacement:"

"The fact that a corporation had no net income for a year does not necessarily mean that no effective reservation of funds is ever made in respect of its depreciation provisions for that year. (It may) have had gross income sufficient to meet depreciation . . . provisions. In other cases, the deficit for the year may have been less than the depreciation provision, in which event a part of the provision may be regarded as set aside during the year. On the other hand, if the deficit has been charged against previously accumulated surplus, (or original investment) and if the accumulated deficits are ultimately extinguished through reorganization or bankruptcy, the depreciation provisions which have merely increased the amounts of those deficits will never be represented by any actual provision of funds. During the decade of the 1930's the (United Steel Corporation) set aside as current depreciation provisions a total of $510 million, and during the same period it had a deficit after dividends of $190 million which was quite properly charged against the surplus of previous years. During this period, therefore, it may be said that only 63 per cent of its depreciation provisions resulted in effective setting aside of funds available for financing replacements of extensions."

Another approach to the financial aspects of depreciation is through the statement of application of funds. The comparison of the balance sheets of a company will show that there were changes in many of the accounts during the period that expired between the preparation of the earlier balance sheet and the preparation of the latter. The statement of application of funds assembles and classifies these changes to show how and why the changes occurred. "If the financial condition of the business has improved during the period, this improvement is due to the fact that additional resources have come into the business from some source, and these additional resources have been used for certain purposes. A statement of application of funds shows how these resources were provided, and what use was made of them." However, as previously noted, the provision for depreciation does not in any way alter the amount of assets or liabilities actually received, disbursed or incurred, but rather aggregates part of the net increase to offset an estimated decrease in the value of the fixed assets. This is borne out by the statement, "Depreciation is an expense, but the provision for depreciation does not represent an expenditure of funds. Therefore,

1. Principles of Accounting, Finney, Chapter 29.
to find the funds provided by the profits, it is necessary to add the net profits for the period and the depreciation provisions made during the period.¹ Such an addition would restore the net profit before depreciation which is the net increase in assets resulting from revenue over the expenditures of assets and the incurrence of liabilities made in securing the revenue. Thus, again, it is seen that the provision for depreciation does not in itself produce anything, but merely segregates the increase in net assets, known as profit, between that which may be carried to net worth as available for distribution and that which must be retained in the business to offset the estimated decline in value of fixed assets used.

Summary

(1) Depreciation, the loss in value of fixed assets as a result of various factors, is accepted as a part of the cost of doing business.

(2) The extent of the depreciation must be estimated on a periodic basis so that it can be included in periodic computation of profit and loss.

(3) In calculating the extent of the periodic depreciation, the loss of physical value (wear and tear, etc.) is generally used, but the inclusion in the estimate of anticipated obsolescence is not permitted in so far as

¹. Finney: Principles of Accounting, Chapter 29
use of the rate determined for tax purposes is concerned.

(4) When there is a profit for the period, the accounting for depreciation retains in the business an unidentified portion of the total assets as compensation for the estimated loss in value of the fixed assets.

(5) When there is a loss for the period, to the extent that the loss exceeds the depreciation provision, there has not actually been retained in the business the necessary compensating assets, but rather the owner’s equity has been reduced to compensate for the declining value.
CHAPTER IV

RELATION OF DEPRECIATION ACCOUNTING TO THE PROBLEM
RELATION OF DEPRECIATION ACCOUNTING TO THE PROBLEM

The problem is to determine the method of financing the plant expansion necessary to meet the emergency production requirements of war. Past experience with plant expansion has shown that the expanded plant may very possibly be of little productive value after the war has ended, and it is anticipated that the duration of the war will be a period shorter than the lives of the fixed assets that are to be acquired. Yet, the study of depreciation accounting brought out the point that for tax purposes the anticipated obsolescence that will result from the loss of demand for the products of the new plants can't be included in computing depreciation for tax purposes. It therefore is necessary to depreciate the plant at rates that would apply if it were acquired for normal expansion purposes. Furthermore a study of the financial aspects of depreciation disclosed the fact that depreciation provisions in themselves are of no benefit. The provisions succeed in their purpose only when there is a profit after making the provision. Thus, unless there is reasonable anticipation of profit during the useful lives of the assets acquired in the new expansion, their cost cannot be recovered.
CHAPTER V

OTHER ASPECTS OF THE PROBLEM
OTHER ASPECTS OF THE PROBLEM

In addition to consideration of investment recovery, there must be consideration of the unavoidably recurring expenditures for taxes and general upkeep. Real estate and property taxes are based on the assessed value regardless of the net book or unrecovered value shown on the books of the owner. Also the owner ordinarily feels obliged to provide plant protection in the form of insurance, watchmen, etc., and to make necessary expenditures for maintenance and repairs to prevent the rapid deterioration which overtakes abandoned plant. Thus if the investment recovery is made over the economically useful lives of the facilities, but their physical life extends beyond that period, the facilities must produce sufficient revenue to cover the tax and general upkeep expenditures in the period from the end of their economically useful lives to the end of their physical lives.
CHAPTER VI

METHODS OF SOLVING THE PROBLEM
METHODS OF SOLVING THE PROBLEM

There are three basic methods available for handling the problem. The first of these is the most simple. Acquire the necessary assets with the intention of recovering the investment through ordinary depreciation accounting. The second method is to take advantage of the special provision made in the tax laws and acquire the assets with the understanding that the period of depreciation will be five years or less, regardless of the normal lives of the assets. And finally, to have the expansion investment made by an agency of the government either with, or without, the provision that the government will sell it after the war if it is found to be usable for normal business.

Each of these methods involves special considerations and has advantages and disadvantages of its own, so that it would be best to examine the methods separately and then compare them.
CHAPTER VII

NORMAL INVESTMENT
In some cases, it may be desirable for the company to make the necessary investment in expansion of its plant as if it were ordinary business expansion. Such an outlook would be possible in instances where it could reasonably be expected that the total of the industry's expansion was not so great as to make reasonable use of the plant after the war an impossibility. Were there an expectation that the present and future profits of the company might be sufficient to at least cover the depreciation charges, such a method might be advisable. However, as will be seen in the next section, the provisions in the amortization regulations permit the use of normal rates of depreciation even after the assets have been certified for amortization, and in addition other provisions further increase the ability of the plant manager to correct errors of judgment as time passes. Because there is nothing to gain by using this method in preference to those later described, nothing more will be said at this point regarding the expansion as normal.
CHAPTER VIII

AMORTIZATION
AMORTIZATION

In recognition of the difficulty business was encountering in planning expansion of plant for war production, the government enacted special tax laws granting concessions to the owners of such facilities as were acquired for this purpose. These tax provisions originated with the Second Revenue Act of 1940, approved October 8, 1940. Subsequently, the provisions were altered by further laws and regulations, the latest of which is Public Law 285, interpreted in T.D. 5104. However, most of the principal features of the amortization procedure were explained in T.D. 5016.

Perhaps the best method of attaining an understanding of amortization, is by examining the laws and Treasury Decisions relating thereto. For this reason, the following pages will present, step by step, the basic information from those laws and regulations.

The information contained in the following pages is based on:

Internal Revenue Code
Treasury Decisions-5016, 5049, 5104
Instructions-TAS 21, 24
N.A.C.A. Bulletin, Amortization and Defense Certificate Nov. 1941
Experience in preparation of Applications
A. Emergency Facility

An emergency facility is any land, land improvement, building, machinery, equipment, or part thereof, the acquisition of which occurred after June 10, 1940, or the construction, reconstruction, installation, or erection of which was completed after that date, and which has been properly certified by the Secretary of the Department concerned as necessary to the interest of national defense during the emergency period.

B. Secretary of Department Concerned

The certification of the facilities is made by the Secretary of War or the Secretary of the Navy, whichever is concerned in the use of the facilities, to the Commissioner of Internal Revenue.

C. Emergency Period

The emergency period began June 10, 1940 and is to continue until the date that the President proclaims that the utilization of a substantial portion of the emergency facilities is no longer required in the interest of national defense. Normally, this period is the maximum period of amortization. However, for specific facilities, the period may be shorter as noted in "Termination of
Amortization Period." Generally, facilities will be amortized over a sixty month period which falls within this maximum period of emergency. For those sixty month periods that extend beyond the maximum period of the emergency, special treatment is provided as noted under "Termination of Amortization Period."

D. Amortization Deduction

Section 23 of the Internal Revenue Code provides for deductions from gross income. This section was amended as a result of the Second Revenue Act of 1940 by the addition of a new sub-section "t" providing for deduction with respect to the amortization of emergency facilities, in lieu of depreciation ... an amount determined by the new section (124) which had been added for the purpose of permitting such a deduction and for determining the manner of computing the deduction.

Section 124 provides as the general rule that if the required certificate has been issued, a corporation (and only a corporation), may elect to take as a tax deduction a portion of the adjusted basis of the certified facilities. The deduction taken -- which is the amortization allowance -- will generally be based on complete amortization over a period of sixty months.
E. Beginning of Amortization Period

The amortization period will begin with whichever of the following the taxpayer elects:

1. The month following the month in which the facility was completed or acquired.

2. The taxable year succeeding that in which the facility was completed or acquired.

A statement of the date of completion or acquisition as ascertained by the taxpayer, together with a statement of the pertinent facts relied on, should be filed with the taxpayer's election to take amortization.

F. Computation of Amortization Deduction

The amortization deduction is figured on a monthly basis and is taken in lieu of depreciation. For each month of the sixty month amortization period that falls within the taxable year, the month's amortization deduction is determined by dividing the adjusted basis of the facility at the end of the month by the number of months, including the one for which the computation is being made, that remain in the sixty month period. The adjusted basis at the end of the month that is used in this computation does not take into consideration the deduction with respect to that month.
Example of Deductions (T.D. 5016, p. 8)

October ($240,000 / 60) ..................$4,000
November ($236,000 / 59) .................4,000
December ($232,000 / 58) .................4,000
Total deduction for year ...............$21,000

G. Election of Amortization

As noted under "Beginning of Amortization Period," the taxpayer may elect to start taking amortization at either of two times. If he elects the earliest, the month following the month of completion or acquisition, a statement to that effect must be included in his return for the taxable year in which the completion or acquisition fell. If he elects the later starting date, the taxable year succeeding the year of completion or acquisition, a statement to that effect must be included with the return for that year. If the facility is completed or acquired in the last month of the taxable year, the statement should be included with the return for the taxable year succeeding that in which it was completed or acquired because this will cover either election.

No other method of making the election is permissible, and each statement of election should contain a description of each facility for which amortization is claimed that will clearly identify such facility.
If the election is not filed as provided above, the taxpayer is not allowed amortization with respect to the facilities except as provided by "Termination of Amortization Period."

H. Election to Discontinue Amortization

If, after having elected to take amortization, and even after having taken such deductions for part of the sixty month period, the taxpayer decides to discontinue amortization, he may notify the Commissioner of Internal Revenue of his intention. Such notice must be in writing, must specify the month with which deduction of amortization will be discontinued, should contain a clear description of the facilities, and must be filed before the beginning of the month in which the deductions will cease.

When such a change of election is made, the taxpayer will not be allowed amortization again except as provided in "Termination of Amortization Period." However, if the facilities concerned are depreciable property, regular depreciation may be taken beginning with the month after the last month in which amortization is taken.

I. Termination of the Amortization Period

Amortization is based on the need for special treatment of assets acquired or constructed for use during
the emergency period. This period has its beginning set at June 10, 1940 by the provisions of the law, and it extends until such time as the President proclaims that the utilization of a substantial portion of the emergency facilities with respect to which certificates have been issued, is no longer needed in the interest of national defense. For Internal Revenue (tax) purposes, the termination date will be either this date established by proclamation, or the date specified in a certificate from the Secretary of the Department concerned to the Commissioner as the date the facilities ceased to be necessary in the national defense, whichever is the earlier. However, it can readily be assumed that neither of these dates will be prior to the end of the war.

J. Effect of Termination of Amortization Period

If the taxpayer had elected to take amortization in the proper manner as described in Election of Amortization, and the sixty month period has not expired when the amortization period is terminated, he may elect to terminate the amortization period with respect to his facilities as of the month in which the date of the end of the emergency falls. In such a case, there will be substituted in place of the original sixty month period a new period beginning
with the first month of his old sixty month period and ending with the month in which the date of the end of the emergency period falls. His taxes for all years falling within that period will then be recomputed with the amortization deduction based on the new period.

If the taxpayer had elected to take amortization and had later elected to discontinue taking these deductions, the termination of the amortization period might permit him to change his second election. Provided the date of the ending of the emergency occurs prior to the ending of his original sixty month period and after the beginning of the month following the last month in which he took the amortization deduction, he may elect to terminate the amortization period with respect to his facilities as of the end of the month in which the emergency ceases, and his previous election to discontinue amortization will then be disregarded. The new period will then be determined as mentioned in the previous case, and his taxes will be recomputed.

If the taxpayer had secured the necessary certification, but had not elected to amortize, the termination of the amortization period might make it possible for him to elect to take amortization. Provided the date the emergency ceases occurs before the expiration of sixty months from the
last day of the month in which the facility was completed or acquired, the taxpayer may elect to take amortization deductions. Such deductions would then be computed on the basis of a period beginning with the month following the month of completion or acquisition and ending with the month in which the emergency ceased. The taxpayer's returns would be recomputed on the basis of the amortization thus determined. Naturally, in each of the above cases, the newly determined amortization deduction would be substituted for the depreciation previously claimed, not added to it in recomputing the taxes.

In all the preceding cases, the notice of election made as a result of the termination of the amortization period, must be filed with the Commissioner of Internal Revenue within ninety days after the termination date applicable in the particular case, and the statement must contain a description clearly identifying the asset. In addition, a copy of this statement should be attached to the tax return for the taxable year in which the termination occurs.

K. Recomputation of Tax--Termination of Amortization Period

The recomputation of the tax applies to income, excess profits, capital stock, and any other taxes of the corporation directly or indirectly affected by the recomputation.
The adjustment will be considered as a refund or assessment with regard to each individual year involved, if within one year from the date the emergency ceases a claim for refund is filed or a notice of deficiency mailed. This adjustment will be made regardless of any changes in the law (except regarding compromises—Section 3761) which would normally prevent such adjustment, either on the date the amortization period is terminated, or within one year from that date.

The adjustment made will be that resulting from the recomputation of amortization deduction only, and will not be affected by other adjustments.

Once paid, a refund can not be recovered by any claim except one based on the recomputation.

Refunds or assessments will bear interest at the usual rates applicable to overpayments and deficiencies.

L. Adjusted Basis of Emergency Facilities (Based on T.D. 5016, Section 19, 124-6)

The adjusted basis is the cost on which amortization deductions will be computed. In all cases, this is the cost of the construction, reconstruction, erection, installation, or acquisition which it is desired will be certified and amortizable.
If all expenditures in question were attributable to work done after June 10, 1940, and if the assets had been certified in their entirety, then the unadjusted basis for amortization would be the same as any other unadjusted basis.

If the facilities are certified in their entirety, but a part of the total expenditure for them is attributable to work done prior to June 10, 1940, then the unadjusted basis will be only that portion of the total as is attributable to work done after June 10, 1940, and the balance will be eligible only for ordinary depreciation.

If the facilities are certified only in part, then only that portion certified is subject to amortization and the balance is subject to ordinary depreciation. In addition, should any of the work have been done prior to June 10, 1940, then the above paragraph would also apply.

From such unadjusted basis, the adjusted basis will be determined by applying adjustments of Section 113 (b), which would not apply to the type of assets under consideration in most cases, although one possible instance would be fire damage covered by insurance.

M. Additions to Facilities

Once a certified facility has been completed or acquired, further expenditures made, even though attributable
to that facility, shall not be added to its adjusted basis for amortization purposes. Such additional expenditures should be treated as the construction, reconstruction, erection, installation, or acquisition of a new facility, and application made for certification of that new facility as a separate item.

N. Depreciation of a Portion of a Facility

It was previously noted that in some cases, only a portion of the expenditures for a facility might be considered subject to amortization. Such cases would be where part of the expenditures were attributable to work done prior to June 10, 1940, where amortization of a depreciable property had been elected, and then a subsequent election made to discontinue amortization, or where only a part of the facility was certified as being in the interests of national defense. Thus, in general, if the adjusted basis of the facility for amortization is less than its adjusted basis for depreciation, the difference may be depreciated normally. It should be noted, however, that certain of the facilities, such as land, are not eligible for depreciation, and for such facilities no depreciation would be allowed because the depreciable part of a facility falls under the regular depreciation provisions of the tax laws.
0. Payment by the United States of the Unamortized Cost of the Facility

The corporation may be reimbursed for the unamortized cost of certified emergency facilities because of the cancellation of contracts involving the use of the facilities, or because the corporation had reasonable grounds for anticipating future contracts and these contracts were not made. In such cases, the amount received may be properly includible as gross income for tax purposes for the year in which such payment was received. The corporation would then be allowed, at its election, to include in that tax return for the month in which the payment was includible, an amount equal to the payment received in lieu of the regular amortization allowance, provided that this amount does not exceed the unamortized adjusted basis of the facility as of the end of the month prior to computing the month's deduction.

Should the corporation be so reimbursed for facilities not entitled to amortization, the regular depreciation deduction may be adjusted in the same manner.

P. Certification -- Necessity Certificate

The Secretary of the Department concerned will certify to the Commissioner of Internal Revenue that the
facilities described in the Application for a Necessity Certificate are necessary in the interests of national defense. When such action is taken "and the certificate (applied for is) issued by the Army or the Navy . . . a copy thereof is transmitted to the Treasury Department accompanied by a copy of the Appendix A filed with the application . . . It is assumed that copies of these certificates will reach the Internal Revenue Agent in connection with the audit of the income tax returns in which amortization deductions with respect to emergency plant facilities will be taken and that the agent will make a determination that the facilities being amortized are the same as those described in (Appendix A of) the certificate of Necessity."1

Q. Time of Filing Application -- Necessity Certificate

The time allowed within which an application for a Necessity Certificate must be made has been revised since the original amortization legislation to give applicants a longer period to accumulate the information required. The latest change in time limit was that made by Public Law 285 (T.D. 5104) which provided that applications made on or before December 1, 1941 could include any facilities, the

construction, reconstruction, erection, or installation of which was completed after June 10, 1940, or any facilities acquired after that date. This made it possible to file applications for facilities which had not previously been included on applications, either because the time limit had expired or because the corporation had not desired to apply for a certificate. In addition, the time limit was changed from sixty days after the beginning of construction, reconstruction, installation, or erection, or sixty days after acquisition, whichever was the earlier, to six months after such date. Thus, so far as applications regarding facilities now being acquired are concerned, such applications must be filed before the expiration of six months after the beginning of construction, reconstruction, erection, or installation of the facilities, or before the expiration of six months after their acquisition, whichever is the earlier.

The application is usually for certification of a number of individual facilities, and the above time limitation applies to each individual facility included.

The date of filing the application is considered to be the date such application is received by the Department concerned.¹

It should be noted that the Treasury Decisions specifically state that the Certificate shall have no effect unless the application was filed within the time limits prescribed. From this it would appear that if, through error, a Certificate was issued even though the application had not been filed within the time limit, or if the applicant had secured the Certificate by misstating the determining dates, the Certificate would be considered void and amortization would not be allowed.

R. Notification -- Necessity Certificate.

The Department concerned will notify the applicant of the action taken with regard to its application; i.e., certification was or was not made.

S. Place of Filing Application -- Necessity Certificate.

"Applications shall be filed with the office of the Under Secretary of War, Tax Amortization Section, Washington, D.C., or with the Office of the Under Secretary of the Navy, Washington, D.C. An application shall be made to only one department, ordinarily that one which receives directly or indirectly the larger part of the products to be produced with the facilities sought to be certified."¹

¹. Ibid.
T. Number of Times to File Application -- Necessity Certificate

"Applications shall not be made more than once for certification of the same facilities."¹ However, this restriction is varied somewhat in regard to changes in cost or substitution of facilities as noted in that section.

U. Number of Copies of Application to be Filed -- Necessity Certificate

"A signed original of the application, together with two extra copies, which need to be signed, shall be filed." And "It will be helpful, although not obligatory, if the applicant will furnish three extra copies of Appendix 'A', in addition to the three copies required."²

V. Information Required in Application -- Necessity Certificate

(1) The name and address of the corporation making the application, together with the date of the application.

(2) The application must be addressed to the Department concerned.

(3) A statement by the corporation that the facilities it is seeking to have certified are necessary in the interest of national defense during the emergency period.

1. General Instruction for Application for a Necessity Certificate -- TAS 24
2. Ibid.
(4) State of incorporation.

(5) Name, office, and address of the person authorized to represent the corporation for the purpose of the application.

(6) If the applicant's usual business does not include the manufacture or sale of products similar to those which will be manufactured with the facilities covered by the application, a description of the usual business must be made.

(7) The products to be manufactured or the services to be rendered with the facilities must be described.

(8) Include a list of the prime or sub-contracts with the United States in fulfilling which of the facilities will be used. If the production is on sub-contract, the identity of the prime contractor should be shown with the contract number involved.

(9) The date it is expected that production with the facilities will begin.

(10) If the facilities include land, a statement should be made giving the name of the former owner, the affiliation between the former owner and the applicant, and the manner in which the land was used prior to its acquisition.
(11) If the facilities include any buildings not constructed especially for the applicant, information similar to that in (10) above should be given.

(12) If any of the other facilities were acquired second-hand, information similar to that in (10) above should be included.

(13) A statement should then be made that all of the facilities, except those just listed under (10, 11, and 12), if any, were or are to be constructed or acquired new by the applicant.

(14) Information on which the applicant bases its statement that the facilities are necessary in the interest of national defense. Such information would include:

(a) Correspondence with Army or Navy officers, with the holder of the prime contract, or with other persons or companies when such correspondence indicates the need for the facilities.

(b) For each plant involved, show the rate of production being attained without the facilities in terms of units, weight, dollars, horsepower, etc., as compared with the production anticipated to be possible with the facilities.

(c) Average number of employees per day with present facilities as compared with estimated
number required when new facilities have been added.

(d) Number of shifts operating the present facilities and the number of shifts it is expected will be used when the new facilities have been added.

(e) Number of hours per shift per week, and the number of employees per shift at present, and anticipated, with use of new facilities.

(f) If the number of shifts and their hours are less than the maximum possible, include an explanation as to the reason for adding to facilities rather than increasing the number of shifts or the hours per shift.

(15) As the above information is in respect to the applicant's productive capacity, an additional statement should be included, giving the applicant's understanding of the need for additional facilities in the industry as a whole. If the capacity of the industry as a whole is such that there is not a general need for facilities, an explanation of the applicant's desire to add to its facilities must be made, particularly with respect to the reason for not engaging these existing facilities.
(16) Some indication should be given regarding attempts to subcontract to avoid the need for the facilities.

(17) The percentage of the productive capacity of the new facilities that will be directly or indirectly absorbed in the national defense program. If this is less than 100%, the percentage of the cost of the facilities that it is sought to certify must be stated.

(18) Attempts to negotiate financing of the facilities by government agencies should be noted.

(19) List all other applications which have been filed, giving their file number or certificate number, the Department with which they were filed, the total estimated cost of each application's facilities, and the date of certification of any of the applications.

W. Verification of Application -- Necessity Certificate

Each application must contain a sworn statement that the officer of the corporation signing the application has examined the application and that the facts stated therein are true to the best of his knowledge and belief. In addition, the Secretary of the corporation must certify the signing officer's name, office and authority.
X. Appendix "A" -- Necessity Certificate

The Appendix "A" of the application contains a complete descriptive list of the facilities for which certification is sought. The reason for attaching this detailed listing is that the certificate is a certification of the need for FACILITIES and therefore it is the physical item of plant that are being certified, and it is these items of plant that the corporation desires permission to amortize. The application must be filed within the time limit prescribed, and it is to be expected, therefore, that the costs used will be estimates. However, as the certification is of facilities, unless the cost estimate proves to be very inaccurate, so as to indicate a change in the physical item, the cost used on the application will have no particular bearing on the facilities being eligible for amortization.

The first page of the Appendix is a summary sheet for the lists of facilities that make up the Appendix. This summary should show the total estimated cost for each of the principal groups of facilities: Land, Buildings, Machine Tools, Hand Tools and Aids to Manufacture, Furnaces, and other Facilities, together with the total estimated cost of all facilities. In addition, the Summary should show the number of pages included in the Appendix, including
the Summary and any blueprints, maps, or other
descriptive material attached to the facility
lists as exhibits and the location of the facilities.

The pages following the Summary should be
made in the form of separate schedules, one for each
of the principal facility groups, and each schedule
should show the total of the estimated costs of the
items included, which total would agree with that
shown on the Summary.

All facilities listed in the Appendix
should have identification numbers assigned to make
it possible to refer to the item involved when listing
the information required in the Application with
respect to land acquired and second-hand buildings
or equipment purchased, when showing the location or
other information on maps or blueprints attached as
exhibits, and for reference in case of changes at a
later date.

In addition to the information required in
the Application as noted above, any items which are
"replacements" should be properly noted as such in
the Appendix.
Each facility listed should be clearly described, and there should be shown its estimated cost, date of acquisition, and the date of beginning construction, installation, reconstruction, or erection, whichever is the earlier or whichever applies.

The first schedule, "land," should contain a list of the individual pieces of land acquired or to be acquired, and cross reference should be made to the location of the land on a map which would be attached as an exhibit. In addition to land, the schedule should also contain each item of land improvement involved, such as filling and grading low area, dredging channels, or similar work. Each individual project of this sort would constitute a separate item. Even though two or three identical improvements were being made at different locations within the area occupied by the same plant, they should be considered as separate facilities to aid identification and location either physically or on the map. The total of the estimated costs for the items on this schedule should agree with the amount shown for "Land" on the summary.

The second schedule, "Buildings," should show as individual items each new building to be constructed
and each addition to an existing building. As buildings vary greatly in size and type, there should be included for each building its street address (which might be covered by a statement on the summary that all facilities are located in one plant), its overall dimensions, and a description of the construction to indicate the number of floors, materials of construction, etc., and the identifying number assigned to the building on the plant records. The map or blueprint attached as an exhibit to show the location of the building need show only the ground area occupied. The total of the estimated costs of the buildings included on this schedule should agree with the amount shown as "buildings" on the summary.

The third schedule, "Standard Machine Tools," should contain a list of the machines acquired, or to be acquired. As it is quite customary in larger organizations to departmentalize, it would aid clarity of description and ease of identification if the machines were grouped according to the department for which they were acquired. This schedule should include such items as lathes, planers, saws, presses, wood-working machines, boring mills, milling machines, and other mechanical equipment the purpose of which is to form or shape materials and which are generally recognized as machine tools. In
computing the estimated cost to be used for the individual items, perhaps the simplest basis would be to include any expenditures necessary in securing and placing in operating condition the machine itself together with the cost of such attachments and accessories as would be readily identifiable as a part of the machine and which are necessary in its operation. However, as it must be possible to identify the items if requested to do so, such easily moved accessories as benches and tool cabinets should not be included as part of the machine unless they are to be numbered in such a manner that they can be easily located.

The description of the machine tool given in the Appendix should contain the make, model number or size, type of machine (as saddle type turret lathe, vertical milling machine, horizontal milling machine, four head rail miller, two head rail miller, chucking type lathe, etc.), serial number marked on the machine by its maker, and the shop number assigned by the corporation acquiring the machine. As an aid to later identification, it would be well to mark each of the parts of the machine and each of its accessories with this shop number.

The fourth schedule, "Hand Tools and Aids to Manufacture," is a general schedule designed to include all the small portable tools required. These tools would
include hand operated electric drills, measuring instruments, small buffers, hand trucks, skid boxes, extra boring bars, surface plates, and similar relatively small tools and general shop equipment. As this type of item is the hardest to list specifically in advance of purchase, the use of lump sums to cover general classes of hand electric tools, carpenter tools, storage equipment, etc., would generally be acceptable for the original application subject to specific description upon acquisition. The total of the estimated costs shown in this schedule should agree with that shown for "Hand Tools and Aids to Manufacture" on the summary.

The fifth schedule, "Furnaces," should contain a list of the individual furnaces acquired or to be acquired. This list would contain open hearth, blast, heat treating, forging, or testing furnaces, and should include in the description of each the type the particular furnace is. As many of these furnaces have maker's names and model numbers, this information should be included in the description together with other clarifying information such as the source of heat (oil, gas, electric), the size, and the shop number assigned by the applicant. The estimated cost of the furnace would include the cost of acquisition and installation and the cost of temperature recording and controlling instruments. The total of these individual estimated costs should equal the amount
shown for "Furances" on the summary.

"Other Facilities," the last schedule, should show all other facilities acquired. Such items might be fork trucks, cranes, large testing apparatus, sand blasting equipment, automotive vehicles, trailers, tractors, power lines, welding equipment, transformers, motor-generator sets, and similar items not included in the other schedules. The estimate cost of each of these items would be the cost installed and ready to operate. The description, should contain the maker's name, size, and in some cases the use to be made of the item. (For example, "power feeding," would not be a clear description for identifying an item, but "power feeding from pole 10/64 to the arc welding battery in the Welding Department" would make it possible to readily locate the specific power line.) The total of the estimated costs of these items should equal the amount shown as "Other Facilities" on the summary.
Y. Changes in Facilities after Filing Application -- Necessity Certificate

As noted previously, the Application for a Certificate usually must be made prior to the acquisition of the facilities because the time limitation imposed by law requires it. Not only is this true, but, because the size of some expansion programs is so great, some of the facilities may not even have been ordered at the time of filing. These factors, together with priorities, allocation, diversions, changes in process, changes in design, and many other factors, make it highly probable that the facilities originally listed in the Application will not be the ones finally acquired. However, the certification is a certification of facilities and not of the expansion program, so it is necessary, whenever there is a change in facilities, to apply for a new certificate covering the substituted or added items. The filing of an application for this purpose within the time limit will maintain a fully certified position for the corporation and there will then be no question regarding the amortization. Naturally, the facility replaced will not have been acquired, and in the final list prepared after completion of the facilities and determination of their cost, such replaced facilities will be omitted, preferably
with a notation of the certificate and item numbers of the substituted item.

While the above procedure is to be recommended in that it fully protects the acquiring corporation, the Certification Units of the War and Navy Department is in accord. However it should be noted that while this procedure has been tentatively adopted, the applicants are advised that they should satisfy themselves as to whether it actually covers the requirements of Section 124.

The information letter procedure provides for five possible classes of change in facilities, any one of which may be explained in a letter of information filed under oath.

In the first class, a corporation which has already received a Necessity Certificate may file an information letter explaining that facilities, in addition to those listed in the Certificate, have been acquired. The Department concerned will consider this letter an application for a new Certificate covering the additional items. It should be noted, however, that this procedure does not in any way alter the time limitation and that the letter is therefore accepted as an application subject to its having been received before the expiration of six months after the date of acquisition, etc. Because the time limit

1. N.A.C.A. Bulletin—Amortization and Defense Certificates, November 1941.
2. Ibid.
applies, the only advantage in selecting this procedure rather than the normal and safe method of filing a regular application is that it is easier to write a letter than it is to prepare an application.

The second class of change is very common. A corporation which has received a Necessity Certificate may find that priorities, changes in cost, or some other difficulty makes it impossible to acquire the facilities described in the Certificate, and it substitutes other facilities. A letter explaining such a change should contain both the detail regarding the change in description and a statement of the necessity for the change. If the Certification Unit is satisfied that the change was a direct substitution and that it was necessary, a new Certificate will be issued covering the substituted facility regardless of the period of time elapsed since acquisition, etc. This class of change "has been restricted to such things as the substitution of a machine of one make for that of another make."¹ The instructions regarding letters of information specifically suggests, however, that if the time limit has not expired, this class of change should be used as the basis for a regular application to be certain of proper certification.

¹. Ibid.
The third class of change is that resulting from the actual acquisition of items provided for in the original "Certificate by a blanket item such as "Shop benches, etc." If the detailed listing of the items acquired appears to be reasonable in accordance with the original blanket item, then a supplementary "Certificate will be issued stating that "it is hereby certified that the facilities listed in the letter attached to this supplemental certificate represent the descriptive detail of Item . . . in Appendix A of the applicant's original Necessity Certificate Application filed . . . (date)."¹ For such descriptive detail, the total of the individual item's costs need not agree with the amount of the blanket item, but any variation should be explained in the letter. This is the class of change that will occur in the acquisition of the facilities of a great many Certificates, especially with regard to the schedules "Hand Tools and Aids to Manufacture" and "Other Facilities," both of which are very apt to have blanket items included.

The last class of change is one that can be expected where estimated costs are used; that is, the Certificate holder finds upon completion or acquisition of the facilities described in the Certificate that the ¹. Ibid.
actual cost exceeds the estimates contained therein. In such a case, a letter of information explaining the difference will be forwarded by the Certification Unit to the Treasury Department where it will be placed in the taxpayer's file for reference upon audit of the income tax returns.

Although it is possible to use the information letter in the various ways just outlined, Mr. Frederick E. Burnham, General Accountant of United Aircraft Corporation, recommends in his article "Amortization and Defense Certificates" that its use be restricted to such matters as small increases in cost and that new and timely applications be used to fully protect the corporation.

2. Summary -- Amortization

1. Permission may be secured by a corporation to compute a deduction known as amortization which may be substituted for depreciation as a deduction in arriving at taxable income.

2. Such permission is granted on the basis of an Application for a Necessity Certificate providing such Application proves to the War or Navy Department that the facilities for which amortization is sought are necessary in the interests of national defense.

3. When such approval has been received through the Application becoming a Necessity Certificate, the
corporation will be allowed to amortize the cost of the facilities over a period of sixty months or the remainder of the Emergency Period, whichever proves to be the shorter.

4. If it so desires, however, the corporation may take only normal depreciation on the certified facilities, or it may take amortization for part of the sixty month period and then elect to take depreciation on the un-amortized adjusted basis remaining.

5. Should the Emergency Period end before the sixty month period, amortization may be recomputed, under certain circumstances, if it was taken, or may be taken if it had not been or had been taken only in part.
CHAPTER IX

GOVERNMENT FINANCING
Government Financing

An agency of the United States Government, Defense Plant Corporation (part of the Reconstruction Finance Corporation), has been established to provide manufacturing facilities which are leased to corporations, producing material necessary to the national defense. Each individual project of this nature is handled through a separate contract between Defense Plant Corporation (hereafter called D.P.C.) and the corporation which is the lessee. There are certain basic features common to most of these contracts, however, and these features provide information needed for comparison here.

The usual procedure for securing D.P.C. financing is to make an application somewhat in the same form as that of the Application for a Necessity Certificate, giving the name and address of the corporation applying, the proposed location of the facilities, the use to be made of their productive capacity, and the need for the facilities. In addition, an Appendix "A" is attached to provide detailed descriptions of the facilities. This Appendix is similar, in general form and arrangement, to the one used with the Application for a Necessity Certificate, but usually states both the total estimated cost of each item and, in addition, the estimated costs of the component parts. Thus, the cost
of a building is shown in total and subdivided as bare building, power feeding, heating, lighting, plumbing, sprinklers, connected yard facilities, and architects' fees, while the cost of a machine is shown in total and also in detail as the machine, standard attachments, motors and controls, foundation, and installation. However, the extent of this detailed information required for the particular project should be determined by consulting D.P.C.

On the basis of the total estimated cost of the facilities, the corporation requests, in the application, a fee to cover all its expenses in connection with the project for supervision, accounting, travelling, etc., because it is customary for the corporation to handle the construction and/or purchase of the facilities, acting for and on behalf of D. P. C. After a definite contract has been negotiated on the basis of the application, this fee becomes fixed and is not increased even if the actual cost is greater.

In performing its work of acquiring the facilities, the corporation may place orders, the cost of which is to be billed directly to D. p. C., or it may make expenditures of its own funds and apply to D.P.C. for reimbursement. Obviously, the facilities thus acquired are the property of D. P. C.
The contract was based on the information given in the application, a part of which was the Appendix "A", listing the facilities needed. Naturally, therefore, the facilities acquired are restricted to this list unless approval to add to the list is secured. This is somewhat similar to the Amortization requirement that application be made for certification of items not included on a list previously certified. D. P.C. requirements with respect to the identification of the facilities are, however, much more strict than those of the amortization requirements. Rather than merely stating that the corporation must be ready to identify the facilities when called upon to do so, as is required by the amortization law, D. P. C. requires definite labeling or stamping of each facility and its component parts as acquired, so that there shall be no question of identity.

The contract usually provides that after the facilities have been acquired, D.P.C. will lease them to the corporation for a nominal rental of perhaps a dollar a year. The lessee corporation then operates the facilities under this lease to produce the material needed and it is to be expected that in most cases operations will continue for the duration of the emergency.

When the emergency ends and operations cease to be necessary to the national defense, D.P.C. will dispose
of the facilities in the manner provided for in the contract. Usually this would be:

(1) The lessee corporation will be offered the facilities at cost less normal depreciation.

(2) If the price thus arrived at is not satisfactory, a price may be negotiated.

(3) Should the lessee corporation and D.P.C. fail to consummate a sale, D.P.C. will hold the property for a period of perhaps five years.

(4) After this waiting period, the property may be put up for sale to anyone offering an acceptable price. When this is done, if an acceptable offer is received, the lessee corporation will be allowed to meet this offer. However, if it does not do so, the property will be sold to the party originating the offer.
CHAPTER X

COMPARISON OF METHODS
COMPARISON OF METHODS

The comparison of advantages and disadvantages of the methods of solving the problem can be best be made by examining each of the methods separately to determine its merits and then applying this information to the various types of expansion problems.

A. Advantages of Regarding the Expansion as Normal

(1) Regarding the expansion as normal and not applying for amortization or government financing would eliminate the accounting and administrative work such applications involve.

(2) The use of normal or slightly accelerated depreciation rates would result in greater depreciable life for the facilities so that there would be a depreciation deduction available to reduce income in the future even after the emergency. Such a deduction might prove very valuable if taxes continue to rise.

(3) If profits are only sufficient to cover normal depreciation, then any greater deduction could not actually be earned. In such
a case, taking only normal depreciation would give full tax benefit in current years and would allow for tax benefit in future years.

B. Disadvantages of Regarding Expansion as Normal

(1) The receipt of a certificate permitting amortization does not compel the corporation to take this deduction. However, having the certificate, the corporation can recompute its taxes if the emergency ends within sixty months as previously noted. Thus, it is in a position to correct its judgment at a later date.

(2) If profits are sufficient to cover the amortization deduction, it might be better to take the full deduction while there is profits available and worry about the taxes of future years when they appear, because future business may not produce profits.

(3) If current profits are sufficient to cover the amortization deduction, but before the full allowance has been taken profits decline, it is possible to return to regular depreciation with the advantage of having recovered more of the cost than would have been possible under normal depreciation.
C. Advantages of Amortization

(1) The use of the amortization deduction allows a corporation to include in expenses, when arriving at taxable income, a much greater amount for the loss in value of fixed assets (emergency facilities) than would normally be permissible. Thus, if the corporation's income is sufficiently large to cover this deduction, its use provides for the recovery of the investment in emergency facilities from the income produced during the emergency period. Should these assets prove to be of no economic value after that period, the loss would be limited to real estate tax, property tax, and maintenance expenditures until the assets were disposed of.

(2) The provisions for variations of the deduction make it possible to use amortization to recover a large part of the investment and depreciation to recover the balance if such action suits the corporation's earnings.

(3) The provisions for recomputation make it possible, in some cases, to correct errors in
judgment several years after the original decision.

(4) The recovery of all or a part of the investment during the period when continuous use is to be expected reduces the fixed charges that must be met out of the future peacetime earnings when volume may be small thus improving the corporation's competitive position.

(5) If borrowing was necessary to finance the expansion, the rapid recovery of investment made possible by the amortization provision will accelerate retirement of the debt.

D. Disadvantages of Amortization

(1) If tax rates continue to rise, the corporation might later find that the fully amortized assets are a tax disadvantage in that the amount removed by the deduction from current income would have been taxed at lower rates than the amount taxable in future years because of the lack of either a depreciation or an amortization deduction.

(2) If the assets have no foreseeable productive value after the emergency, they can become liabilities even if fully amortized because they will produce no income to cover the recurring tax and maintenance charges. Thus,
the corporation could gain no advantage in amortizing this type of asset.

(3) The value of the amortization provisions is dependent entirely upon the income produced by the assets being amortized or upon the excess income producing ability of the corporation's other assets which will help create an overall profit. Furthermore the provision in the laws allowing a recomputation of the amortization deductions if the emergency period ends prior to the ending of the sixty month period makes it possible that the deductions will be recomputed. Should this occur, there must be a profit after the regular amortization deduction sufficient to cover the resulting increase or part of the value of the deduction will be lost. In determining whether income will be sufficient for these purposes, care must be taken to examine the contracts and future laws with respect to any provisions contained therein limiting profits on the material produced with the facilities. Should there be a limitation of profit to a percentage of the cost arrived at by including only normal depreciation, the effect might be serious in some cases. The severity of the
restricting provision would vary according to the relation of depreciation to total cost, and according to the relation of depreciation to total cost, and according to the relation of normal depreciation to amortization as can best be shown by illustration. If the cost based on normal depreciation were $100 with depreciation constituting $50 of this total, and profit was limited to 10%, there would be produced only $10 against which to offset the difference between depreciation and amortization in computing taxable income. However, if the normal depreciation had been based on an annual rate of 10%, the 20% amortization deduction would create a difference of $50 which clearly exceeds the profit and renders the effective use of the amortization deduction impossible unless there is compensation profit produced by other sales. Obviously, this is an extreme example, but it indicates what could happen.

E. Advantages of Government Financing

(1) The corporation is not required to make an investment in the facilities and, therefore, does not have to consider the problems of re-
covery of investment or of use after the emergency period.

(2) If, after the emergency, the corporation wishes to purchase the assets, the contract usually provides for such a purchase at a reasonable price.

F. Disadvantages of Government Financing

(1) If the assets prove to be valuable after the emergency, the corporation might have been able to acquire them and to have amortized their cost so that it would be in a better post-war competitive position.

(2) The saving of a capital loss through the use of government financing might be more than offset in the future by competitive use of the facilities because a competitor was able to bid a higher price than the corporation could afford at the time of sale.

G. Expansion for Strictly War Production

The addition to plant for the production of goods whose use is limited to war, such as special presses for forming and forging the huge slabs of armor plate needed for battleships, the lathes required to turn large rifles, or the concentrated collection of
heavy equipment necessary for tank production, or the buildings required to house these facilities can best be financed through government agencies. The corporation could not hope to use these assets after the end of the emergency and so they would be of no value or a definite liability.

H. Expansion in the Face of Excessive Capacity

In many cases, the industry as a whole may have expanded already far beyond its pre-war size. In such cases, the problem depends largely upon the position of the particular corporation. If it appears that the corporation's earnings will be sufficient to cover amortization of the facilities needed, it might be well to adopt this basis so as to have fully amortized plant available for the competitive struggle to come. Furthermore the availability of the new facilities might make it possible to retire the old plant and use only the new if volume is insufficient for both. This would result in improved productive ability and in a lower cost position. However, if the expansion were beyond any possible future use, the corporation could either apply for government financing or, if it had excessive earnings, adopt the amortization basis with the definite intention of retiring the plant after the emergency. Such action as the latter would be based principally on eliminating the possibility of future competition.
I. Expansion with Borrowed Funds

Unless earnings beyond the emergency period are very certain, a corporation planning to borrow for expansion should carefully check its earning capacity for the emergency period itself and base its decision entirely on those earnings. If they are expected to be large enough to cover the amortization deduction, it would appear that the borrowings could be repaid. There would be no advantage, however, in taking the risk involved unless the corporation could really foresee future use for the facilities in the years after the emergency. The use of government financing would solve the current borrowing problem, and if the facilities actually were valuable after the emergency, they could be purchased at a fair price by borrowing them.

I. Other Expansion

In some cases, the expansion required is not greatly in excess of what might be considered normal expansion or replacement of plant and it is of a nature identical with that of the existing plant. These cases are the ones where normal depreciation might be considered. If the earnings of the corporation are not sufficient to justify the amortization deduction, and if it appears that the expanded plant will be usable in peacetime pro-
duction at normal profit, then it might be best to expand as would be done in normal times. By this method, the full tax deduction for the loss of useful value would be available and the depreciation deduction could be actually earned. If the earnings at the present were sufficient to cover the amortization deduction, that basis might be used for part of the sixty month period to produce lower fixed charges for the future. Furthermore the spreading of the deductions over a longer period would provide protection against increasing tax rates. Even in these cases, however, it would pay to secure a Necessity Certificate so as to be able to re-compute the deductions if the emergency ends suddenly and the corporation's judgment of profits appears to be in error.
CONCLUSION

In the previous chapters the problem of financing and accounting for emergency plant expansion was presented and three methods of solving the problem were considered. No attempt was made, however, to select one of these methods as the best because such selection must be based on a study of the individual expansion project to determine the factors involved. In general, these factors would be the financial aspects with which this thesis is primarily concerned, but the purely financial factors would have to be tempered in many cases by consideration of other aspects not discussed before.

The long lives of buildings, together with the relative impossibility of moving them, eliminates the use of D.P.C. financing in some instances where, from the financial point of view, it would be the logical method. For instance, additions to the corporation's existing buildings become an integral part of the old buildings and such additions are not reasonably usable or salable separately. Therefore D.P.C. could not very well purchase the land to be occupied and construct such additions. Similarly, expansion involving the construction of a new building on a plot complete-
ly surrounded by the existing plant would not ordinarily be considered suitable for D.P.C. financing because D.P.C. would have to buy the plot and sufficient other land to gain access to its property. Even if D.P.C. were willing to undertake such financing, the corporation would not want its factory site to be so split. Because of these considerations, D.P.C. financing of buildings must be regarded as limited to separate building either off the present factory site or at the edge of that site so that the usefulness of the corporation's property would not be reduced by the sale of the new buildings to outside interests should the corporation not want to purchase them after the end of the emergency.

However, machinery and equipment are usually movable, so such limitations would not extend to the productive facilities needed for installation in the buildings mentioned above. Thus, the solution in such cases might be company financing of the buildings, perhaps under the amortization plan, and D.P.C. financing of the machinery and equipment.

Choice of the financially desirable solution might be prevented in other cases by the inability to secure the necessary certification or D.P.C. financing agreement because the facilities could not be shown to be necessary to the war effort. For such expansions, choice
would be limited to **normal expansion financing**.

After having determined the method of financing each particular expansion by comparison of the advantages and disadvantages of the three methods as noted in the preceding chapter, and then adjusting this decision in accordance with other considerations such as those just referred to, a single corporation -- or even a division of a large corporation -- might find that it could use one, two, or all three of the methods for its various expansions. For instance, it might undertake the following projects:

(A) Expansion for the production of a non-defense product for which only normal expansion financing would be available.

(B) Small additions to facilities to produce one of its regular products for the war effort for which expansion amortization would offer the best method.

(C) Expansion of production of one of its regular products to such an extent that use of the plant for normal markets would be impossible. This might be handled by having D.P.C. construct an entirely new plant separate from the corporation's existing factory.
(D) An expansion similar to "C", but which the corporation wanted to keep within its existing factory site for operating reasons. This might be handled by having D.P.C. finance the machinery and equipment for use in a building constructed by the company under the amortization plan.

Thus it can be seen that there is no one best way to handle the expansion problem. In fact, there is not even one best way for a single corporation to handle its various expansions. Each project must be considered as a separate problem, the solution of which depends primarily on the financial considerations discussed in the preceding chapters, adjusted to conform with any special considerations, such as location of the facilities.
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